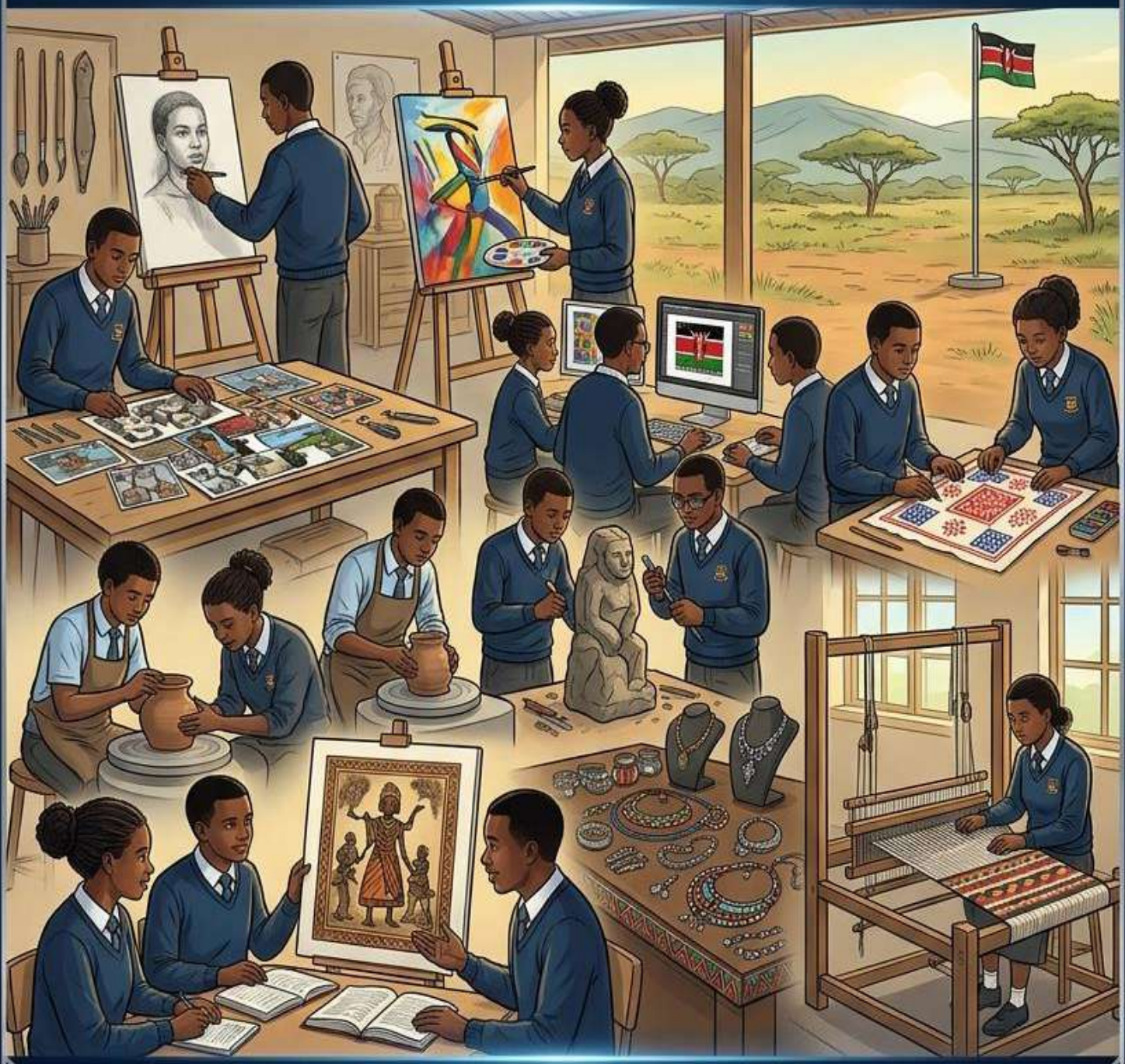
GRADE 11
FINE ARTS NOTES
COMPETENCY BASED EDUCATION
SENIOR SCHOOL CURRICULUM



AUTHOR:
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STRAND 1.0: PICTURE MAKING TECHNIQUES (2D ART)

1.0 INTRODUCTION TO PICTURE MAKING TECHNIQUES (2D ART)

1.1 Meaning of Picture Making

Picture making is the process of creating visual images on a flat surface using different artistic materials, tools and techniques.

It involves arranging lines, shapes, colours, tones, textures and forms to communicate ideas, emotions, experiences and observations.

Picture making is a major area of Fine Arts Technology because it enables artists to represent people, objects, places, events and imaginary situations.

Examples of picture-making activities include:

1. Drawing a human figure using pencil or charcoal.
2. Painting a Kenyan landscape using watercolours.
3. Creating a portrait of a community leader.
4. Drawing people participating in traditional dances.
5. Painting scenes showing environmental conservation.
6. Creating digital illustrations using a tablet or computer.
7. Drawing people participating in sports and recreational activities.

1.2 Meaning of Two-Dimensional Art (2D Art)

Two-dimensional art refers to artworks that have two main dimensions: length and width.

Such artworks are created on flat surfaces and do not have actual physical depth, although artists may create an illusion of depth through shading, perspective, colour and overlapping.

Examples of 2D artworks:

- Pencil drawings.
- Charcoal drawings.
- Watercolour paintings.
- Acrylic paintings.
- Pastel drawings.
- Digital paintings.
- Posters and illustrations.
- Prints and graphic artworks.

1.3 Elements of Art Used in Picture Making

Elements of art are the basic visual components used by artists to create artworks.

1. Line

A line is a continuous mark made on a surface by a moving point.

Lines are important in drawing and painting because they define shapes, communicate movement and create visual effects.

Types of lines include:

- Horizontal lines: Run from left to right.
- Vertical lines: Run from top to bottom.
- Diagonal lines: Slant in different directions.
- Curved lines: Bend gradually.
- Zigzag lines: Consist of connected sharp angles.
- Broken lines: Have spaces between their sections.
- Thick lines: Have greater width and visual weight.
- Thin lines: Have little width.

2. Shape

A shape is a two-dimensional enclosed area formed by lines, colours or changes in tone.

Types of shapes:

- Geometric shapes: Circles, squares, triangles and rectangles.
- Organic shapes: Irregular shapes found in nature, such as leaves, clouds and human body outlines.

3. Form

Form refers to the three-dimensional appearance of an object, showing height, width and depth.

In 2D artwork, artists create an illusion of form using shading, highlights and tonal variations.

4. Colour

Colour is the visual sensation produced when light is reflected from an object.

Colour helps artists communicate mood, atmosphere, identity and meaning.

5. Texture

Texture refers to the surface quality of an object or artwork.

It may be:

- Actual texture: Can be physically felt.
- Implied texture: Appears to have a particular surface quality but is actually flat.

Examples include rough tree bark, smooth skin, woollen clothing and rocky surfaces.

6. Tone

Tone refers to the lightness or darkness of a colour or surface.

Artists use tone to create depth, volume and contrast.

7. Space

Space refers to the area around, between or within objects in an artwork.

Artists use space to create balance, depth and composition.

1.4 Principles of Art and Design

Principles of art and design are guidelines used to organise elements of art into attractive and meaningful compositions.

They include:

1. **Balance:** Distribution of visual weight within an artwork.
2. **Contrast:** Use of differences, such as light against dark.
3. **Emphasis:** Making one part of an artwork stand out.
4. **Proportion:** Relationship between the sizes of different parts of an object.
5. **Rhythm:** Repetition of visual elements to create movement.
6. **Unity:** Arrangement of elements to produce a sense of completeness.
7. **Harmony:** Combining elements in a pleasing manner.
8. **Movement:** Directing the viewer's eyes through an artwork.
9. **Variety:** Using different elements to create visual interest.

SUB-STRAND 1.1: HUMAN FIGURE DRAWING

CONTOUR DRAWING AND GESTURE DRAWING

1.1.1 Introduction to Human Figure Drawing

Human figure drawing is the artistic process of representing the human body through lines, shapes, forms, tones and other visual elements.

Artists draw human figures to communicate human experiences, emotions, activities, cultural practices and social issues.

Human figure drawing is an important skill in:

- Fine arts.
- Illustration.
- Fashion design.
- Animation.
- Graphic design.
- Sculpture.
- Architecture and interior design.
- Film and game development.
- Advertising.

Examples of human figure drawing in the Kenyan context

An artist may draw:

1. A Maasai person performing a traditional dance.
2. A farmer planting maize in a field.
3. A teacher teaching learners in a classroom.
4. Athletes competing in a running competition.
5. A mother carrying a child.
6. Children playing football.
7. People fetching water from a community water point.
8. A group of people participating in a cultural celebration.

1.1.2 Meaning of Contour Drawing

Contour drawing is a drawing technique in which an artist uses lines to represent the visible outlines and important edges of a subject.

The artist carefully observes the subject and follows its boundaries using continuous or controlled lines.

Contour drawing concentrates on the shape and structure of the subject rather than detailed shading.

When drawing a human figure, contour lines are used to represent features such as:

- The outline of the head.
- The shoulders.
- The arms.
- The torso.
- The waist.
- The legs.
- The feet.
- Clothing outlines.

Example: Drawing the outline of a person standing with hands on the waist without filling the drawing with heavy shading.

1.1.3 Characteristics of Contour Drawing

1. **Emphasis on outlines:** It focuses on the visible boundaries of the subject.

2. **Use of lines:** Lines are the main tools used to describe the human figure.

3. **Observation:** The artist studies the subject carefully before and during drawing.

4. **Simplicity:** Unnecessary details are avoided to maintain clarity.

5. **Line variation:** Artists may use thick, thin, light or dark lines to describe different parts.

6. **Attention to proportion:** The sizes of body parts are observed and represented accurately.

7. **Representation of structure:** Contour lines communicate the overall shape and arrangement of body parts.

8. **Limited shading:** Traditional contour drawing mainly relies on lines rather than tonal shading.

9. **Controlled hand movement:** The artist uses careful hand movements to follow the edges of the subject.

10. **Concentration:** The artist maintains attention on the subject to observe important details.

1.1.4 Types of Contour Drawing

A. Blind Contour Drawing

Blind contour drawing is a technique in which the artist draws the outline of a subject without looking at the drawing paper.

The artist concentrates on observing the subject rather than checking the marks being made on the paper.

Characteristics:

- The eyes remain focused on the subject.

- The pencil or drawing tool moves slowly.
- The artist avoids looking at the paper.
- Lines may appear distorted or irregular.
- The technique develops observation and hand-eye coordination.

Example: Drawing a classmate's hand without looking at the drawing paper.

B. Continuous Contour Drawing

Continuous contour drawing involves drawing the subject using one continuous line without lifting the drawing tool from the paper.

Characteristics:

- The drawing is produced using a continuous line.
- The artist follows the boundaries of the subject.
- The line may overlap itself.
- It encourages concentration and coordination.
- It can produce simple but expressive drawings.

Example: Drawing the outline of a standing human figure using one unbroken line.

C. Modified Contour Drawing

Modified contour drawing involves observing the subject carefully while occasionally looking at the drawing paper to make adjustments.

The artist uses controlled lines to represent the important outlines and structural features.

Characteristics:

- Combines observation and visual checking.
- Allows correction of proportions.
- Produces more controlled outlines.
- Can include selected internal details.
- Suitable for more accurate human figure drawings.

D. Cross-Contour Drawing

Cross-contour drawing uses lines that move across the surface of a subject to communicate its volume and three-dimensional structure.

These lines follow the direction of the body's surfaces.

Examples:

- Lines across the rounded surface of the head.
- Curved lines across the arm.
- Lines following the shape of the torso.

Cross-contour lines help an artist understand how the body occupies space.

1.1.5 Importance of Contour Drawing

1. Develops observation skills.

2. Improves hand-eye coordination.
3. Helps learners understand human body structure.
4. Develops control of drawing lines.
5. Helps artists understand proportion.
6. Encourages concentration and patience.
7. Provides a foundation for advanced drawing techniques.
8. Helps artists simplify complex subjects.
9. Improves the ability to represent objects accurately.
10. Supports the development of illustration and animation skills.

1.1.6 Materials and Tools Used in Contour Drawing

Material/tool	Use
Pencils	Producing outlines and details
Drawing paper	Providing a drawing surface
Charcoal	Producing expressive lines
Pens	Producing permanent contour lines
Erasers	Correcting unwanted pencil marks
Drawing boards	Supporting drawing paper
Easels	Supporting paper during drawing
Rulers	Measuring selected proportions
Sketchbooks	Recording drawing exercises
Digital stylus	Producing digital contour drawings

1.1.7 Line Quality in Contour Drawing

Line quality refers to the visual characteristics of a line, including its thickness, darkness, smoothness, direction and expression.

Artists use different line qualities to make drawings more interesting and meaningful.

Types of line quality

1. Thick lines

- Have greater width.
- May be used to emphasise the outer outline of a figure.

- Help distinguish important forms.

2. Thin lines

- Have less width.
- Are useful when drawing delicate features.
- Can represent smaller details.

3. Light lines

- Are produced using little pressure.
- Are useful for preliminary construction.
- Can represent delicate edges.

4. Dark lines

- Are produced using greater pressure or darker drawing materials.
- Help emphasise important features.
- Increase visual contrast.

5. Broken lines

- Consist of separate marks.
- May represent unclear or partially hidden edges.
- Create a loose drawing effect.

6. Curved lines

- Follow rounded surfaces.
- Help describe the shape of the human body.

7. Expressive lines

- Communicate energy, emotion and movement.
- May vary in direction and thickness.

1.1.8 Human Figure Proportion

Proportion refers to the relationship between the sizes of different parts of the human body.

Correct proportion is important because it helps the artist produce a believable representation of the human figure.

The head measurement method

Artists commonly use the length of the head as a unit of measurement when estimating human body proportions.

For an average adult figure, the body is approximately seven to eight head lengths tall, depending on the individual and artistic style.

A simplified eight-head guide:

Body section	Approximate measurement

Head	1 head
Chin to chest	1 head
Chest to waist	1 head
Waist to hip region	1 head
Hip to mid-thigh	1 head
Mid-thigh to knee	1 head
Knee to lower leg	1 head
Lower leg to feet	1 head

These measurements are guidelines rather than fixed rules. Human proportions vary according to age, body type and individual characteristics.

Factors affecting human figure proportions

1. Age of the person.
2. Gender-related anatomical differences.
3. Body type.
4. Posture.
5. Viewing angle.
6. Perspective.
7. Individual physical characteristics.
8. Artistic style.

Proportion of children

Children generally have larger heads relative to their body size compared with adults.

For this reason, an artist should not apply adult proportions when drawing young children.

Importance of correct proportion

- Makes human figures believable.
- Helps maintain body balance.
- Improves the accuracy of drawings.
- Supports realistic representation.
- Helps communicate posture and physical activity.

1.1.9 Procedure for Drawing a Human Figure Using Contour Technique

Materials required:

- Drawing paper.
- HB or 2B pencil.
- Eraser.
- Drawing board.
- Live model or reference photograph.

Procedure:

1. Observe the human model carefully.
2. Identify the general posture of the figure.
3. Study the overall height and width of the body.
4. Identify the major body parts.
5. Lightly indicate the general position of the head.
6. Sketch the shoulders and torso.
7. Establish the position of the arms and legs.
8. Observe the outlines of the body.
9. Draw the outer contour using controlled lines.
10. Add important internal contours such as clothing folds and facial outlines where necessary.
11. Vary line thickness to emphasise selected areas.
12. Check the proportions of the different body parts.
13. Correct inaccurate outlines.
14. Remove unnecessary construction lines.
15. Review the completed drawing.

Practical activity 1

Draw a human figure standing upright using the contour drawing technique.

Instructions:

- Work from a live model or suitable reference image.
- Use simple and controlled lines.
- Observe the proportions of the figure.
- Avoid unnecessary shading.
- Present the finished drawing for classroom appraisal.

1.1.10 Meaning of Gesture Drawing

Gesture drawing is a drawing technique used to capture the action, movement, energy and general posture of a subject through quick, expressive and flowing lines.

It focuses on the overall movement of the human body rather than detailed outlines.

The artist observes the model and quickly records the direction and flow of movement.

Example: Quickly sketching a football player kicking a ball using flowing lines to show the movement of the arms, legs and body.

1.1.11 Characteristics of Gesture Drawing

1. **Quick execution:** Drawings are usually completed within a short period.
2. **Emphasis on movement:** It captures the action and energy of the subject.
3. **Expressive lines:** Flowing and dynamic lines are used.
4. **Simplification:** Small details are omitted.
5. **Focus on posture:** The general arrangement of the body is emphasised.
6. **Use of action lines:** Lines indicate the main direction of movement.
7. **Loose construction:** The drawing may contain overlapping and unfinished lines.
8. **Observation:** The artist studies the subject's movement carefully.
9. **Spontaneity:** The artist responds quickly to changes in posture.
10. **Dynamic representation:** The drawing communicates activity and energy.

1.1.12 The Line of Action in Gesture Drawing

The line of action is an imaginary or visible line that represents the main direction and flow of movement in a human figure.

It helps the artist organise the body parts around one central movement.

For example:

- A person bending forward may have a curved line of action.
- A person jumping may have an upward diagonal line of action.
- A person running may have a forward-slanting line of action.
- A person standing upright may have a relatively straight line of action.

Importance of the line of action

1. Helps capture movement.
2. Establishes the direction of the pose.
3. Connects the different body parts.
4. Makes gesture drawings more expressive.
5. Helps avoid stiff-looking figures.
6. Provides a foundation for constructing the body.

1.1.13 Types of Gesture Drawing

A. Quick Gesture Drawing

This involves drawing a human figure within a very short period, often between 30 seconds and two minutes.

Features:

- Uses fast, flowing lines.
- Focuses on the general movement.
- Omits unnecessary details.
- Develops quick observation skills.

B. Extended Gesture Drawing

This involves spending more time observing and recording a human figure.

The artist may spend approximately three to ten minutes on a drawing.

Features:

- Allows improved observation.
- Captures more body structure.
- Shows clearer proportions.
- Allows selected details to be added.

C. Action Gesture Drawing

This focuses on the movement of a human figure during an activity.

Examples:

- Running.
- Dancing.
- Jumping.
- Throwing a ball.
- Carrying a load.
- Swimming.
- Digging.

D. Sequential Gesture Drawing

This involves drawing several stages of movement to show how a human figure changes position over time.

Example: Drawing a person in three stages while kicking a football:

1. Preparing to kick.
2. Swinging the leg.
3. Following through after kicking.

1.1.14 Difference Between Contour Drawing and Gesture Drawing

Contour drawing	Gesture drawing
Focuses on outlines and edges.	Focuses on movement and action.
Uses controlled lines.	Uses quick, flowing lines.
Emphasises shape.	Emphasises posture and energy.
Usually takes more observation time.	Often uses timed exercises.

Captures the visible boundaries.	Captures the general action.
Details may be carefully observed.	Details are usually omitted.
Helps develop accuracy.	Helps develop movement and spontaneity.

1.1.15 Materials and Tools Used in Gesture Drawing

- Sketching pencils.
- Charcoal sticks.
- Drawing paper.
- Sketchbooks.
- Markers.
- Pens.
- Erasers.
- Drawing boards.
- Easels.
- Digital drawing tablets.
- Digital styluses.

1.1.16 Procedure for Drawing Human Figures Using Gesture Technique

1. Observe the model's posture.
2. Identify the main direction of movement.
3. Establish the line of action.
4. Indicate the position of the head.
5. Represent the shoulders and hips using simple shapes.
6. Connect the body parts using flowing lines.
7. Indicate the arms and legs.
8. Show the direction of movement.
9. Establish the balance and weight distribution.
10. Observe the relationship between body parts.
11. Refine the general structure.
12. Add selected details if time allows.
13. Review the drawing to establish whether it communicates movement.

Practical activity 2: Timed gesture drawing

Use a live model or video reference to draw human figures in different postures.

Suggested timing:

Exercise	Time
Standing figure	30 seconds
Walking figure	1 minute
Running figure	1 minute
Bending figure	2 minutes
Dancing figure	2 minutes
Jumping figure	2 minutes
Carrying a load	3 minutes

1.1.17 Drawing Human Figures in Different Postures

Posture refers to the way a person positions or holds their body.

Artists must understand posture to produce believable human figure compositions.

Common human postures

1. Standing posture

The body is supported by the feet while the person remains upright.

2. Sitting posture

The body rests on a supporting surface, with the hips and legs bent.

3. Walking posture

The legs move alternately while the arms generally swing in coordination.

4. Running posture

The body moves forward through alternating leg movements, with greater dynamic action.

5. Bending posture

The body inclines forward, sideways or backward.

6. Kneeling posture

One or both knees support the body.

7. Jumping posture

The body moves upward or forward through muscular force.

8. Dancing posture

The body adopts different positions according to rhythm and movement.

Examples from Kenyan society

- Maasai traditional dancers.
- Athletes running during school sports.
- Farmers bending while planting.
- Fishermen casting fishing nets.
- Children playing traditional games.
- Women carrying baskets.
- Artisans making traditional crafts.

1.1.18 Human Figure Composition Inspired by Children's Rights

A composition is an organised arrangement of visual elements within an artwork.

Artists can use human figure drawing to communicate children's rights and promote awareness of social issues.

Meaning of children's rights

Children's rights are the basic freedoms, protections and entitlements that every child should enjoy for proper development and well-being.

Examples include:

1. Right to education.
2. Right to healthcare.
3. Right to protection from abuse.
4. Right to adequate nutrition.
5. Right to a name and nationality.
6. Right to play and recreation.
7. Right to parental care.
8. Right to protection from harmful labour.
9. Right to express opinions.
10. Right to live in a safe environment.

Suggested composition ideas

1. Right to education

Draw learners sitting in a classroom, reading books and interacting with a teacher.

2. Right to play

Draw children playing football, skipping ropes or participating in athletics.

3. Right to healthcare

Draw a healthcare worker examining a child in a health facility.

4. Right to protection

Draw adults protecting children from dangerous situations.

5. Right to family care

Draw a family spending time together.

Procedure for creating a children's rights composition

1. Select one children's right.
2. Identify the message to communicate.
3. Research suitable human poses.
4. Make preliminary gesture sketches.
5. Establish the composition.
6. Draw the human figures using contour techniques.
7. Use gesture lines to communicate movement.
8. Observe correct proportions.
9. Add relevant background objects.
10. Refine the lines and visual arrangement.
11. Give the composition an appropriate title.
12. Display and appraise the completed artwork.

1.1.19 Appraisal of Human Figure Drawings

Appraisal is the process of examining and evaluating an artwork to determine its strengths, weaknesses and effectiveness.

It enables artists to improve their skills and appreciate the work of others.

Aspects to consider when appraising contour drawings

1. Accuracy of outlines.
2. Correct human figure proportions.
3. Quality of lines.
4. Clarity of shapes.
5. Simplicity of representation.
6. Observation of the model.
7. Effective use of drawing materials.
8. Neatness and presentation.

Aspects to consider when appraising gesture drawings

1. Communication of movement.
2. Effectiveness of the line of action.
3. Natural appearance of posture.
4. Expressiveness of lines.
5. Correct positioning of body parts.
6. Balance of the figure.

7. Effective use of time.
8. Overall visual impact.

Appropriate language when appraising artwork

Use respectful statements such as:

- The drawing effectively communicates movement.
- The artist has demonstrated good observation skills.
- The proportions are generally well balanced.
- The line quality creates visual interest.
- The posture is clearly represented.
- The composition communicates the intended message.
- The artist could improve the positioning of the arms.

Avoid insulting or discouraging comments.

1.1.20 Safety and Care When Drawing Human Figures

1. Use drawing materials responsibly.
2. Avoid sharing sharp drawing tools carelessly.
3. Maintain proper sitting and standing posture.
4. Keep the working area clean.
5. Respect the privacy and dignity of live models.
6. Obtain permission before photographing or recording people.
7. Use appropriate and safe reference materials online.
8. Avoid sharing personal information on digital platforms.
9. Respect copyright when using online images.
10. Ensure that models participate voluntarily.

SUB-STRAND 1.2: PAINTING

BRUSH-STROKE TECHNIQUE, DABBING TECHNIQUE AND DIGITAL PAINTING

1.2.1 Introduction to Painting

Painting is an artistic process of applying pigments or coloured materials onto a surface to create images, communicate ideas and express feelings.

It is one of the major forms of two-dimensional art.

Painting involves the use of colour, line, shape, tone, texture, space and form to produce visual compositions.

Artists use different painting techniques and tools depending on the intended appearance of the artwork.

Examples of painting activities in Kenya

1. Painting the Maasai Mara landscape.
2. Painting Mount Kenya and its surrounding vegetation.
3. Painting traditional Maasai dancers.
4. Painting scenes of rural and urban life.
5. Painting wildlife such as elephants, lions and giraffes.
6. Painting people participating in sporting activities.
7. Painting the Kenyan coastline.
8. Painting community activities such as farming, fishing and trading.
9. Painting environmental conservation messages.
10. Creating digital paintings of Kenyan cultural heritage.

1.2.2 Importance of Painting

Painting is important because it:

1. Provides a means of self-expression.
2. Communicates social and cultural messages.
3. Preserves cultural heritage and traditions.
4. Develops creativity and imagination.
5. Improves observation and visual communication skills.
6. Provides opportunities for employment and entrepreneurship.
7. Promotes appreciation of nature and the environment.
8. Supports the development of fine motor skills.
9. Provides opportunities for recreation and relaxation.
10. Contributes to the development of the creative industry.
11. Promotes tourism through paintings of attractive Kenyan destinations.
12. Helps communicate messages about health, education and environmental conservation.

1.2.3 Painting Materials and Tools

Painting materials and tools are the items used by artists to prepare, apply and finish paintings.

A. Painting materials

1. Watercolour paints

Watercolour paints are pigments mixed with a water-soluble binder.

They are diluted using water to produce transparent layers of colour.

Uses:

- Painting landscapes.
- Creating light washes.
- Painting skies and clouds.
- Producing delicate colour effects.
- Creating illustrations.

2. Acrylic paints

Acrylic paints are water-based paints that contain pigments suspended in an acrylic polymer binder.

They dry relatively quickly and form a durable paint film.

Uses:

- Painting portraits.
- Painting human figures.
- Creating textured surfaces.
- Producing colourful compositions.
- Painting on canvas, paper and prepared boards.

3. Oil paints

Oil paints consist of pigments mixed with drying oils such as linseed oil.

They generally dry more slowly than acrylic paints.

Uses:

- Creating detailed paintings.
- Producing rich colours.
- Blending colours smoothly.
- Creating realistic portraits and landscapes.

4. Gouache paints

Gouache is an opaque water-based paint that produces a relatively matte finish.

Uses:

- Illustration.
- Poster painting.
- Decorative compositions.
- Painting areas that require solid colour coverage.

5. Poster colours

Poster colours are generally opaque water-based paints used for decorative and educational artwork.

Uses:

- School posters.
- Illustrations.
- Decorative paintings.
- Classroom displays.

6. Inks

Painting inks are liquid colouring materials used to produce lines, washes and decorative effects.

7. Digital pigments and colour tools

These are electronic colour systems used in digital painting software to create images on screens.

B. Painting tools







1. Paintbrushes

Brushes are tools used to apply paint onto a surface.

Common types include:

- Round brush: Used for lines, details and curved strokes.
- Flat brush: Used for broad strokes and filling large areas.
- Filbert brush: Has a rounded flat shape and is used for blending and curved strokes.
- Fan brush: Used for texture, foliage and decorative effects.
- Detail brush: Used for small details and fine lines.
- Wash brush: Used for covering large areas with diluted paint.

2. Painting palette

A palette is a flat surface used for holding and mixing colours before applying them to an artwork.

3. Painting paper

Painting paper is a specially prepared surface used for applying paint.

Watercolour paper is usually thicker and more absorbent than ordinary writing paper.

4. Canvas

Canvas is a strong fabric surface, commonly stretched over a wooden frame, used for painting.

5. Painting board

A painting board provides a firm surface for supporting painting materials.

6. Sponge

A sponge is used to apply paint through repeated dabbing or pressing movements.

7. Palette knife

A palette knife is a flat tool used for mixing paint or applying thick paint onto a surface.

8. Water container

It holds clean water for diluting watercolour paints and cleaning brushes.

9. Easel

An easel is a stand that supports a painting surface during artwork production.

10. Masking tape

It is used to secure paper to a board and create clean edges.

1.2.4 Meaning of Painting Technique

A painting technique refers to a particular method or approach used by an artist to apply paint onto a surface to achieve a desired visual effect.

Different techniques produce different textures, patterns, tones and appearances.

Examples include:

- Wash technique.
- Brush-stroke technique.
- Dabbing technique.
- Dry-brush technique.
- Splattering technique.

- Sponging technique.
- Blending technique.
- Layering technique.
- Digital painting techniques.

1.2.5 Wash Painting Technique

A wash is a painting technique in which diluted paint is applied over a surface to create a thin, relatively transparent layer of colour.

The technique is commonly used in watercolour painting.

Characteristics of wash painting

1. Uses diluted paint.
2. Produces transparent layers.
3. Allows the surface or underlying layers to remain visible.
4. Can create smooth areas of colour.
5. Is suitable for painting backgrounds.
6. Can produce gradual tonal transitions.
7. Requires control of water and pigment.
8. Can create atmospheric effects.

Types of wash painting

A. Flat wash

A flat wash is a technique in which an artist applies a uniform layer of diluted paint over an area.

The aim is to achieve an even colour without noticeable variations.

Uses:

- Painting a clear sky.
- Painting a distant background.
- Creating a uniform colour area.

B. Graded wash

A graded wash is a technique in which the colour gradually changes from dark to light or from strong to weak.

The artist achieves this by gradually increasing the amount of water or reducing the pigment concentration.

Uses:

- Painting a sunset.
- Painting the sky at different levels of brightness.
- Creating atmospheric backgrounds.

C. Variegated wash

A variegated wash involves combining two or more colours while they are still wet to allow them to blend into one another.

Uses:

- Painting colourful skies.
- Creating water reflections.
- Painting sunset scenes.
- Producing interesting background effects.

Procedure for creating a flat wash

1. Prepare the painting paper.
2. Select the desired watercolour.
3. Mix the paint with clean water.
4. Load the brush with sufficient paint.
5. Apply the paint using even horizontal strokes.
6. Continue applying the strokes while maintaining a wet edge.
7. Avoid leaving unwanted dry patches.
8. Allow the painting to dry naturally.

Practical example

Paint a blue sky using a flat wash technique.

1.2.6 Meaning of Brush-Stroke Painting Technique

Brush-stroke painting is a technique in which an artist creates an image by applying paint using deliberate movements of a paintbrush.

The direction, pressure, shape and thickness of the brushstrokes influence the appearance of the artwork.

The artist uses different brush movements to communicate form, texture, movement and emotion.

Example: Painting the fur of an animal using short, directional brushstrokes or painting flowing grass using long strokes.

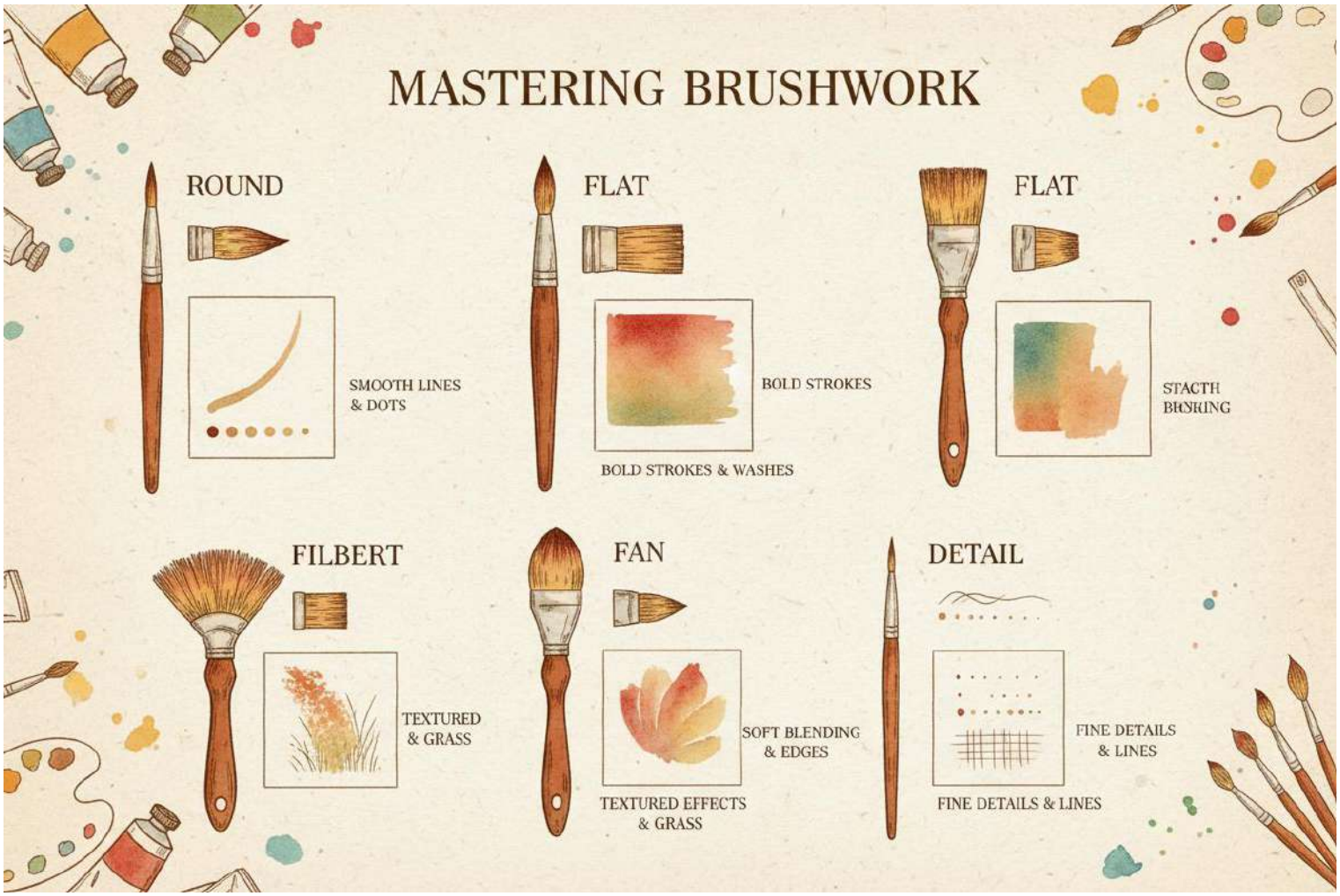


1.2.7 Characteristics of Brush-Stroke Painting

1. **Visible brush marks:** The strokes may remain visible on the painting surface.

2. **Variety of strokes:** Artists use short, long, curved, straight and circular strokes.
3. **Texture creation:** Brushstrokes can create the appearance of rough, smooth or irregular surfaces.
4. **Directional movement:** The direction of strokes helps communicate movement.
5. **Variation in thickness:** Artists use different brushes and pressure to produce varied marks.
6. **Expressiveness:** Brushstrokes can communicate emotion and energy.
7. **Colour variation:** Different colours can be applied through separate or overlapping strokes.
8. **Layering:** Artists can apply several layers of brushstrokes to create depth and visual interest.
9. **Tool dependence:** The type and size of the brush influence the appearance of the strokes.
10. **Individual style:** Artists may develop unique ways of applying brushstrokes.

1.2.8 Types of Brushstrokes




Stencil
Press and flick
Twisting
Thick & thin
Pull & Push using side of brush
One line
Flicking
"writing"
Using the tip
10
Kevind
PRINCETON
NEPTUNE

1. Horizontal strokes

These are brush marks made from left to right or right to left.

Uses:

- Painting horizons.
- Representing calm water.
- Painting distant landscapes.
- Creating horizontal patterns.

2. Vertical strokes

These are brush marks made from top to bottom or bottom to top.

Uses:

- Painting tree trunks.
- Representing falling rain.
- Painting upright structures.
- Creating vertical textures.

3. Diagonal strokes

These are brush marks made at an angle.

Uses:

- Representing sloping surfaces.
- Painting moving objects.
- Creating dynamic compositions.
- Showing wind direction.

4. Curved strokes

These are brush marks that follow curved or circular paths.

Uses:

- Painting rounded objects.
- Representing flowing water.
- Painting clouds.
- Showing curved body forms.

5. Short strokes

These are small brush marks applied over a limited area.

Uses:

- Painting hair.
- Creating grass textures.
- Representing fur.
- Painting small details.

6. Long strokes

These are extended brush marks made with continuous brush movements.

Uses:

- Painting long grasses.
- Creating broad backgrounds.
- Representing flowing materials.
- Painting extended surfaces.

7. Thick strokes

These are broad marks created using a loaded brush, a larger brush or greater pressure.

Uses:

- Creating bold visual effects.
- Representing rough surfaces.
- Emphasising selected parts.

8. Thin strokes

These are narrow brush marks created using a fine brush or the tip of a brush.

Uses:

- Creating delicate details.
- Painting fine lines.
- Representing branches and small features.

9. Dry-brush strokes

These are produced using a brush containing relatively little paint and moisture.

They create broken, rough and textured marks.

Uses:

- Painting rough tree bark.
- Creating rocky surfaces.
- Representing dry grass.
- Creating worn surfaces.

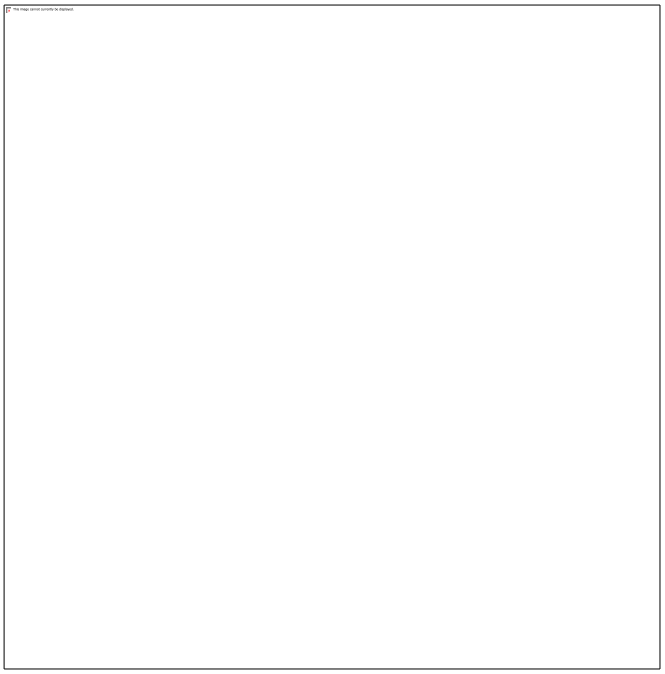
10. Dotted strokes

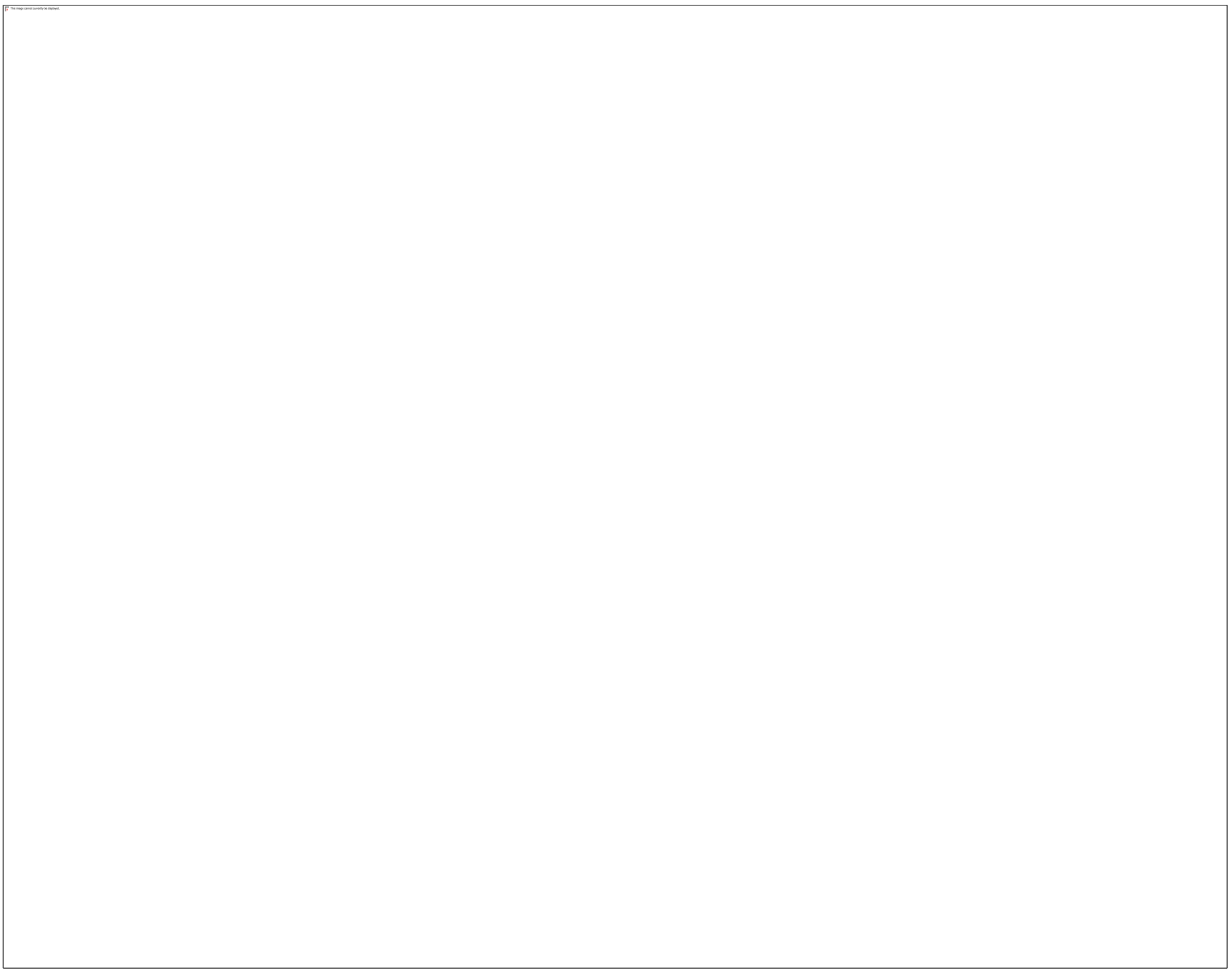
These are small marks made by touching the painting surface repeatedly with the brush.

They may be used to create texture, decorative patterns and visual effects.

1.2.9 Famous Artist Associated with Brush-Stroke Technique: Vincent van Gogh

Vincent van Gogh was a famous Dutch painter known for expressive and energetic brushwork.





Characteristics of his painting style

1. Used visible and expressive brushstrokes.
2. Applied thick layers of paint in many works.
3. Used directional lines to create movement.
4. Used strong colour contrasts.
5. Created rhythmic patterns through brushwork.
6. Expressed emotions through colour and brush movement.
7. Used swirling and curved marks in some compositions.
8. Created distinctive textures through repeated strokes.

Lessons learners can gain from Vincent van Gogh

- Experiment with different brush movements.
- Use lines to create movement.
- Explore expressive colour combinations.

- Develop an individual painting style.
- Observe how brushstrokes influence texture.
- Use paint application to communicate emotions.

1.2.10 Materials and Tools for Brush-Stroke Painting

- Round brushes.
- Flat brushes.
- Filbert brushes.
- Watercolour paints.
- Acrylic paints.
- Painting paper.
- Canvas.
- Palette.
- Water containers.
- Easel.
- Palette knife.
- Cleaning cloth.

1.2.11 Procedure for Painting Using Brush-Stroke Technique

Example: Painting a human figure in a Kenyan cultural setting.

1. Select a suitable subject.
2. Study the posture of the human figure.
3. Prepare the painting surface.
4. Sketch the human figure lightly.
5. Identify the major areas of colour.
6. Select suitable paints.
7. Mix the required colours on a palette.
8. Select appropriate brushes.
9. Apply broad brushstrokes to establish large areas.
10. Use smaller strokes to develop body features and clothing.
11. Vary the direction of strokes according to the form being represented.
12. Use different brush sizes to create texture.
13. Introduce light and dark colours to create tonal variation.
14. Refine selected areas using controlled strokes.
15. Allow the painting to dry.
16. Clean the brushes and working area.
17. Display the completed painting for appraisal.

1.2.12 Applying Brush-Stroke Technique in Human Figure Painting

Brushstrokes can be used to represent different human body features and clothing materials.

Area being painted	Suggested brushstroke
Hair	Short, curved strokes
Skin	Smooth, controlled strokes
Clothing	Long or flowing strokes
Facial features	Fine, delicate strokes
Muscles	Curved directional strokes
Background	Broad horizontal or vertical strokes
Decorative patterns	Short, repeated strokes
Footwear	Controlled short strokes

Practical activity 3

Paint a human figure participating in a traditional Kenyan dance.

Requirements:

- Use a suitable drawing to establish the figure.
- Apply varied brushstrokes.
- Use colour to represent clothing.
- Show the movement of the figure.
- Create texture using different brush movements.

1.2.13 Meaning of Dabbing Painting Technique

Dabbing is a painting technique in which paint is applied to a surface using repeated small touches or pressing movements of a brush, sponge or other suitable tool.

Instead of spreading the paint continuously, the artist creates separate marks that may form patterns, textures or images.

Dabbing is useful for producing textured surfaces and visual effects.

Example: Using a sponge to create the appearance of leaves on trees or using small brush touches to represent flowers in a field.

1.2.14 Characteristics of Dabbing Technique

1. Uses repeated small marks.
2. Can be produced using brushes or sponges.
3. Creates textured surfaces.
4. Produces patterns through repeated application.
5. Can combine different colours.
6. Allows the artist to represent natural surfaces.
7. Can produce rough or stippled appearances.
8. May involve closely spaced or widely spaced marks.
9. Creates visual interest.
10. Can be used in both realistic and decorative paintings.

1.2.15 Tools Used in Dabbing Technique

1. Sponge

A sponge is used to apply paint through gentle pressing movements.

It is suitable for creating irregular textures.

2. Round brush

The tip of a round brush can be used to produce small dabs and dots.

3. Stippling brush

A stippling brush is used to create repeated small marks.

4. Flat brush

The end or edge of a flat brush can be used to create repeated rectangular or broad marks.

5. Cotton buds

Cotton buds can be used to create small circular marks.

6. Palette

A palette is used to mix and prepare colours.

7. Painting paper or canvas

These provide the surfaces on which the paint is applied.

1.2.16 Methods of Applying Dabbing Technique

A. Sponge dabbing

This involves dipping a sponge into paint and gently pressing it against the painting surface.

Uses:

- Creating clouds.
- Painting foliage.
- Representing rough surfaces.
- Producing decorative backgrounds.
- Creating natural textures.

B. Brush dabbing

This involves loading a brush with paint and repeatedly touching its tip or end against the surface.

Uses:

- Painting flowers.
- Creating small patterns.
- Representing grass.
- Producing textured backgrounds.

C. Stippling

Stippling is a technique of creating an image or texture using many small dots or tiny marks.

The dots may be closely or widely spaced to create different tonal effects.

Uses:

- Creating tonal variations.
- Representing rough surfaces.
- Painting foliage.
- Creating shadows.
- Producing decorative patterns.

D. Cotton-bud dabbing

This involves using a cotton bud to apply repeated small circular marks.

It is useful for:

- Painting small flowers.
- Creating dots and decorative patterns.
- Representing fruits.
- Producing fine textures.

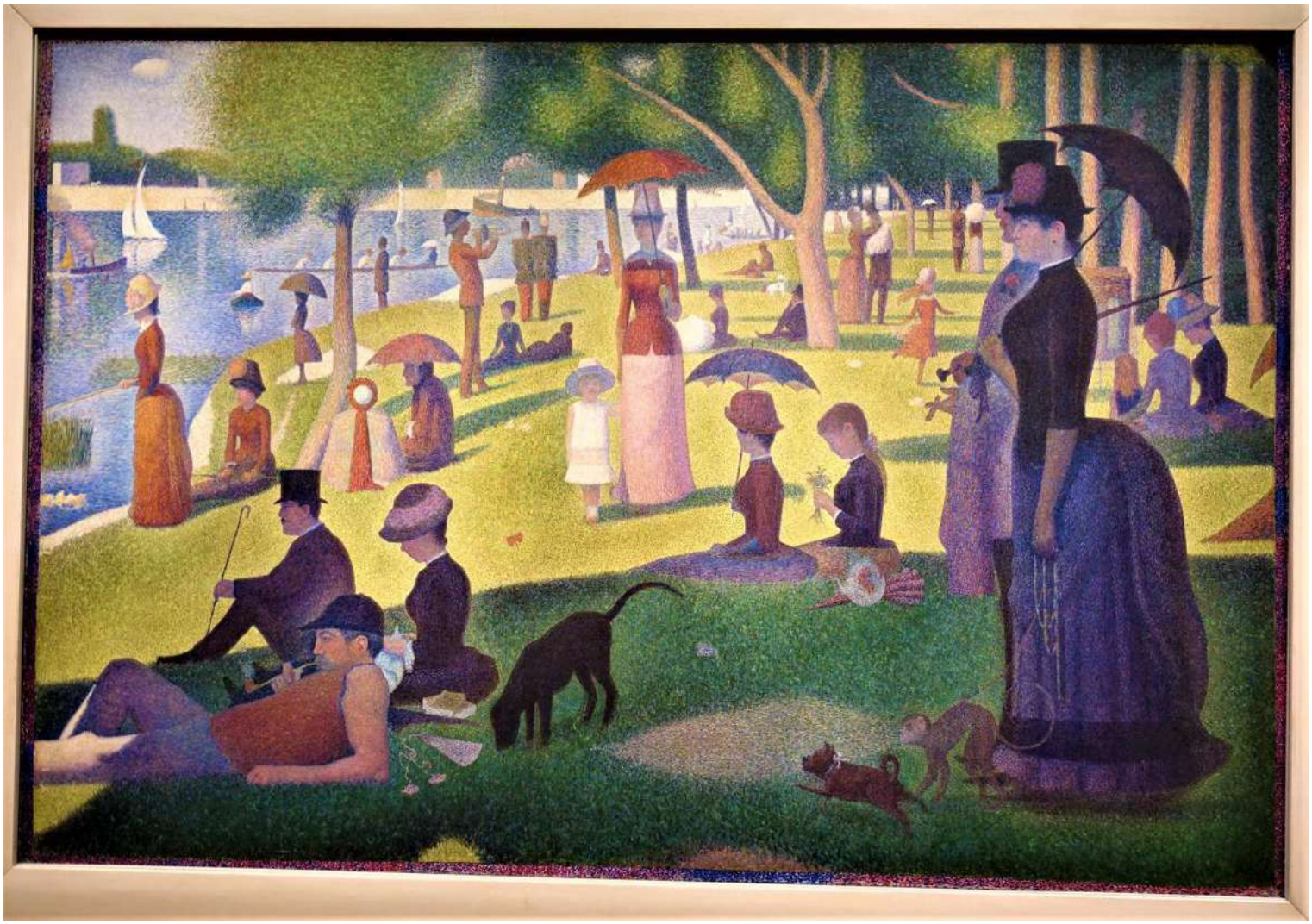
1.2.17 Dabbing Technique and Pointillism

Pointillism is a painting technique in which an artist creates an image using numerous small, distinct dots of colour.

The dots are arranged carefully so that they visually combine when viewed from a suitable distance.

Pointillism is associated with the Neo-Impressionist movement.

Dabbing and pointillism are related because both can involve applying small separate marks of paint. However, pointillism is a more systematic approach based on the deliberate arrangement of distinct dots of colour.





1.2.18 Famous Artists Associated with Dabbing and Pointillism

A. Georges Seurat

Georges Seurat was a French painter associated with the development of Pointillism.

His paintings are recognised for the use of small dots or distinct touches of colour.

Famous artwork: *A Sunday Afternoon on the Island of La Grande Jatte*.

Characteristics of his technique:

1. Used small distinct marks of colour.
2. Carefully arranged colours across the painting surface.
3. Used colour relationships to create visual effects.
4. Built images through repeated marks.
5. Created compositions that appear more unified when viewed from a distance.

B. Paul Signac

Paul Signac was a French painter who helped develop and promote Divisionism and Neo-Impressionist painting.

His work frequently used distinct touches of colour to create visual effects.

Characteristics:

- Used separate marks of colour.
- Explored colour relationships.
- Created vibrant landscapes.
- Used repeated marks to produce texture.
- Experimented with the visual interaction of colours.

1.2.19 Difference Between Brush-Stroke and Dabbing Techniques

Brush-stroke technique	**Dabbing technique**
Uses deliberate brush movements.	Uses repeated touches or pressing movements.
Can produce long or short lines.	Mainly produces separate marks.
Emphasises direction and flow.	Emphasises texture and repeated patterns.
Uses different brush movements.	Uses brushes, sponges and other dabbing tools.
Suitable for painting flowing forms.	Suitable for painting foliage and textured surfaces.
May create smooth or rough effects.	Commonly creates dotted or irregular textures.
Examples include expressive brushwork.	Examples include stippling and pointillist effects.

1.2.20 Procedure for Painting Using Dabbing Technique

Example: Painting a Kenyan landscape showing trees, flowers and vegetation.

1. Select a suitable landscape reference.
2. Prepare the painting surface.
3. Lightly sketch the main features.
4. Select appropriate paints.
5. Prepare the colours on a palette.
6. Choose a suitable sponge or brush.
7. Dip the tool lightly into the paint.
8. Remove excess paint if necessary.
9. Press the tool gently against the painting surface.
10. Repeat the process to create the desired texture.
11. Use different colours to represent natural variations.
12. Vary the spacing and size of the marks.
13. Allow some colours to overlap where appropriate.
14. Add darker marks to create depth.
15. Add lighter marks to create highlights.
16. Refine the composition.
17. Allow the painting to dry.
18. Clean the tools and working area.

Practical activity 4: Painting a landscape using dabbing

Create a painting of a Kenyan countryside landscape showing trees, grass, flowers and clouds.

Use:

- Sponge dabbing for tree foliage.
- Brush dabbing for flowers.
- Stippling for grass textures.
- Wash technique for the sky.

1.2.21 Creating Texture Using Dabbing Technique

Texture is the surface quality of an artwork or object.

Dabbing helps artists create different textures by varying the size, shape, spacing and density of marks.

Examples:

Texture	Method of creation
Rough tree bark	Repeated irregular dabs
Tree foliage	Closely spaced sponge marks

Flower petals	Small circular dabs
Grass	Short, repeated brush touches
Rocky surfaces	Irregular dark and light dabs
Clouds	Soft sponge dabbing
Sand	Small closely spaced dots
Animal fur	Short repeated marks

1.2.22 Factors Affecting the Appearance of Dabbing

1. Type of painting tool.
2. Amount of paint used.
3. Pressure applied.
4. Size of the tool.
5. Spacing between marks.
6. Colour combinations.
7. Type of painting surface.
8. Consistency of the paint.
9. Number of layers applied.
10. Direction of repeated marks.

1.2.23 DIGITAL PAINTING TECHNIQUES

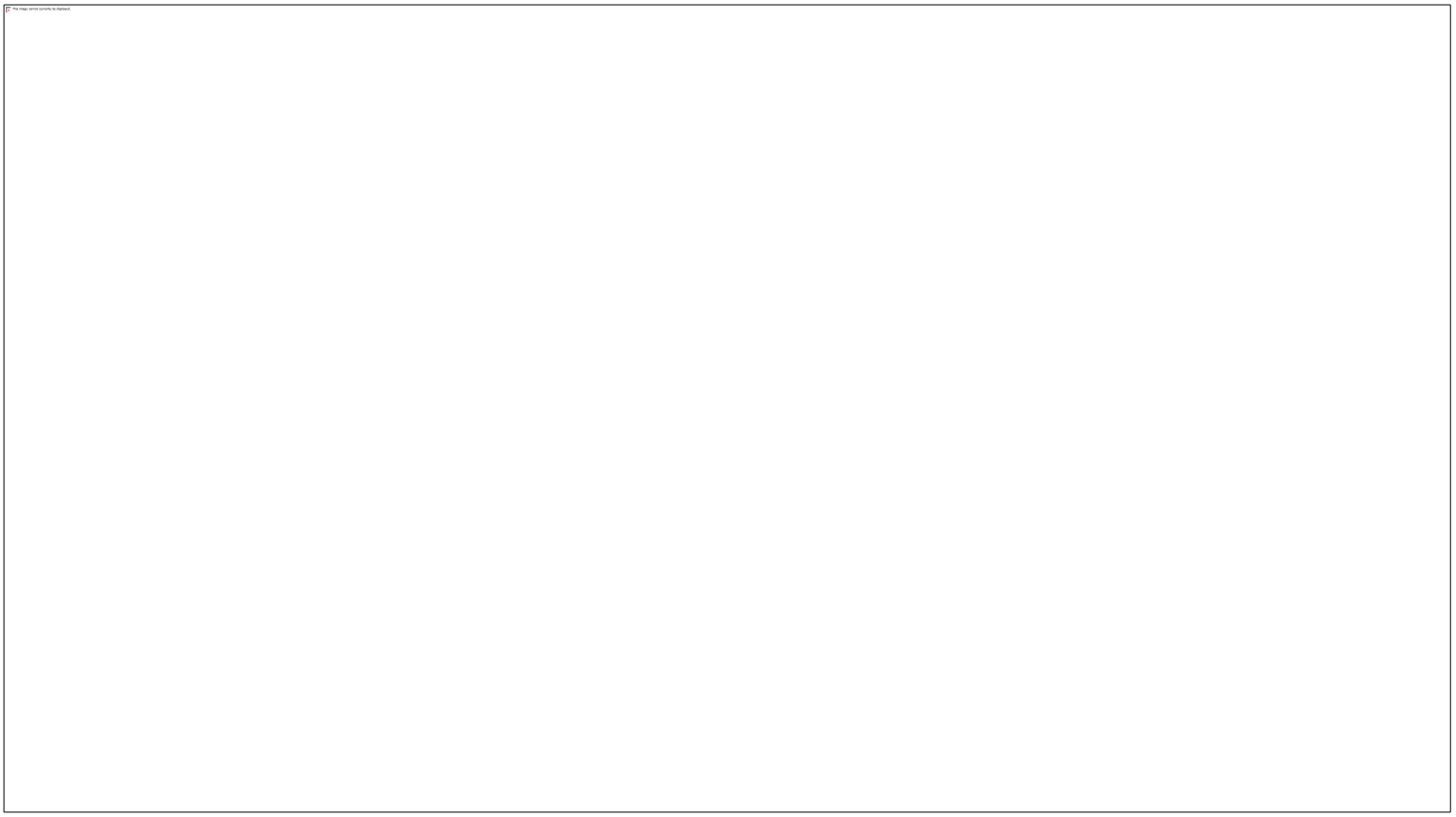
Meaning of Digital Painting

Digital painting is the process of creating painted images using electronic devices and specialised software or applications.

Instead of applying physical paint directly onto paper or canvas, the artist uses a digital stylus, mouse, touchscreen or other input device to apply virtual colours and brush effects.

Digital painting allows artists to create, edit, save and share artworks electronically.


XP-PEN



1.2.24 Characteristics of Digital Painting

1. Uses electronic devices.
2. Uses digital drawing and painting software.
3. Allows the artist to select different virtual brushes.
4. Supports a wide range of colours.
5. Allows easy editing and correction.
6. Supports layering of images.
7. Allows resizing and transformation of objects.
8. Enables digital storage of artwork.
9. Makes it possible to share artwork electronically.
10. Supports the combination of photographs, drawings and painted elements.
11. Allows experimentation without consuming physical paint.
12. Can produce both realistic and abstract images.

1.2.25 Digital Painting Equipment

1. Computer

A computer is an electronic device used to operate digital painting software and store digital artworks.

2. Graphics tablet

A graphics tablet is an electronic drawing surface that allows artists to create images using a stylus.

3. Digital stylus

A stylus is a pen-like electronic tool used to draw or paint on a compatible touchscreen or graphics tablet.

4. Smartphone

A smartphone can be used to create digital paintings through drawing and painting applications.

5. Tablet computer

A tablet computer provides a touchscreen surface for digital drawing and painting.

6. Digital display

A digital display is a screen used to view and interact with digital artwork.

7. Printer

A printer produces physical copies of digital paintings.

8. Scanner

A scanner converts physical drawings and paintings into digital images.

1.2.26 Digital Painting Software and Applications

Digital painting software refers to computer programs or applications designed to create and edit digital images.

Examples include:

1. Adobe Photoshop

- Supports digital painting and image editing.
- Provides different brush types.
- Supports layers.
- Allows colour adjustment.
- Supports blending and texture creation.

2. Krita

- Designed for digital painting and illustration.
- Provides different brushes.
- Supports layers.
- Allows creation of digital textures.
- Supports animation features.

3. Procreate

- Used for digital illustration.
- Provides customisable brushes.
- Supports layers.
- Allows artists to create detailed paintings.

4. Corel Painter

- Simulates traditional painting tools.
- Supports digital brush effects.
- Provides different artistic media.
- Can imitate the appearance of traditional painting.

5. Autodesk SketchBook

- Used for drawing and illustration.
- Provides digital pencils and brushes.
- Supports layers.
- Allows artists to create sketches and paintings.

6. ibisPaint

- Used for digital drawing and painting.
- Provides multiple brushes.
- Supports layers and digital effects.
- Can be used on compatible mobile devices.

Note: Software availability, device compatibility and licensing arrangements vary. Learners should use legally available applications.

1.2.27 Common Digital Painting Techniques

A. Digital Brush-Stroke Technique

This involves using virtual brushes to produce different types of marks on a digital canvas.

The artist can adjust:

- Brush size.
- Brush shape.
- Brush hardness.
- Opacity.
- Colour.
- Stroke direction.
- Pressure sensitivity where supported.

B. Digital Dabbing Technique

This involves using a digital brush to produce repeated small marks on the screen.

It can create:

- Foliage.
- Flowers.
- Rocks.
- Clouds.
- Decorative patterns.

- Textured backgrounds.

C. Digital Blending Technique

Blending involves gradually merging two or more colours to create smooth transitions.

Uses:

- Creating skin tones.
- Painting skies.
- Representing rounded objects.
- Creating shadows and highlights.

D. Digital Layering Technique

Layering involves creating an image using separate transparent or partially transparent working levels called layers.

Each layer can contain different parts of the artwork.

For example:

- Background layer.
- Human figure layer.
- Clothing layer.
- Shadow layer.
- Highlight layer.
- Decorative details layer.

E. Digital Gradient Technique

A gradient is a gradual transition between two or more colours or between different levels of transparency.

Uses:

- Creating sunsets.
- Painting skies.
- Creating background effects.
- Representing light and shadow.

F. Digital Texture Technique

This involves using digital brushes, patterns and effects to simulate different surface qualities.

Examples:

- Wood texture.
- Stone texture.
- Fabric texture.
- Hair texture.
- Grass texture.

G. Digital Erasing Technique

This involves removing unwanted digital marks using an eraser tool.

Unlike traditional painting, digital erasing may allow the artist to correct selected areas without affecting the entire artwork.

H. Digital Selection and Transformation

Selection tools allow the artist to isolate parts of an image.

Transformation tools allow selected objects to be:

- Resized.
- Rotated.
- Moved.
- Reflected.
- Distorted.

1.2.28 Understanding Layers in Digital Painting

A layer is an independent working level in a digital artwork.

Layers enable artists to organise different parts of a painting separately.

Example: Painting a Kenyan savannah landscape

Layer	Content
Layer 1	Sky
Layer 2	Distant mountains
Layer 3	Grassland
Layer 4	Trees
Layer 5	Animals
Layer 6	Foreground details
Layer 7	Shadows and highlights

Importance of layers

1. Make editing easier.
2. Allow independent modification of objects.
3. Help organise complex compositions.
4. Make it easier to experiment with colours.
5. Allow the artist to hide or display selected elements.
6. Reduce the risk of damaging other parts of the artwork.
7. Support non-destructive editing when used appropriately.

1.2.29 Colour Selection in Digital Painting

Digital painting applications provide colour selection tools that enable artists to choose and adjust colours.

Common colour selection methods

1. Colour wheel

A circular colour-selection tool that allows artists to select colours based on hue and related properties.

2. Colour palette

A collection of selected colours prepared for use in an artwork.

3. Eyedropper tool

A tool that samples a colour from an existing image or part of the artwork.

4. RGB colour model

RGB stands for Red, Green and Blue.

It is an additive colour model used in digital displays.

Different combinations of red, green and blue light produce different colours.

5. Hexadecimal colour codes

These are alphanumeric codes used to identify specific colours in digital design.

For example, #FF0000 represents red in the standard RGB hexadecimal system.

1.2.30 Advantages of Digital Painting

1. Allows easy correction of mistakes.
2. Provides a wide range of digital brushes.
3. Allows artists to experiment with different colours.
4. Reduces the need for physical painting materials.
5. Makes storage and retrieval of artwork easier.
6. Supports sharing through digital platforms.
7. Allows artwork to be resized.
8. Supports the combination of text, images and illustrations.
9. Allows multiple versions of an artwork to be created.
10. Supports collaboration between artists in different locations.
11. Can be used in animation and multimedia production.
12. Provides opportunities for digital entrepreneurship.

1.2.31 Limitations of Digital Painting

1. Requires access to electronic devices.
2. Some applications require paid subscriptions.
3. Devices may be expensive.
4. Requires digital skills and training.

5. Power interruptions may affect work.
6. Device malfunction may lead to loss of unsaved work.
7. Some applications require internet connectivity for certain features.
8. Extended screen use may cause eye strain.
9. Digital files may be exposed to viruses or unauthorised access.
10. Digital painting may not fully reproduce the physical qualities of traditional paint.

1.2.32 Difference Between Traditional Painting and Digital Painting

Traditional painting	Digital painting
Uses physical paints.	Uses digital colour systems.
Uses physical brushes.	Uses virtual brushes and digital tools.
Uses paper, canvas or boards.	Uses electronic screens and digital canvases.
Mistakes may be difficult to correct.	Mistakes can often be reversed or edited.
Requires physical storage.	Can be stored electronically.
May require cleaning physical tools.	Requires maintenance of electronic equipment.
Paint is physically applied.	Colour is digitally applied.
Often involves physical material costs.	May involve software and device costs.

1.2.33 Procedure for Creating a Digital Painting of a Kenyan Landscape

Materials required:

- Computer, tablet or smartphone.
- Digital painting software.
- Digital stylus or mouse.
- Reference photograph.
- Suitable storage device.

Procedure:

1. Select a Kenyan landscape as the subject.
2. Collect suitable reference images.
3. Open the digital painting application.
4. Create a new digital canvas.
5. Select the appropriate canvas size and resolution.
6. Choose a suitable background colour.

7. Create a background layer.
8. Sketch the main landscape features.
9. Add distant mountains or hills.
10. Paint the sky using suitable colours.
11. Add vegetation using brush-stroke techniques.
12. Use digital dabbing to create tree foliage and grass textures.
13. Add foreground details.
14. Introduce shadows and highlights.
15. Adjust the colour balance.
16. Review the composition.
17. Save the work in an editable format.
18. Export a final copy in a suitable image format.
19. Display the completed artwork.

1.2.34 Painting Human Figures Using Varied Painting Techniques

Artists can combine different painting techniques within one composition.

For example, when painting a human figure participating in a traditional Kenyan dance:

- Use a wash technique to create the background.
- Use brushstrokes to paint the human figure.
- Use dabbing to create patterns on clothing.
- Use fine brushstrokes to paint facial features.
- Use darker tones to establish shadows.
- Use lighter tones to create highlights.

Importance of combining painting techniques

1. Creates visual variety.
2. Improves the appearance of texture.
3. Makes the composition more expressive.
4. Helps distinguish different objects.
5. Creates depth and tonal variation.
6. Encourages experimentation.
7. Develops artistic creativity.
8. Improves technical painting skills.

1.2.35 Digital Painting of Sceneries

A scenery is a visual representation of a natural or built environment.

Examples of Kenyan sceneries include:

- The Great Rift Valley.
- Mount Kenya.
- Lake Victoria.
- Maasai Mara.
- Lake Nakuru.
- The Kenyan coastline.
- Rural agricultural landscapes.
- Nairobi cityscape.
- Tea plantations in Kericho.
- Flower farms in Naivasha.

Elements to consider when painting scenery

1. Sky and atmospheric conditions.
2. Mountains and hills.
3. Vegetation.
4. Rivers and lakes.
5. Buildings and other structures.
6. Roads and transport features.
7. People and animals.
8. Light and shadows.
9. Foreground, middle ground and background.
10. Colour harmony.

1.2.36 Composition in Digital Painting

Composition refers to the arrangement of visual elements within an artwork.

A good digital painting should have a clear arrangement of objects and a meaningful relationship between foreground, middle ground and background.

Important compositional principles

1. Rule of thirds

The rule of thirds involves dividing the image into nine equal sections using two horizontal and two vertical lines.

Important features may be positioned along these lines or at their intersections to create visual interest.

2. Balance

Visual elements should be arranged to achieve a sense of stability.

3. Focal point

A focal point is the area that attracts the viewer's attention.

4. Contrast

Differences in colour, tone, size and shape can make important elements stand out.

5. Unity

Different parts of the painting should work together to create a complete image.

6. Depth

Artists can create the illusion of depth through overlapping, size variation, perspective and atmospheric colour changes.

1.2.37 Cyber Safety in Digital Painting

Cyber safety refers to practices that protect individuals, devices and information when using digital technology.

Learners should observe the following precautions:

1. Use trusted digital painting applications.
2. Avoid downloading suspicious files.
3. Do not share passwords.
4. Respect copyright and intellectual property rights.
5. Obtain permission before using other people's photographs.
6. Avoid sharing personal information online.
7. Use appropriate websites for reference images.
8. Save artwork regularly.
9. Keep software updated.
10. Use secure storage for digital files.
11. Avoid opening unknown links.
12. Maintain healthy screen-use habits.

1.2.38 Appraisal of Paintings

Appraisal is the process of examining and evaluating a painting to determine its artistic qualities and effectiveness.

Aspects to consider when appraising brush-stroke paintings

1. Variety of brushstrokes.
2. Direction of brushstrokes.
3. Control of the painting tools.
4. Effective use of colour.
5. Creation of texture.
6. Tonal variation.
7. Composition.
8. Originality.
9. Neatness.
10. Communication of the intended message.

Aspects to consider when appraising dabbing paintings

1. Clarity of repeated marks.
2. Appropriate use of dabbing tools.
3. Variety of textures.
4. Spacing of marks.
5. Colour combinations.
6. Effectiveness of patterns.
7. Visual balance.
8. Overall presentation.

Aspects to consider when appraising digital paintings

1. Quality of the digital image.
2. Appropriate selection of digital tools.
3. Effective use of layers.
4. Colour harmony.
5. Texture and tonal variation.
6. Composition.
7. Creativity.
8. Technical control.
9. Appropriate file saving and presentation.
10. Originality and respect for copyright.

1.4 SUMMARY OF THE STRAND

Picture Making Techniques (2D Art) develops the learner's ability to create visual compositions using traditional and digital artistic approaches.

The strand covers:

1. Contour drawing for representing the outlines and structure of human figures.
2. Gesture drawing for capturing movement, energy and posture.
3. Brush-stroke painting for creating expressive marks, texture and movement.
4. Dabbing for producing repeated marks, patterns and textures.
5. Digital painting for creating and editing images using electronic devices and software.
6. Appraisal of artworks to improve artistic skills and appreciate the work of others.

1.5 GRADE 11 FINE ARTS TECHNOLOGY – TOPICAL REVISION QUESTIONS

SECTION A: 30 MARKS

Instructions:

- Answer all questions.
- Each question carries 1 mark.
- Choose the most appropriate answer from the alternatives provided.

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

1. Which of the following best describes contour drawing?

A. Applying different colours to a surface.

B. Using lines to represent the visible outlines and edges of a subject.

C. Creating images using small dots only.

D. Representing objects through digital photography.

2. The main emphasis in gesture drawing is to capture:

A. Fine details of clothing.

B. Accurate facial features.

C. Movement and posture.

D. Surface decoration.

3. Which of the following is a characteristic of blind contour drawing?

A. The artist continuously looks at the drawing paper.

B. The artist draws without looking at the paper.

C. The artist uses only watercolour paints.

D. The artist concentrates on shading.

4. The imaginary line that represents the main direction of movement in gesture drawing is called:

A. Horizon line.

B. Contour line.

C. Line of action.

D. Construction border.

5. Which drawing technique involves producing an image using one continuous line without lifting the drawing tool?

A. Blind contour.

B. Continuous contour.

C. Gesture drawing.

D. Cross-hatching.

6. An artist who wants to represent the movement of a person running should mainly use:

A. Gesture drawing.

B. Blind contour drawing.

C. Decorative drawing.

D. Mechanical drawing.

7. The approximate number of head lengths used as a general guide for the height of an average adult figure is:

A. Three.

B. Four.

C. Six.

D. Seven to eight.

8. Which of the following is most important when drawing a human figure using contour technique?

A. Colour blending.

B. Careful observation of outlines.

C. Application of thick paint.

D. Digital transformation.

9. A drawing showing a footballer kicking a ball within a short period is an example of:

A. Gesture drawing.

B. Flat wash.

C. Digital painting.

D. Blind shading.

10. Which of the following is an example of a human right that can inspire a human figure composition?

A. Right to environmental pollution.

B. Right to exploitation.

C. Right to education.

D. Right to discrimination.

11. The visual characteristics of a line, including its thickness, darkness and smoothness, are referred to as:

A. Line quality.

B. Colour harmony.

C. Space.

D. Proportion.

12. Which of the following materials is most appropriate for producing expressive contour lines?

A. Water container.

B. Charcoal.

C. Sponge.

D. Palette.

13. Painting is best described as the process of:

A. Arranging stones into patterns.

B. Applying pigments onto a surface to create images.

C. Constructing three-dimensional objects only.

D. Cutting shapes from paper.

14. Which painting technique involves applying diluted paint to produce a transparent layer of colour?

A. Dabbing.

B. Stippling.

C. Wash.

D. Impasto.

15. Which painting tool is most suitable for producing broad and even brushstrokes?

A. Flat brush.

B. Detail brush.

C. Cotton bud.

D. Pencil.

16. The artist famously associated with expressive and energetic brushstrokes is:

A. Georges Seurat.

B. Paul Signac.

C. Vincent van Gogh.

D. Leonardo da Vinci.

17. Which of the following is a characteristic of brush-stroke painting?

A. It uses only small dots.

B. It involves deliberate movements of a paintbrush.

C. It does not use pigments.

D. It requires a digital screen.

18. An artist uses short, curved brushstrokes to paint the hair of a human figure. This technique mainly helps to create:

A. Texture and form.

B. Digital layers.

C. Paper thickness.

D. Geometric measurement.

19. Which tool is most appropriate for producing irregular foliage textures through repeated pressing movements?

A. Ruler.

B. Sponge.

C. Compass.

D. Eraser.

20. Dabbing is a painting technique that involves:

A. Applying repeated small touches of paint.

B. Drawing only straight lines.

C. Removing paint from the surface.

D. Using a computer to create photographs.

21. The technique of creating images using numerous small, distinct dots of colour is called:

A. Gesture drawing.

B. Pointillism.

C. Continuous contour.

D. Flat wash.

22. Which artist is associated with the painting *A Sunday Afternoon on the Island of La Grande Jatte*?

A. Vincent van Gogh.

B. Paul Cézanne.

C. Georges Seurat.

D. Pablo Picasso.

23. Stippling is mainly used to create:

A. Repeated dots and tonal textures.

B. Smooth digital gradients only.

C. Large geometric outlines.

D. Continuous flowing lines.

24. Which of the following is the most appropriate tool for creating small circular dabs?

A. Cotton bud.

B. Ruler.

C. Palette knife.

D. Drawing board.

25. Digital painting involves:

A. Painting exclusively using oil paints.

B. Creating painted images using electronic devices and software.

C. Drawing only with charcoal.

D. Printing photographs without editing.

26. Which digital painting tool is used to select a colour from an existing part of an image?

A. Eraser tool.

B. Eyedropper tool.

C. Crop tool.

D. Selection border.

27. In digital painting, layers are used to:

A. Organise different parts of an artwork separately.

B. Increase the physical thickness of paper.

C. Clean painting brushes.

D. Measure the length of a canvas.

28. Which of the following is an example of digital painting software?

A. Microsoft Calculator.

B. Krita.

C. Windows Notepad.

D. File Explorer.

29. The RGB colour model uses which three primary light colours?

A. Red, Green and Blue.

B. Red, Grey and Brown.

C. Yellow, Green and Black.

D. White, Blue and Orange.

30. Which of the following is an appropriate cyber-safety practice when creating digital paintings?

A. Sharing passwords with classmates.

B. Downloading files from unknown websites.

C. Using trusted applications and protecting personal information.

D. Publishing other people's photographs without permission.

SECTION B: STRUCTURED QUESTIONS (50 MARKS)

50 MARKS

Instructions:

- Answer all questions.
- Write your answers clearly.

- Observe the marks allocated to each question.

QUESTION 1: CONTOUR DRAWING (8 MARKS)

a) Define contour drawing. (2 marks)

b) State four characteristics of contour drawing. (4 marks)

c) Identify two materials used when producing contour drawings. (2 marks)

QUESTION 2: GESTURE DRAWING (8 MARKS)

a) Define gesture drawing. (2 marks)

b) Explain three characteristics of gesture drawing. (3 marks)

c) State three reasons why the line of action is important in gesture drawing. (3 marks)

QUESTION 3: HUMAN FIGURE DRAWING (8 MARKS)

a) Explain the meaning of proportion in human figure drawing. (2 marks)

b) State three factors that influence human figure proportions. (3 marks)

c) Outline three steps followed when drawing a human figure using contour technique. (3 marks)

QUESTION 4: BRUSH-STROKE PAINTING TECHNIQUE (8 MARKS)

a) Define brush-stroke painting technique. (2 marks)

b) Identify three types of brushstrokes used in painting. (3 marks)

c) Explain three ways in which brushstrokes contribute to the quality of a painting. (3 marks)

QUESTION 5: DABBING TECHNIQUE (9 MARKS)

a) Define dabbing as a painting technique. (2 marks)

b) Name three tools that can be used to produce dabbing effects. (3 marks)

c) Explain two differences between dabbing and brush-stroke painting techniques. (4 marks)

QUESTION 6: DIGITAL PAINTING (9 MARKS)

a) Define digital painting. (2 marks)

b) Identify three examples of digital painting software or applications. (3 marks)

c) Explain two advantages of using digital painting techniques when creating scenery. (2 marks)

d) State two cyber-safety precautions that should be observed when using digital painting applications. (2 marks)

TOTAL: 50 MARKS

1.6 ANSWER KEY – SECTION A

Question	Answer	Question	Answer
1	B	16	C

2	C	17	B
3	B	18	A
4	C	19	B
5	B	20	A
6	A	21	B
7	D	22	C
8	B	23	A
9	A	24	A
10	C	25	B
11	A	26	B
12	B	27	A
13	B	28	B
14	C	29	A
15	A	30	C

1.7 SUGGESTED PRACTICAL ASSESSMENT ACTIVITIES

These activities can be used by teachers to assess learners' practical competencies.

No.	Practical task	Technique
1	Draw a standing human figure	Contour
2	Draw a person walking	Gesture
3	Draw a footballer in action	Gesture
4	Create a children's rights composition	Contour and gesture
5	Paint a human figure using varied brushstrokes	Brush-stroke
6	Paint a tree using a sponge	Dabbing

7	Paint a flower using stippling	Dabbing
8	Paint a Kenyan landscape using digital tools	Digital painting
9	Create a digital painting using layers	Digital painting
10	Display and critique completed artworks	Art appraisal

1.8 TEACHER'S ASSESSMENT CHECKLIST

The teacher can use the following checklist during practical activities.

Assessment aspect	**Yes**	**No**
Correctly identifies contour drawing	☐	☐
Demonstrates controlled contour lines	☐	☐
Captures movement through gesture drawing	☐	☐
Observes appropriate human proportions	☐	☐
Uses different brushstroke techniques	☐	☐
Creates texture through dabbing	☐	☐
Demonstrates basic digital painting skills	☐	☐
Observes cyber-safety practices	☐	☐
Appraises own and peers' artworks respectfully	☐	☐
Demonstrates creativity and originality	☐	☐

STRAND 1.0: PICTURE MAKING

SUB-STRAND 1.2: PAINTING MAKING TECHNIQUES (2D ART)

1.0 INTRODUCTION TO PAINTING MAKING TECHNIQUES

1.1 Meaning of painting

Painting is a visual art process that involves applying pigments or coloured materials onto a surface to create images, pictures, patterns, objects and compositions.

It is one of the major forms of two-dimensional (2D) visual art because it creates images that have height and width on a flat surface.

Painting enables artists to communicate ideas, feelings, experiences, beliefs and observations through colours, lines, shapes, forms, textures and tones.

In Fine Arts Technology, learners explore traditional and modern painting methods to develop artistic expression, creativity, technical skills and digital literacy.

Examples of painting surfaces include:

1. Paper.
2. Canvas.
3. Wood.
4. Cardboard.
5. Walls.
6. Fabric.
7. Masonite boards.
8. Digital screens.

Examples of painting materials include:

- Watercolour.
- Acrylic paint.
- Oil paint.
- Gouache.
- Poster colour.
- Digital paint.
- Natural pigments.

1.2 Meaning of painting technique

A painting technique refers to a particular method or approach used by an artist when applying paint onto a surface to achieve a desired visual effect.

Different painting techniques produce different appearances, textures, patterns, tones and moods.

For example:

- Brush strokes can create visible lines and movement.
- Dabbing can create dotted patterns and textured surfaces.
- Wash techniques can create transparent layers of colour.
- Digital painting can create realistic or imaginative scenery using electronic tools.

1.3 Importance of painting in Fine Arts Technology

Painting is important because it:

1. **Develops creativity:** It allows learners to generate original ideas and express them visually.

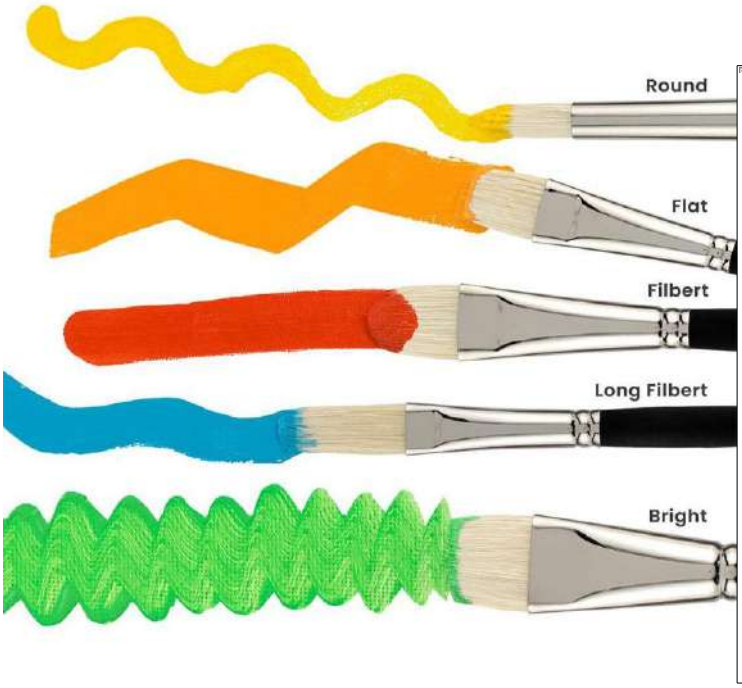
2. **Improves observation:** Learners study objects, people, animals, plants and scenery carefully.
3. **Communicates messages:** Paintings can communicate social, cultural, environmental and personal messages.
4. **Preserves cultural heritage:** Artists represent traditional practices, ceremonies, clothing, buildings and cultural environments.
5. **Develops technical skills:** Learners acquire skills in handling brushes, mixing colours and controlling painting materials.
6. **Promotes emotional expression:** Artists communicate happiness, sadness, anger, peace and other feelings.
7. **Creates employment opportunities:** Painting supports careers in illustration, animation, interior decoration, graphic design, advertising and fine art.
8. **Promotes environmental awareness:** Paintings can communicate messages about conservation, pollution and climate change.
9. **Encourages innovation:** Artists experiment with new materials, tools and technologies.
10. **Promotes appreciation of beauty:** Painting develops the ability to recognise and appreciate visual qualities.

1.4 Characteristics of a good painting

A good painting should demonstrate the following qualities:

1. **Good composition:** The arrangement of objects and figures should be attractive and balanced.
2. **Appropriate colour selection:** Colours should support the intended message and mood.
3. **Clear forms:** Objects and figures should be recognisable.
4. **Effective use of texture:** The surface should communicate the intended visual or physical quality.
5. **Good tonal variation:** Appropriate light and dark values should create depth.
6. **Creativity:** The artwork should demonstrate originality.
7. **Technical competence:** Painting materials should be handled correctly.
8. **Unity:** The different elements should work together.
9. **Appropriate finishing:** The artwork should be clean, complete and carefully presented.

2.0 BRUSH STROKE PAINTING TECHNIQUE



2.1 Meaning of brush stroke technique

A brush stroke is a visible mark or line made when a paintbrush is moved across a painting surface while carrying paint.

Brush stroke technique refers to the method of applying paint using different movements, pressures, directions and types of brushes to produce various visual effects.

The artist controls the appearance of brush strokes by changing:

- The type of brush.
- The size of the brush.
- The amount of paint.
- The amount of water or medium.
- The pressure applied.
- The direction of movement.
- The speed of movement.
- The nature of the painting surface.

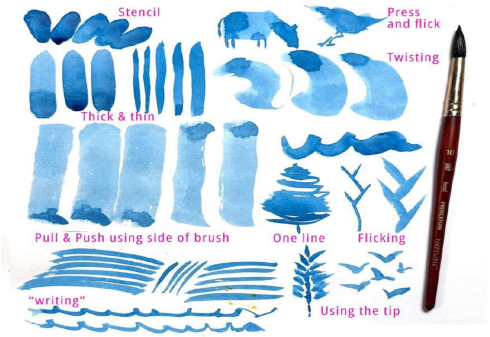
Brush stroke techniques can be used to create realistic, abstract, decorative and expressive paintings.

2.2 Characteristics of brush stroke technique

1. It produces visible marks on the painting surface.
2. It can create thick or thin lines.
3. It can create smooth or rough textures.
4. It can communicate movement and direction.
5. It can produce different patterns.
6. It allows artists to control the distribution of colour.
7. It can create depth through overlapping strokes.
8. It can communicate emotions through expressive movements.

2.3 Types of brush strokes

A. Horizontal brush strokes



These are strokes made by moving a brush from left to right or right to left.

Characteristics:

- They create horizontal lines.
- They suggest calmness and stability.

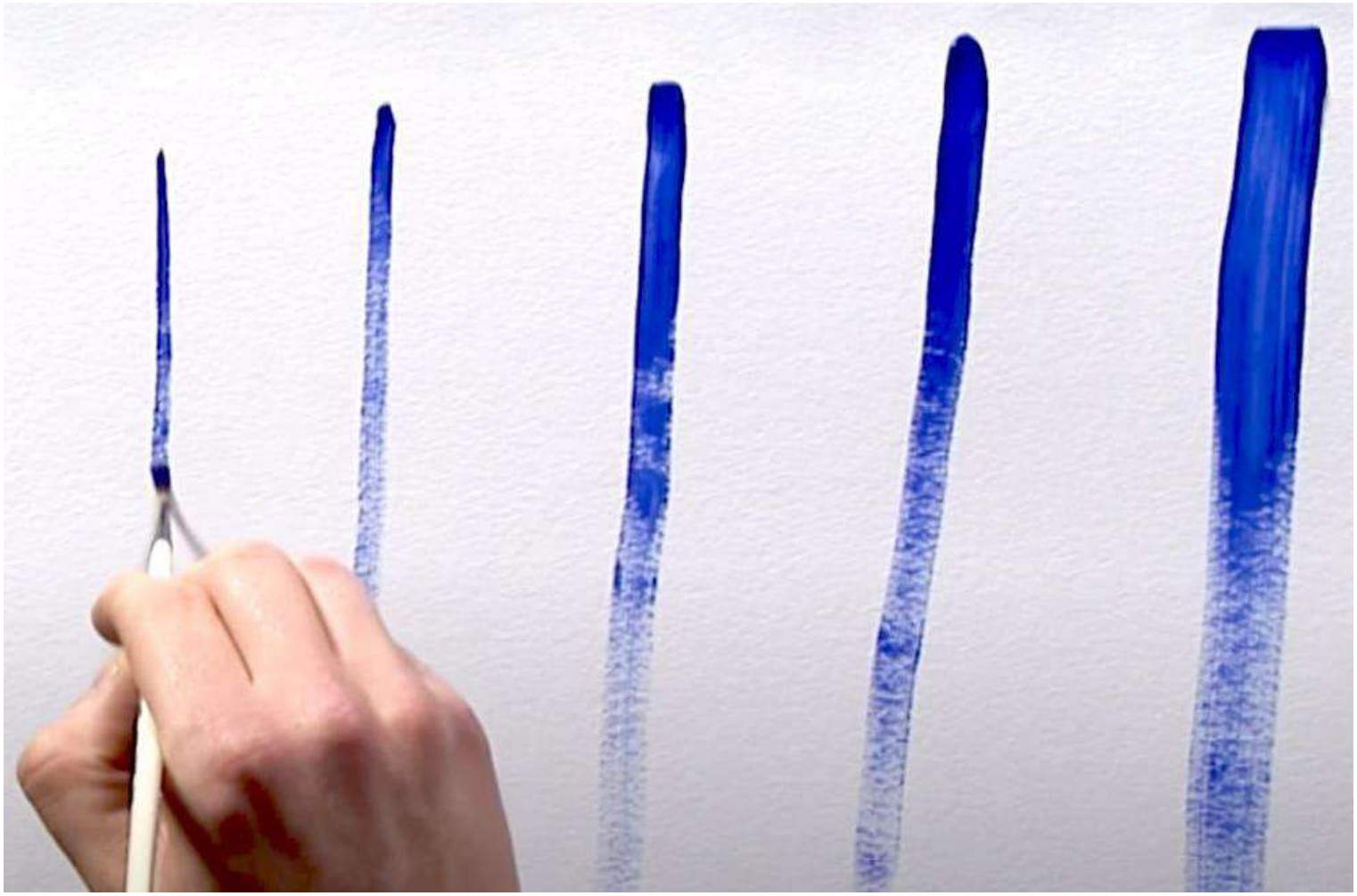
- They can represent flat surfaces.
- They create a sense of width.

Applications:

- Painting lakes.
- Painting calm seas.
- Painting open fields.
- Painting horizons.
- Painting walls and buildings.

Example: A learner paints a calm Lake Victoria landscape using horizontal blue and green brush strokes.

B. Vertical brush strokes



These are strokes made by moving a brush upwards or downwards.

Characteristics:

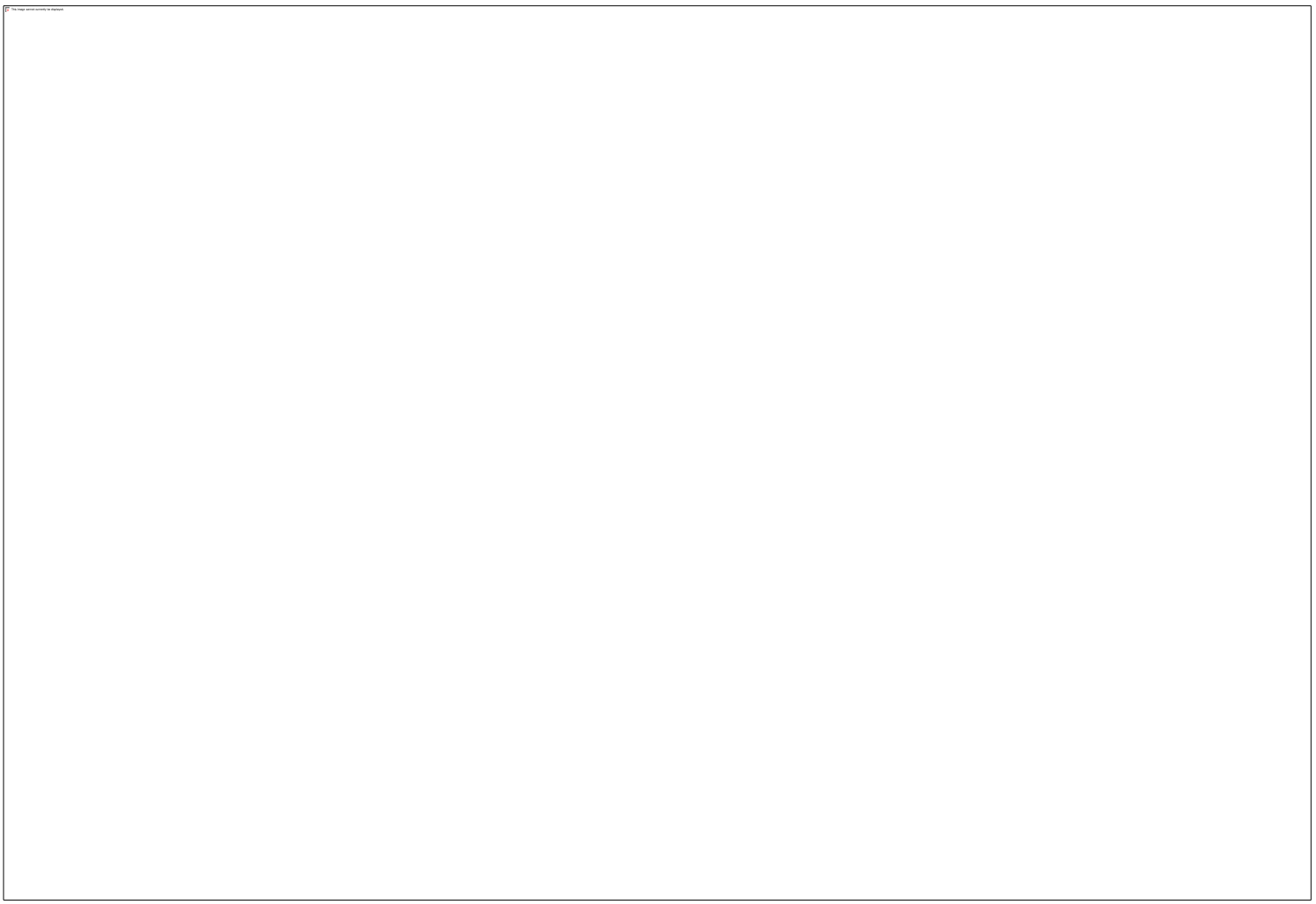
- They create upright lines.
- They suggest height and strength.
- They can represent standing objects.
- They create a sense of vertical movement.

Applications:

- Painting tree trunks.

- Painting tall buildings.
- Painting standing human figures.
- Painting waterfalls.
- Painting grass.

C. Diagonal brush strokes



These are strokes made by moving a brush diagonally across a surface.

Characteristics:

- They create slanting lines.
- They suggest movement and action.
- They create visual energy.
- They can communicate direction.

Applications:

- Painting sloping hills.
- Painting moving water.
- Painting wind-blown grass.
- Painting dynamic human poses.
- Painting objects in motion.

D. Curved brush strokes



These are strokes made by moving the brush in curved, circular or winding directions.

Characteristics:

- They produce curved patterns.
- They create rhythm and movement.
- They can communicate softness.
- They can create organic forms.

Applications:

- Painting clouds.
- Painting flowers.
- Painting flowing hair.
- Painting waves.
- Painting rounded objects.

E. Short brush strokes

These are small, separate brush marks applied over a surface.

Characteristics:

- They create broken colour effects.
- They can create visual texture.
- They allow the artist to build up colour gradually.
- They can produce expressive effects.

Applications:

- Painting leaves.
- Painting flowers.
- Painting grass.
- Painting rough surfaces.
- Painting distant scenery.

F. Long brush strokes

These are continuous strokes made by moving a brush over a relatively long distance.

Characteristics:

- They create flowing lines.
- They cover larger areas quickly.
- They may produce smooth or expressive effects.
- They suggest movement and direction.

Applications:

- Painting large backgrounds.
- Painting water surfaces.
- Painting long tree branches.
- Painting flowing fabric.

G. Thick brush strokes

These are strokes made using a substantial amount of paint or a heavily loaded brush.

Characteristics:

- They produce bold marks.
- They can create raised textures.
- They create strong visual emphasis.
- They make the painting surface appear rough or heavy.

Applications:

- Painting rough tree bark.
- Painting rocks.
- Painting thick vegetation.
- Creating expressive abstract paintings.

H. Thin brush strokes

These are delicate marks made using a fine brush or a small quantity of paint.

Characteristics:

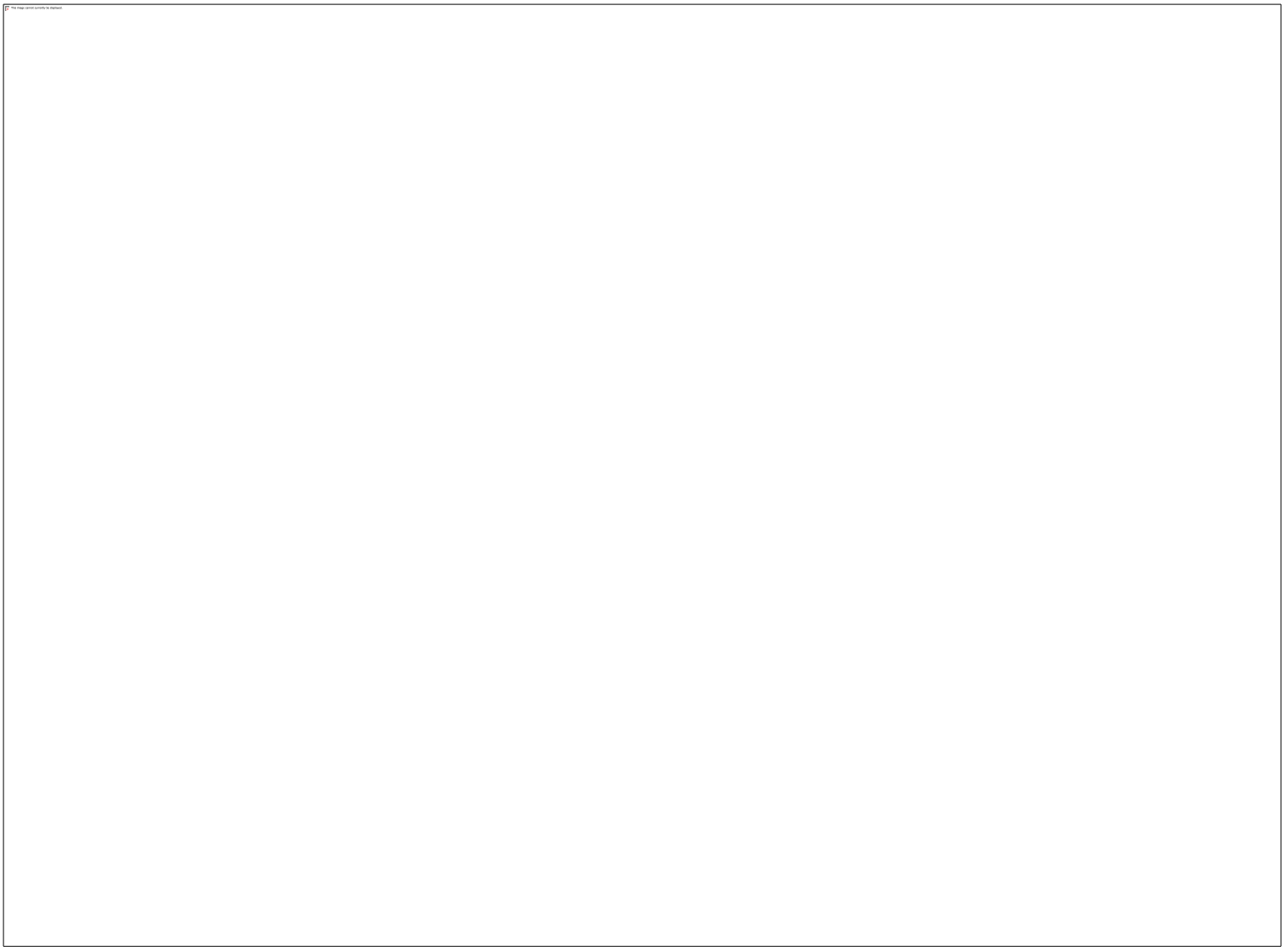
- They produce narrow lines.
- They allow fine details.

- They can create delicate patterns.
- They are useful for outlining.

Applications:

- Painting facial features.
- Painting grass blades.
- Painting tree branches.
- Painting fine patterns on clothes.

2.4 Types of painting brushes



Different brushes produce different marks and textures.

A. Round brush

A round brush has a rounded body and usually a pointed tip.

Uses:

1. Creating fine lines.
2. Painting outlines.
3. Painting curved lines.
4. Adding small details.
5. Painting narrow areas.
6. Creating dots and small marks.

B. Flat brush

A flat brush has a broad, flat end.

Uses:

1. Covering large areas.
2. Creating broad strokes.
3. Painting straight edges.
4. Creating rectangular marks.
5. Producing thick and thin lines depending on how it is held.

C. Filbert brush

A filbert brush has a flat body with a rounded tip.

Uses:

1. Blending colours.
2. Painting curved shapes.
3. Creating soft edges.
4. Painting flower petals.
5. Painting rounded forms.

D. Fan brush

A fan brush has bristles spread out in the shape of a fan.

Uses:

1. Creating grass textures.
2. Painting leaves.
3. Creating clouds.
4. Producing soft blending effects.
5. Painting hair and fur textures.

E. Liner brush

A liner brush is long and narrow, with fine bristles.

Uses:

1. Painting fine lines.
2. Creating delicate details.
3. Painting thin branches.
4. Adding outlines.
5. Painting decorative patterns.

F. Angled brush

An angled brush has bristles cut diagonally.

Uses:

1. Painting sharp edges.
2. Creating diagonal lines.
3. Painting corners.
4. Producing controlled strokes.
5. Painting geometric patterns.

2.5 Factors affecting the appearance of brush strokes

1. **Brush size:** Large brushes produce broad strokes while small brushes produce narrow strokes.
2. **Brush shape:** Round, flat and fan brushes create different marks.
3. **Pressure:** Heavy pressure produces wider marks while light pressure produces delicate marks.
4. **Paint consistency:** Thick paint creates stronger and more textured marks.
5. **Water content:** Watery paint produces softer and more transparent strokes.
6. **Movement:** Different hand movements produce different patterns.
7. **Surface texture:** Rough and smooth surfaces affect the appearance of strokes.
8. **Brush loading:** The quantity of paint on a brush affects the thickness and intensity of the stroke.
9. **Speed:** Fast movements may create energetic marks while slow movements allow greater control.
10. **Colour selection:** Contrasting colours make individual strokes more noticeable.

2.6 Steps in practising brush stroke techniques

1. Collect watercolour paints, paper, water, a palette and different brushes.
2. Arrange the materials safely on a working surface.
3. Observe the different shapes and sizes of brushes.
4. Prepare the desired paint colours.
5. Wet the brush appropriately.
6. Load the brush with paint.
7. Practise horizontal strokes.

8. Practise vertical strokes.
9. Practise diagonal strokes.
10. Practise curved strokes.
11. Experiment with thick and thin strokes.
12. Experiment with short and long strokes.
13. Compare the effects produced by different brushes.
14. Allow the work to dry.
15. Display the experiments for discussion and appreciation.

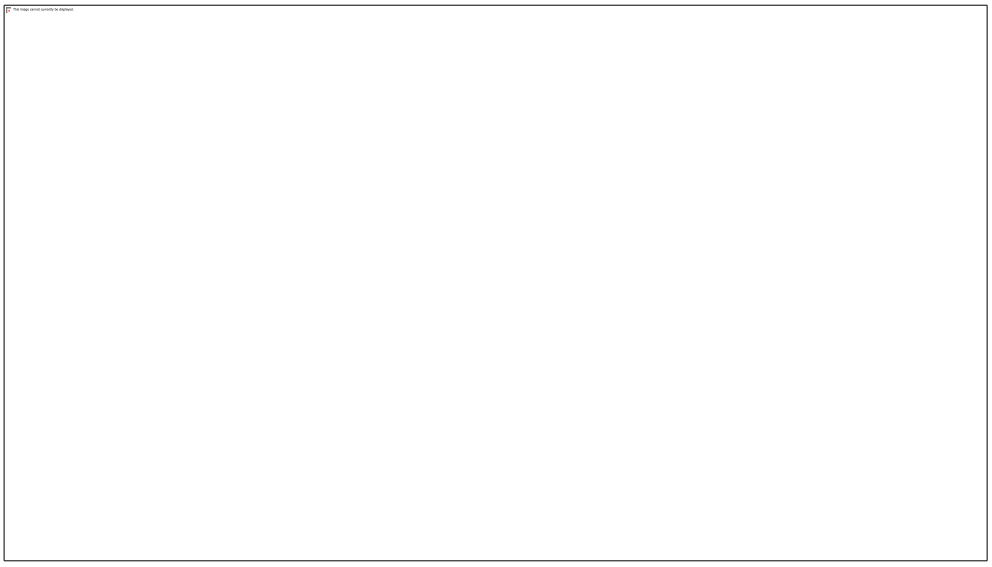
2.7 Advantages of brush stroke technique

- It allows accurate control of paint.
- It produces varied textures.
- It is suitable for detailed painting.
- It supports realistic and expressive painting.
- It allows artists to create movement.
- It can be used with different types of paint.
- It encourages experimentation.

2.8 Limitations of brush stroke technique

- It requires practice and coordination.
- Brushes may leave unwanted marks.
- Poor brush handling may produce uneven results.
- Some brushes are expensive.
- Brushes require proper cleaning and maintenance.
- Large areas may take considerable time when using small brushes.

2.9 Vincent van Gogh and brush stroke technique





Vincent van Gogh (1853–1890) was a Dutch painter recognised for his expressive use of colour and energetic brush strokes.

Features of his painting approach:

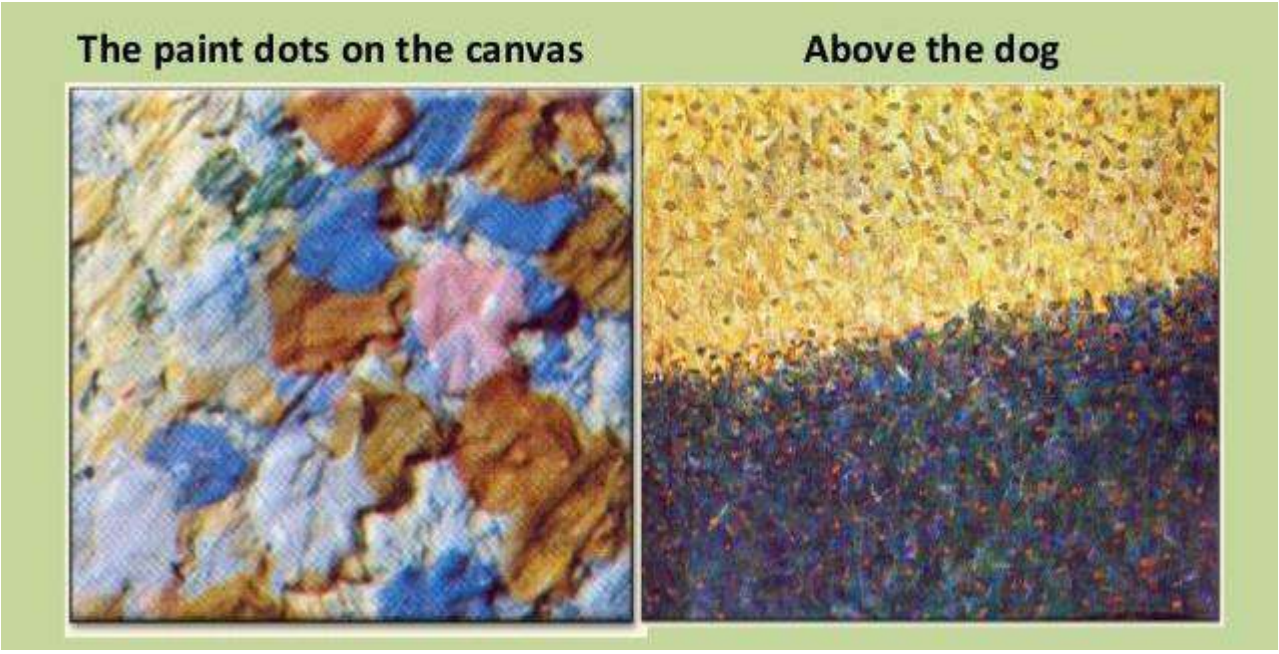
1. Used visible brush strokes.
2. Applied thick layers of paint in many works.
3. Used curved and swirling strokes.
4. Created movement through repeated lines.
5. Used strong colour contrasts.
6. Communicated emotion through colour and brushwork.
7. Used directional strokes to represent natural forms.

Famous paintings:

- *The Starry Night*.
- *Sunflowers*.
- *Irises*.
- *Wheatfield with Cypresses*.

Learning application: Learners can study his use of curved and directional strokes before creating their own landscape paintings.

3.0 DABBING PAINTING TECHNIQUE







3.1 Meaning of dabbing technique

Dabbing is a painting technique in which paint is applied to a surface using repeated light touches or presses of a painting tool.

The tool is lifted and pressed repeatedly onto the surface to create dots, small patches, marks and textured effects.

Dabbing can be carried out using:

- Paintbrushes.
- Sponges.
- Cotton buds.

- Foam pieces.
- Stencils.
- Fingers, where safe and appropriate.
- Other suitable textured tools.

The technique is particularly useful when an artist wants to create texture, patterns, visual interest and broken colour effects.

3.2 Characteristics of dabbing technique

1. It involves repeated touches or presses.
2. It creates dots and small marks.
3. It can produce rough or soft textures.
4. It creates patterns through repetition.
5. It can combine several colours.
6. It allows the artist to create visual depth.
7. It can be used on different surfaces.
8. It can create natural-looking textures.

3.3 Tools and materials used in dabbing

A. Sponge



A sponge is a soft, porous material that absorbs paint and transfers it to a surface.

Uses:

- Creating cloud textures.
- Painting leaves.
- Creating rough surfaces.
- Painting bushes.

- Creating stone textures.
- Producing irregular patterns.

B. Round brush

A round brush can be used to create small dots and repeated circular marks.

Uses:

- Painting flowers.
- Creating small decorative patterns.
- Painting fruit textures.
- Creating dotted backgrounds.

C. Cotton buds



Cotton buds are small tools with soft cotton ends.

Uses:

- Creating small dots.
- Producing decorative patterns.
- Painting flower centres.
- Creating repeated designs.

D. Foam pieces

Foam pieces can be cut into different shapes and used to apply paint.

Uses:

- Creating geometric patterns.
- Producing repeated shapes.
- Creating textured backgrounds.
- Making decorative prints.

E. Stencils

A stencil is a template with cut-out shapes through which paint is applied to create a particular design.

Uses:

- Producing repeated patterns.
- Creating decorative shapes.
- Painting letters and symbols.
- Creating organised compositions.

3.4 Types of dabbing effects

1. Fine dabbing

This involves applying small, closely controlled dots.

Applications:

- Painting flower centres.
- Creating small highlights.
- Painting distant vegetation.
- Producing delicate decorative patterns.

2. Broad dabbing

This involves using larger tools to create bigger marks.

Applications:

- Painting bushes.
- Creating large textured areas.
- Painting clouds.
- Representing rocky surfaces.

3. Dense dabbing

This involves placing marks close together.

Applications:

- Creating thick vegetation.
- Producing dark textured areas.
- Creating visually rich patterns.

4. Scattered dabbing

This involves distributing marks irregularly across the surface.

Applications:

- Painting stars.
- Creating falling leaves.
- Painting flowers.
- Representing distant birds.

5. Layered dabbing

This involves applying different layers of dabs over one another.

Applications:

- Creating depth.
- Building up colour.
- Producing complex textures.
- Painting foliage and landscapes.

3.5 Steps in applying the dabbing technique

1. Prepare the painting surface.
2. Collect paints, brushes, sponges or cotton buds.
3. Select suitable colours.
4. Prepare the paint on a palette.
5. Dip the selected tool lightly into the paint.
6. Remove excess paint if necessary.
7. Press the tool gently onto the surface.
8. Lift the tool vertically to leave a mark.
9. Repeat the process to create a pattern.
10. Vary the pressure and spacing.
11. Introduce additional colours.
12. Overlap selected marks to create texture.
13. Allow each layer to dry where necessary.
14. Complete the painting.
15. Display and evaluate the finished work.

3.6 Uses of dabbing technique in painting

1. Painting tree leaves.
2. Painting flower petals.
3. Creating cloud textures.
4. Painting rocky surfaces.
5. Creating grass and bushes.
6. Painting sand and soil.

7. Creating decorative backgrounds.
8. Painting stars and distant lights.
9. Creating abstract compositions.
10. Producing textured effects on clothing.

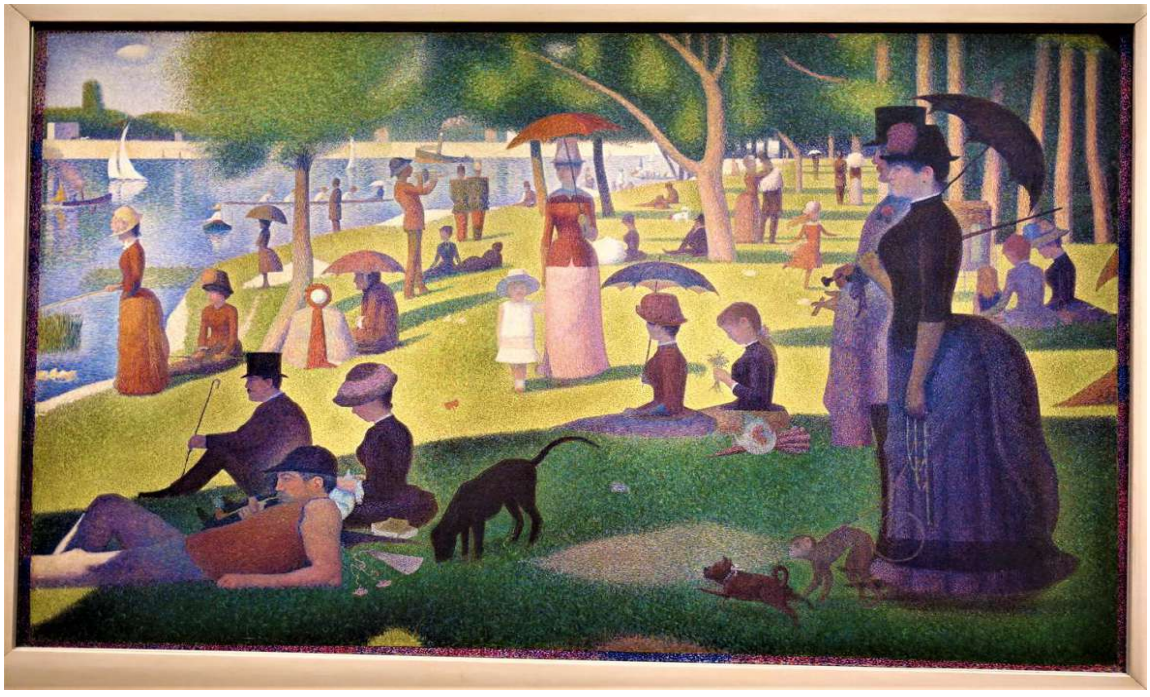
3.7 Advantages of dabbing technique

- It creates attractive textures.
- It is easy to experiment with.
- It uses readily available materials.
- It allows the artist to produce repeated patterns.
- It creates visual interest.
- It is useful for representing natural objects.
- It encourages creativity and innovation.
- It can be used with several painting materials.

3.8 Limitations of dabbing technique

- Repeated marks may become monotonous.
- Excess paint may produce unwanted smudges.
- The technique may be unsuitable for fine realistic details.
- Consistency requires practice.
- Some tools may leave irregular marks.
- It may take time to cover large surfaces.

3.9 Georges Seurat and Paul Signac: Dabbing and Pointillism





Georges Seurat (1859–1891) and Paul Signac (1863–1935) were important artists associated with Neo-Impressionism and Pointillism.

Pointillism

Pointillism is a painting method in which an image is created using many small dots or points of colour placed close together.

When viewed from a suitable distance, the dots visually combine to create forms, colours and images.

Features of Pointillism:

1. Uses small dots of colour.
2. Relies on careful colour placement.
3. Creates visual mixing of colours.
4. Produces a distinctive dotted appearance.
5. Requires patience and accuracy.
6. Can create light and shadow.
7. Produces interesting surface textures.

Important distinction: Pointillism is a specific artistic method based on small points of colour. Dabbing is a broader technique involving repeated touches or presses using different tools. The two can produce similar visual effects, but they are not identical.

Famous works:

- Georges Seurat: *A Sunday Afternoon on the Island of La Grande Jatte*.
- Georges Seurat: *Bathers at Asnières*.
- Paul Signac: *The Port of Saint-Tropez*.

3.10 Difference between brush stroke and dabbing techniques

Brush stroke technique	**Dabbing technique**
Uses directional brush movements.	Uses repeated touches or presses.
Often produces lines and flowing marks.	Often produces dots and patches.
Can create long and continuous marks.	Usually creates separate or overlapping marks.
Useful for outlines and directional effects.	Useful for textured surfaces and patterns.
Can create movement and rhythm.	Can create dense and irregular textures.
Commonly uses round and flat brushes.	Uses brushes, sponges, foam and cotton buds.

4.0 PAINTING THE HUMAN FIGURE USING VARIED PAINTING TECHNIQUES



4.1 Meaning of human figure painting

Human figure painting is the artistic representation of the human body using paint on a two-dimensional surface.

It involves observing and representing the human body in different positions, activities, expressions and environments.

Artists use the human figure to communicate emotions, cultural identity, social experiences, movement and human relationships.

In Fine Arts Technology, learners explore how to sketch, compose and paint human figures using varied painting techniques such as:

1. Brush stroke technique.
2. Dabbing technique.
3. Wash technique.
4. Blending technique.
5. Layering technique.
6. Digital painting technique.

4.2 Importance of studying human figure painting

1. **Develops observational skills:** Learners understand the proportions, shapes and structure of the human body.
2. **Promotes creativity:** Learners experiment with different poses, clothing, colours and backgrounds.
3. **Communicates human experiences:** Paintings can represent work, celebrations, sports, family activities and everyday life.
4. **Preserves cultural identity:** Artists can represent traditional Kenyan clothing, ceremonies and cultural activities.
5. **Develops technical skills:** Learners improve their drawing, colouring, shading and painting abilities.
6. **Promotes empathy:** Learners appreciate different human experiences and perspectives.
7. **Supports career development:** Figure painting is useful in illustration, animation, fashion design and advertising.

4.3 Understanding human body proportions

Human body proportions refer to the relative sizes and measurements of different parts of the human body.

Understanding proportions helps artists create believable human figures.

Important parts of the human figure

1. Head

- Contains the facial features.
- Provides a reference measurement for body proportions.
- Its shape varies depending on the individual.

2. Neck

- Connects the head to the upper body.
- Supports the head.

- Changes position depending on the pose.

3. Torso

The torso is the central part of the body consisting mainly of the chest, abdomen and back.

- Provides the main body mass.
- Determines much of the figure's posture.
- Connects the upper and lower body.

4. Arms

- Extend from the shoulders.
- Include the upper arms, elbows, forearms and hands.
- Their positions communicate actions and gestures.

5. Legs

- Support the body.
- Include the thighs, knees, lower legs and feet.
- Their positions determine whether a figure is standing, sitting, walking or running.

6. Hands and feet

- Hands communicate gestures and activities.
- Feet provide support and balance.
- Their shapes and positions are important in figure painting.

The head measurement method

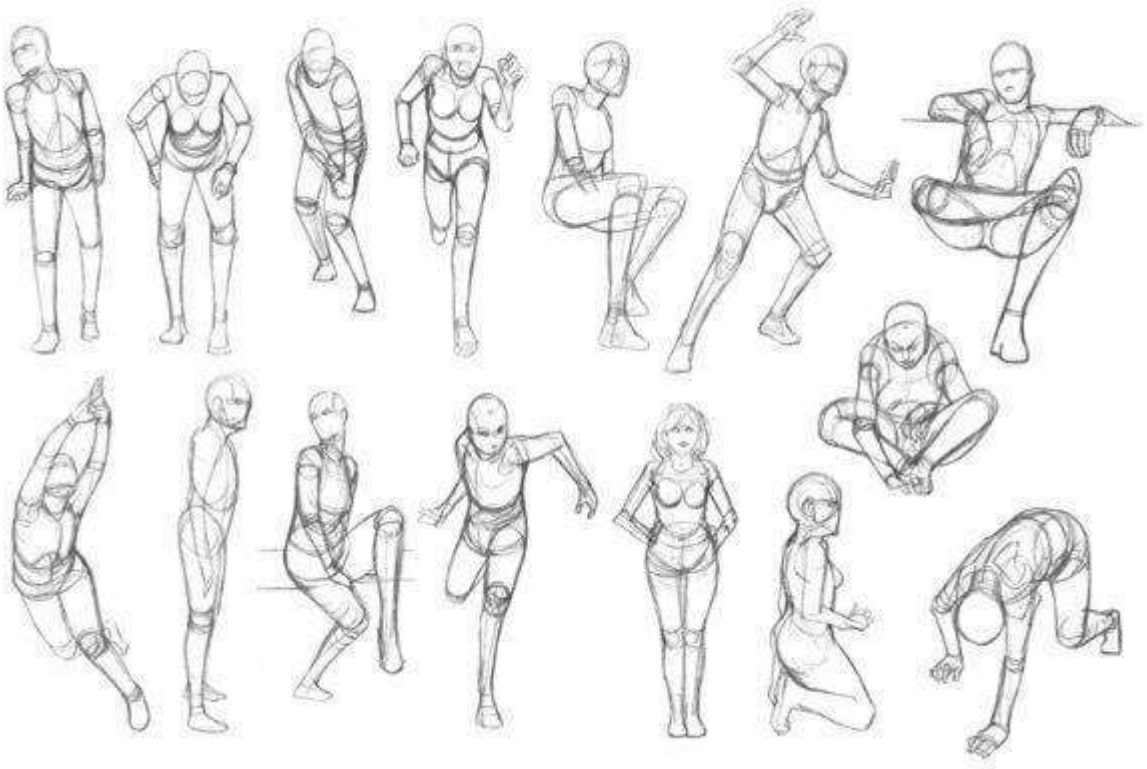
Artists sometimes use the height of the head as a unit when estimating the proportions of an adult figure.

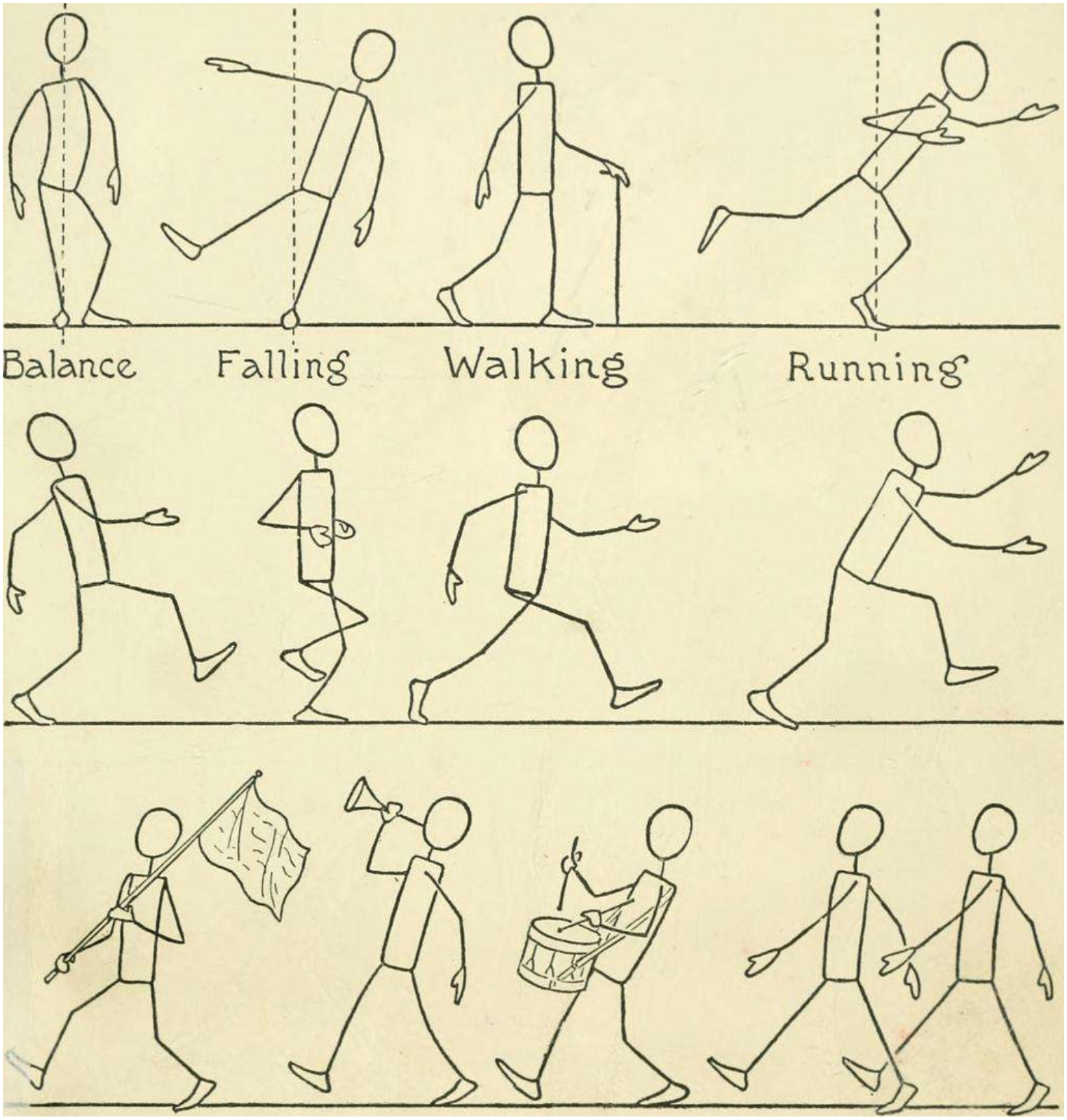
A commonly used academic guide for an idealised adult figure is approximately seven to eight head lengths tall.

This is only a drawing guide. Actual human proportions vary according to age, body type and individual characteristics.

Children generally have larger heads in proportion to their bodies than adults.

4.4 Common human figure poses





A. Standing pose

A standing pose represents a person supporting their body on their feet.

Characteristics:

- The body is generally upright.
- The legs support the body weight.
- The arms may hang naturally or perform an activity.
- The head may face different directions.

Examples in a Kenyan context:

- A teacher addressing learners.
- A farmer standing in a maize field.
- A market trader selling vegetables.
- A musician performing.

B. Sitting pose

This represents a person resting on a chair, stool, bench or other surface.

Characteristics:

- The body weight is supported by a sitting surface.
- The knees are usually bent.
- The torso may lean forwards or backwards.
- The arms may rest on the lap or perform an activity.

Examples:

- A learner reading a book.
- An elder telling stories.
- A person weaving a basket.
- A student using a computer.

C. Walking pose

This represents a person moving from one location to another.

Characteristics:

- One leg moves forward while the other supports the body.
- The arms usually move in coordination with the legs.
- The torso remains balanced.
- The body demonstrates forward movement.

Examples:

- A person walking to school.
- A farmer walking to a farm.
- A person walking along a village path.

D. Running pose

This represents a person moving rapidly.

Characteristics:

- The body leans slightly forward.
- The arms bend and swing.
- The legs move in alternating positions.
- The figure communicates speed and energy.

Examples:

- An athlete running in a competition.
- A child playing football.
- A person participating in athletics.

E. Bending pose

This represents a person leaning the body forwards or sideways.

Examples:

- A farmer planting crops.
- A person collecting firewood.
- A learner picking up a book.

F. Kneeling pose

This represents a person resting on one or both knees.

Examples:

- A person planting seedlings.
- A learner participating in a practical activity.
- A person performing a cultural activity.

4.5 Principles to consider when painting human figures

1. **Proportion:** Maintain believable relationships between body parts.
2. **Balance:** Arrange the body to show stability or intentional movement.
3. **Anatomical structure:** Understand the basic arrangement of body parts.
4. **Gesture:** Capture the general action and direction of the pose.
5. **Perspective:** Show body parts according to their apparent position and distance.
6. **Colour:** Select suitable colours to represent the subject and communicate the intended mood.
7. **Value:** Use light and dark tones to create volume.
8. **Texture:** Represent different surface qualities such as hair, fabric and skin.
9. **Composition:** Arrange the figure and other objects attractively.
10. **Expression:** Communicate feelings through facial features and body language.

4.6 Use of painting techniques when painting human figures

A. Brush stroke technique

Brush strokes are used to:

- Paint the outlines and major forms.
- Create folds in clothing.
- Represent hair.
- Paint facial details.
- Create highlights and shadows.
- Communicate movement through expressive marks.

B. Dabbing technique

Dabbing is used to:

- Create fabric textures.
- Represent decorative patterns.
- Create textured backgrounds.
- Produce hair textures.
- Create visual effects on clothing.
- Represent rough or patterned surfaces.

C. Wash technique

A wash is a thin, diluted application of paint that creates a transparent or semi-transparent layer of colour.

Uses in figure painting:

- Creating initial colour layers.
- Representing soft shadows.
- Painting backgrounds.
- Creating gentle tonal transitions.
- Establishing the overall colour mood.

D. Blending technique

Blending involves gradually merging two or more colours to create a smooth transition.

Uses:

- Creating gradual changes in skin tones.
- Representing rounded body forms.
- Creating soft shadows.
- Producing smooth transitions in clothing.
- Creating atmospheric backgrounds.

4.7 Steps in painting a human figure composition









Step 1: Identify the subject

- Decide what human activity to represent.
- Select the number of figures.
- Identify the environment.
- Determine the message of the painting.

Step 2: Collect reference materials

- Observe actual human figures.
- Study photographs or suitable illustrations.

- Observe body proportions and poses.
- Consider clothing, gestures and expressions.

Step 3: Prepare materials

Collect:

- Painting paper or canvas.
- Pencils.
- Eraser.
- Paints.
- Brushes.
- Palette.
- Water container.
- Drawing board.
- Protective covering.

Step 4: Sketch the composition

- Draw the main figures lightly.
- Establish the overall arrangement.
- Indicate the head, torso and limbs.
- Show the direction of movement.
- Include the background.

Step 5: Establish body proportions

- Compare the size of the head with the body.
- Check the lengths of the limbs.
- Observe the relationship between body parts.
- Correct inaccurate proportions.

Step 6: Apply the first paint layer

- Apply the background colours.
- Block in the main body shapes.
- Establish the main colour areas.
- Avoid unnecessary details at this stage.

Step 7: Develop colour and value

- Introduce lighter and darker tones.
- Create shadows.
- Add highlights.
- Use colour variations to create volume.

Step 8: Apply varied painting techniques

- Use brush strokes for expressive marks.
- Use dabbing to create texture.
- Use washes for transparent colour layers.
- Blend selected areas where necessary.

Step 9: Add details

- Paint facial features.
- Add clothing details.
- Refine hands and feet.
- Develop the background.
- Improve the relationship between the figures and surroundings.

Step 10: Complete and evaluate the painting

- Correct visible errors.
- Improve colour harmony.
- Check composition and balance.
- Allow the painting to dry.
- Display the finished artwork.

4.8 Kenyan themes for human figure painting

Learners can develop compositions based on familiar Kenyan activities and environments.

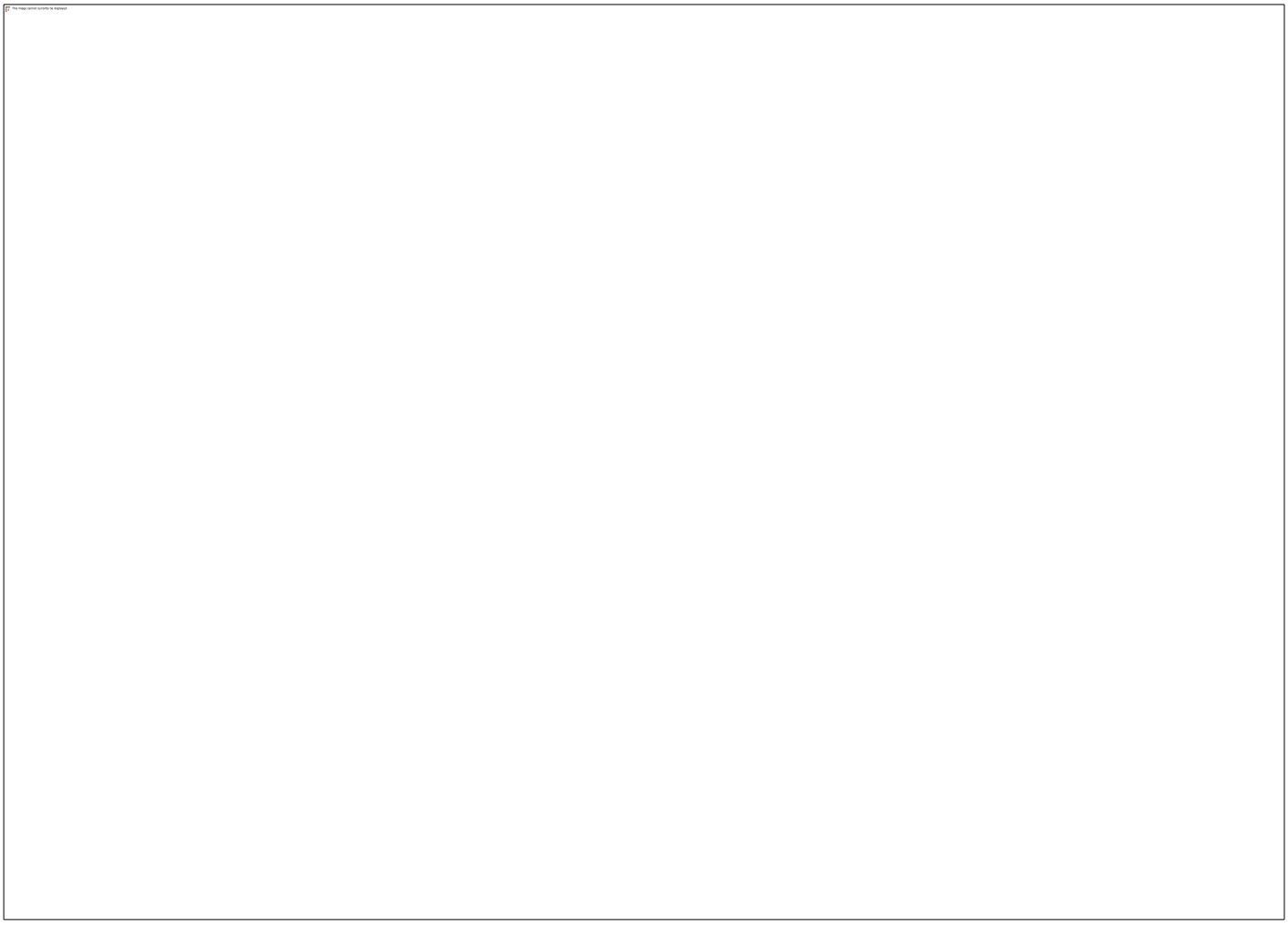
Theme	**Possible human figures**
Agriculture	Farmers planting, harvesting or milking cows
Education	Learners studying or teachers teaching
Sports	Athletes running or players participating in football
Culture	Traditional dancers and musicians
Trade	Traders selling goods in a market
Environment	Community members planting trees
Transport	People boarding matatus or walking
Community service	Young people cleaning their environment
Technology	Learners using computers

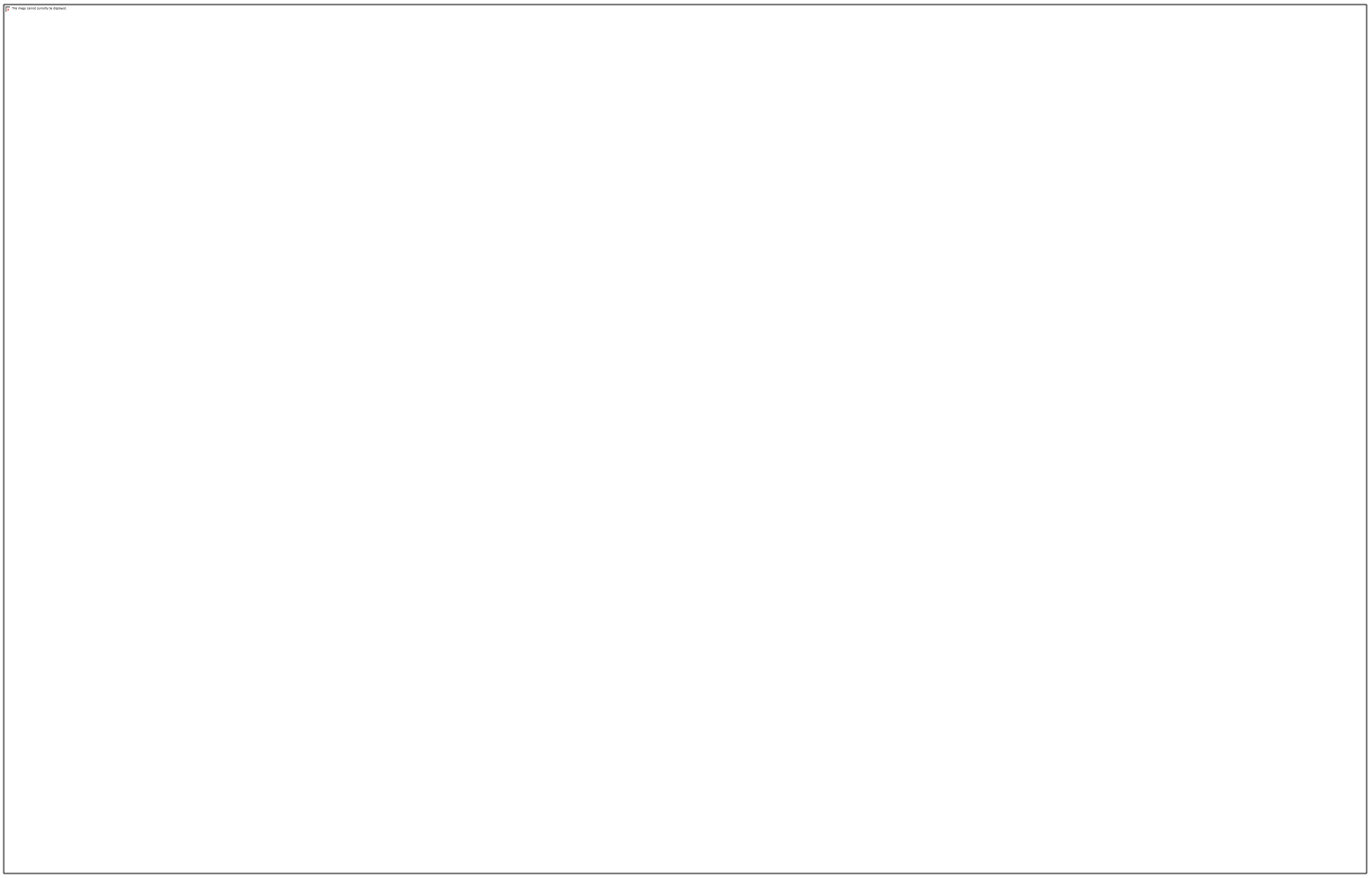
Family life	Family members preparing meals

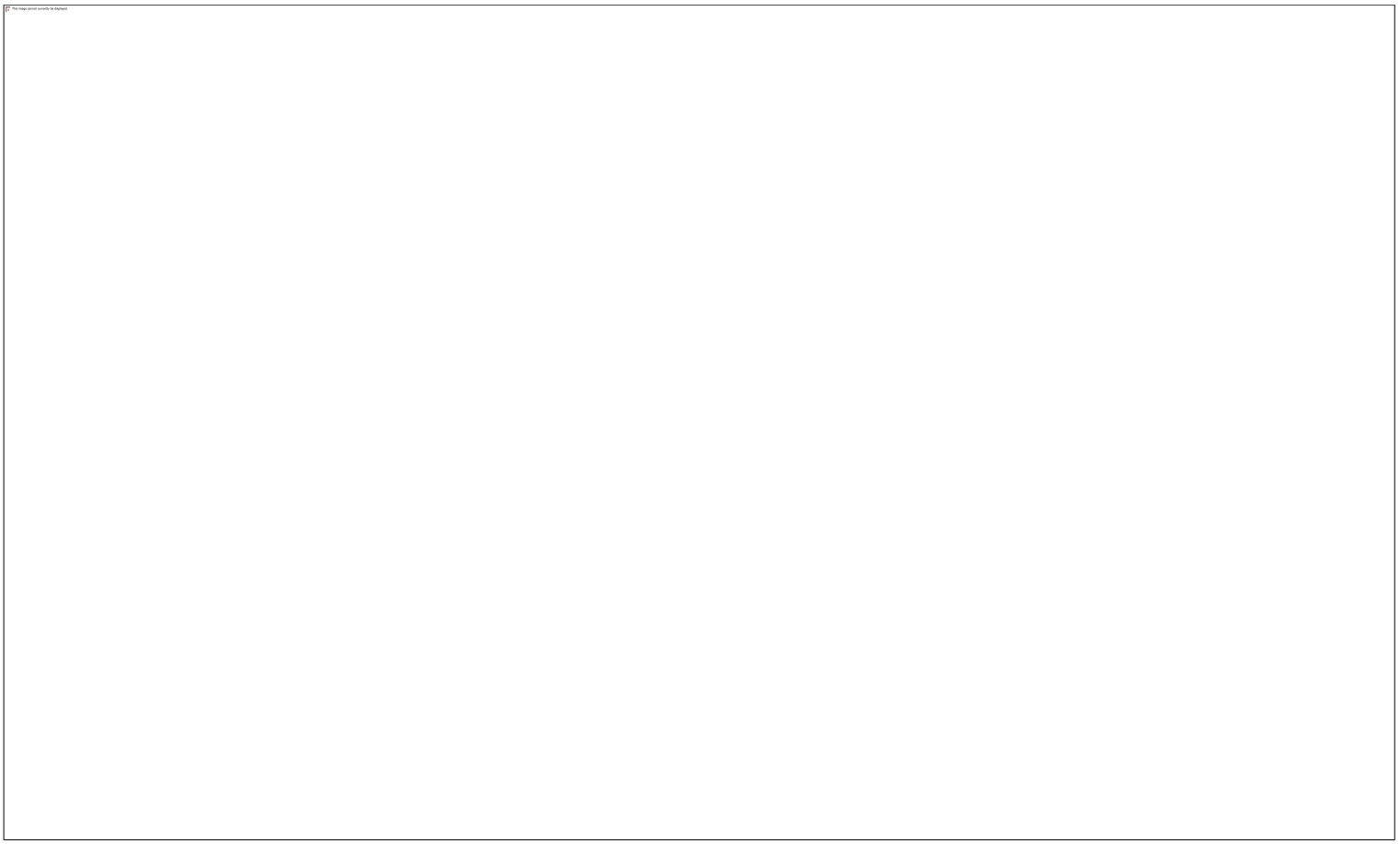
4.9 Common challenges in human figure painting and solutions

Challenge	Possible solution
Incorrect body proportions	Use head measurement and observation
Poor facial details	Practise drawing facial features separately
Stiff body positions	Study gesture and movement
Flat-looking figures	Apply highlights and shadows
Poor colour mixing	Experiment with colour combinations
Weak composition	Make several preliminary sketches
Excessive details	Concentrate on the main forms first

5.0 DIGITAL PAINTING TECHNIQUES







5.1 Meaning of digital painting

Digital painting is the process of creating painted images using electronic devices and specialised software instead of relying entirely on traditional painting materials.

It involves using digital tools such as computers, graphics tablets, styluses and painting applications to create, edit and manipulate images.

Digital painting imitates many traditional painting techniques, including:

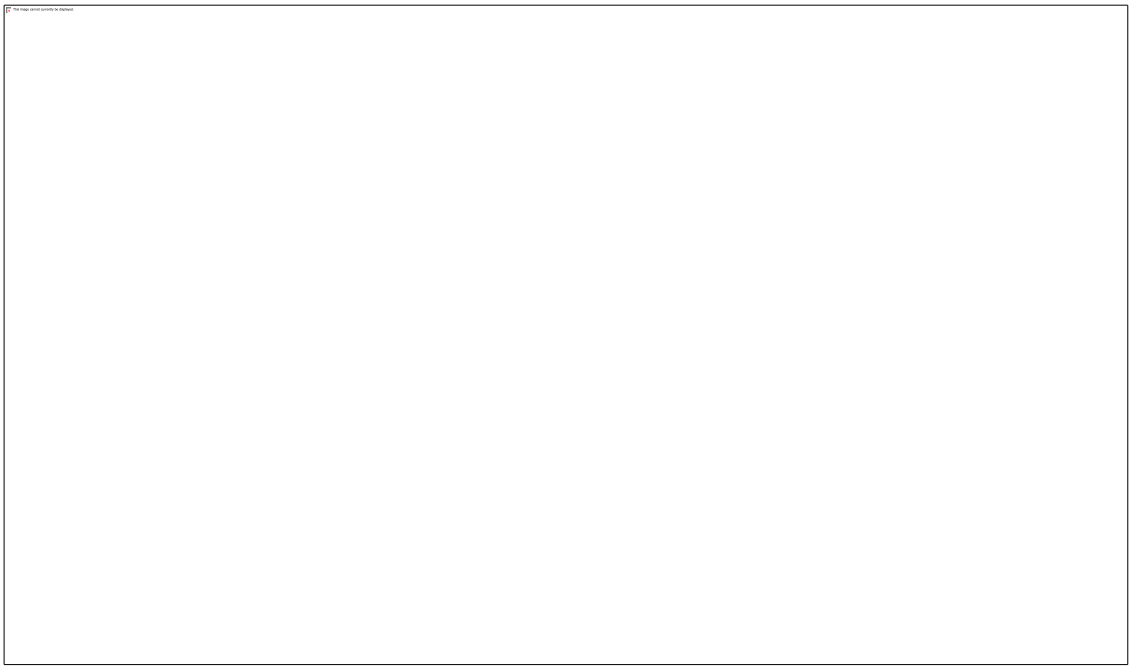
- Brush strokes.
- Dabbing.
- Washes.
- Blending.
- Layering.
- Texturing.

It also provides additional possibilities such as undoing mistakes, resizing objects, adjusting colours and working with multiple layers.

5.2 Importance of digital painting

1. **Promotes creativity:** Artists can explore different styles and visual effects.
2. **Allows easy editing:** Mistakes can be corrected without destroying the entire artwork.
3. **Saves materials:** It reduces the need for physical paint, brushes and paper.
4. **Supports experimentation:** Artists can test different colours, textures and compositions.
5. **Improves efficiency:** Digital tools can speed up some painting processes.
6. **Supports sharing:** Digital paintings can be shared through online platforms.
7. **Supports commercial art:** Digital paintings are used in advertising, publishing, animation and illustration.
8. **Encourages innovation:** Artists can combine traditional art principles with digital technology.
9. **Provides flexible storage:** Artwork can be saved and backed up digitally.
10. **Supports collaboration:** Artists can exchange ideas and work with others using digital platforms.

5.3 Digital painting equipment



A. Computer

A computer is an electronic device used to process information and run digital painting applications.

Uses in digital painting:

- Running painting software.
- Storing artwork.
- Editing images.
- Managing digital files.
- Exporting finished paintings.

B. Graphics tablet

A graphics tablet is an electronic drawing surface that allows an artist to create digital marks using a stylus.

Uses:

- Drawing digital lines.
- Creating brush strokes.
- Painting shapes.
- Applying shading.
- Creating detailed illustrations.

C. Stylus

A stylus is a pen-like electronic tool used to draw or paint on a graphics tablet or compatible touchscreen.

Uses:

- Creating precise marks.
- Drawing outlines.
- Applying digital colour.
- Creating different brush effects.
- Controlling pressure-sensitive strokes on supported devices.

D. Monitor or display screen

A monitor displays the digital artwork being created.

Uses:

- Viewing the painting.
- Checking colours.
- Examining details.
- Monitoring changes.

E. Mouse

A mouse is a pointing device used to control the computer.

Uses:

- Selecting tools.
- Navigating software.
- Adjusting settings.
- Moving objects.

F. Keyboard

The keyboard is used to enter commands and text.

Uses:

- Activating shortcuts.
- Naming files.
- Typing descriptions.
- Controlling software functions.

G. Smartphone or tablet

A smartphone or tablet with suitable applications can also be used for digital painting.

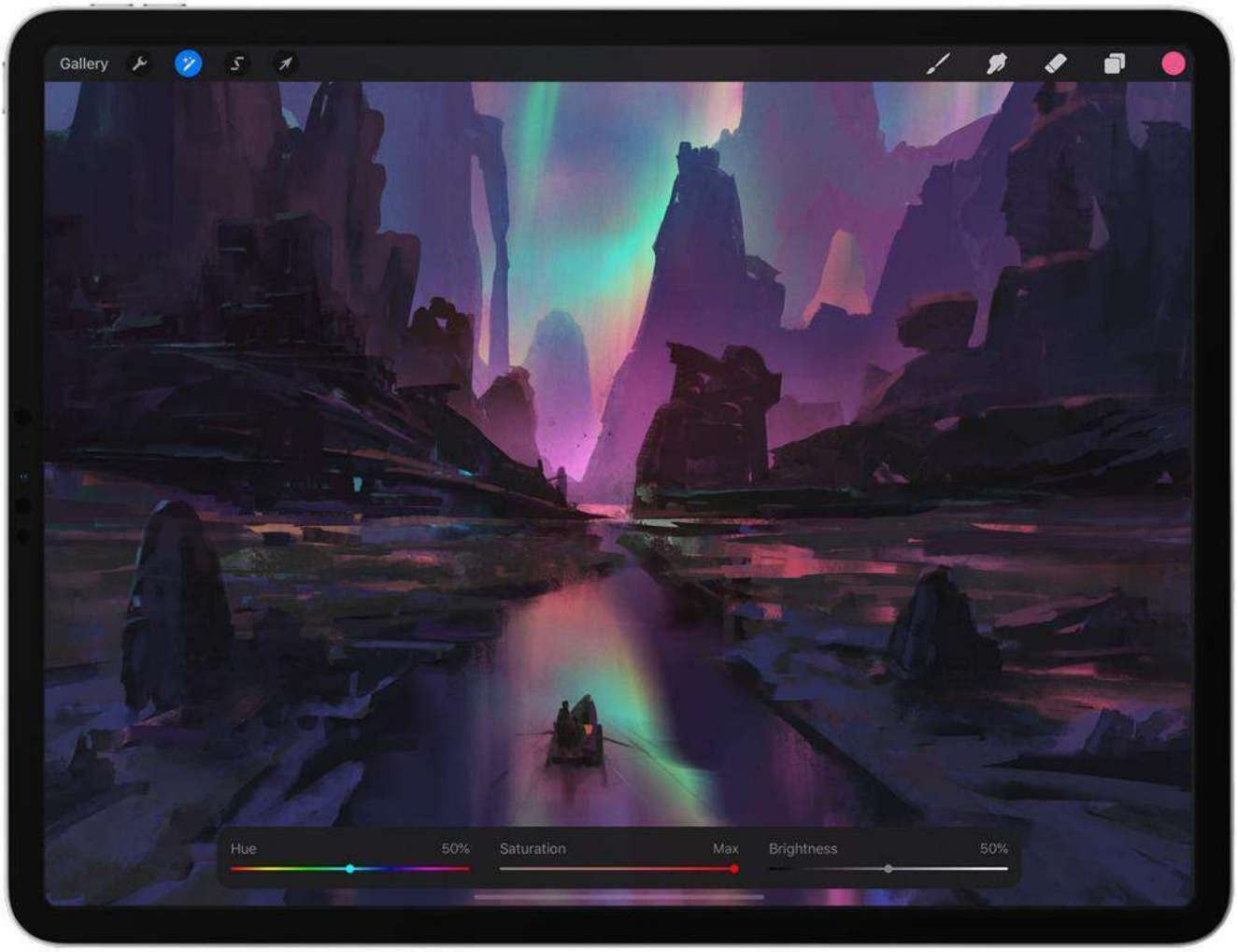
Uses:

- Creating illustrations.
- Painting small compositions.
- Editing pictures.
- Sharing artwork.

5.4 Examples of digital painting software

The following applications can support digital painting and illustration.





1. Krita

Krita is a digital painting application designed for illustration, concept art and other painting activities.

Features:

- Customisable brushes.
- Layers.
- Colour selection.
- Digital drawing tools.
- Painting and texturing tools.

2. Adobe Photoshop

Photoshop is widely used for digital image editing, painting and graphic design.

Features:

- Digital brushes.
- Layers.
- Selection tools.
- Colour correction.
- Image manipulation.

3. Procreate

Procreate is a digital illustration and painting application used on compatible Apple tablets.

Features:

- Digital brushes.
- Layer management.
- Drawing and painting tools.
- Colour selection.
- Illustration tools.

4. GIMP

GIMP is an image editing application that can also be used for digital painting and illustration.

Features:

- Painting tools.
- Brush customisation.
- Layers.
- Image manipulation.
- Colour adjustments.

5. MediBang Paint

This application supports digital drawing, painting and comic illustration.

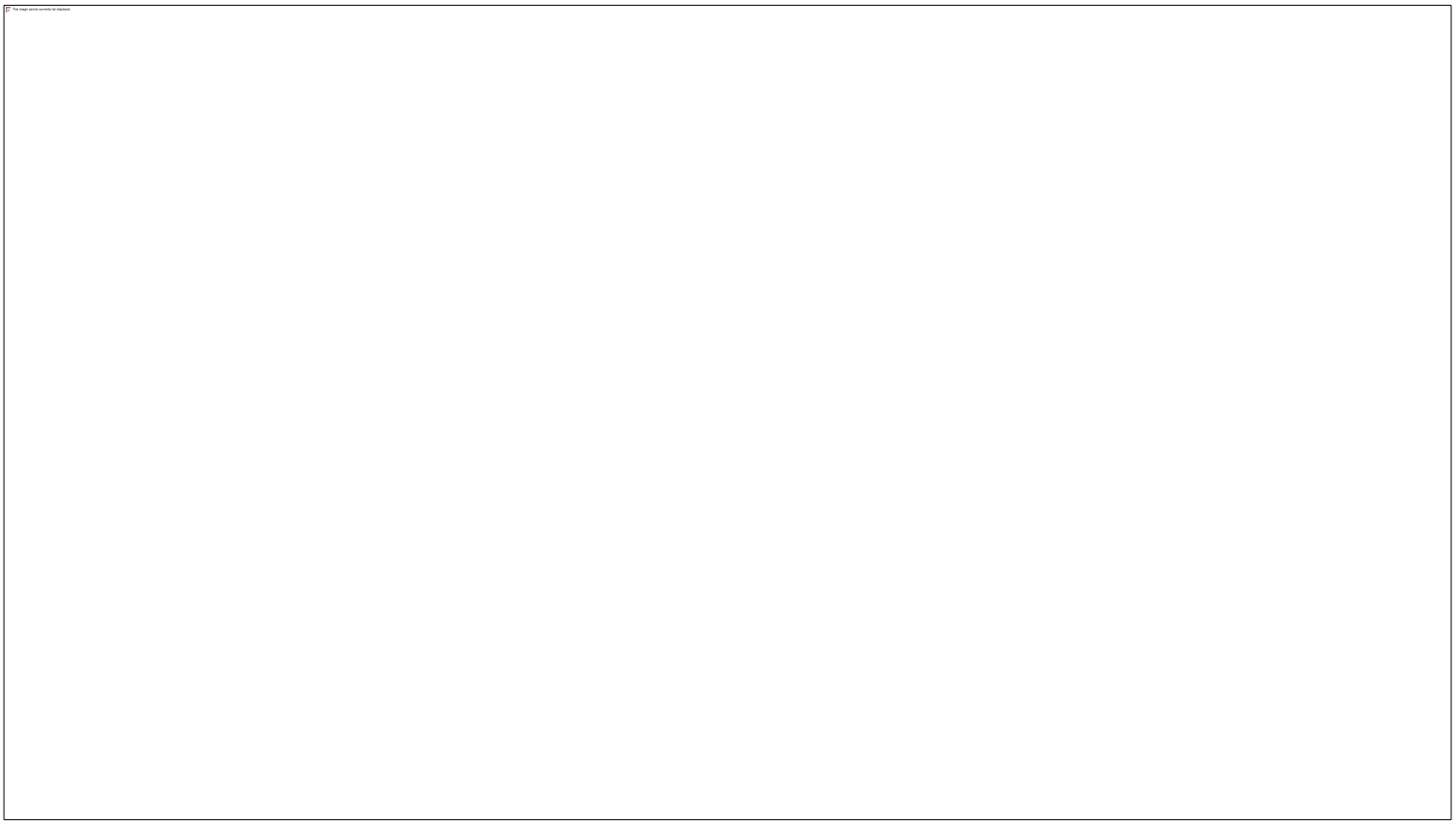
Features:

- Brush tools.
- Layers.

- Colour palettes.
- Drawing tools.
- Illustration features.

Note: The availability of particular applications and features depends on the device, software version and licence. Learners should use legally obtained applications and appropriate school-approved tools.

5.5 Basic tools found in digital painting software



A. Brush tool

The brush tool is used to create lines and apply digital paint to the canvas.

It can be adjusted to produce:

- Thick strokes.
- Thin strokes.
- Soft strokes.
- Rough strokes.
- Textured strokes.

B. Eraser tool

The eraser tool removes selected digital marks or painted areas.

Uses:

- Correcting mistakes.
- Removing unwanted marks.
- Refining shapes.

- Cleaning edges.

C. Colour picker

The colour picker is a tool used to select a colour from an artwork or colour palette.

Uses:

- Matching colours.
- Selecting existing colours.
- Maintaining colour consistency.
- Creating harmonious compositions.

D. Fill tool

The fill tool applies colour to a selected area.

Uses:

- Colouring enclosed shapes.
- Filling backgrounds.
- Applying flat colours.
- Creating large colour areas.

E. Selection tool

The selection tool allows the artist to isolate a particular part of an image.

Uses:

- Editing specific areas.
- Moving selected objects.
- Applying effects to selected regions.
- Protecting other parts of the artwork during editing.

F. Zoom tool

The zoom tool enlarges or reduces the displayed artwork.

Uses:

- Working on fine details.
- Viewing the entire composition.
- Inspecting small areas.
- Checking the overall appearance.

G. Layers panel

Layers are separate levels of digital artwork that can be edited independently.

Uses:

- Separating the background from foreground objects.
- Editing individual parts.
- Reorganising elements.

- Controlling transparency.
- Experimenting without affecting the entire composition.

H. Colour palette

A colour palette is a collection of colours available for use in a digital painting.

Uses:

- Selecting colours.
- Maintaining colour harmony.
- Organising colour combinations.
- Developing consistent artwork.

5.6 Digital painting techniques

A. Digital brush stroke technique

This involves using a digital brush to create different marks and lines.

Applications:

- Painting tree trunks.
- Creating outlines.
- Painting clouds.
- Creating expressive marks.
- Painting detailed objects.

B. Digital dabbing technique

This involves repeatedly applying small digital marks using a textured or dotted digital brush.

Applications:

- Painting leaves.
- Creating grass textures.
- Producing star patterns.
- Painting flowers.
- Creating rough surfaces.

C. Digital wash technique

This involves applying transparent or semi-transparent digital colour layers.

Applications:

- Painting skies.
- Creating atmospheric effects.
- Building soft colour backgrounds.
- Representing shadows.
- Producing transparent colour effects.

D. Digital blending technique

This involves gradually merging colours using digital blending tools or soft brushes.

Applications:

- Creating smooth colour transitions.
- Representing rounded forms.
- Creating shadows.
- Painting clouds.
- Producing realistic effects.

E. Digital layering technique

This involves creating an artwork using several separate digital layers.

Applications:

- Separating the background and foreground.
- Painting objects independently.
- Adjusting individual elements.
- Adding details without affecting the base painting.

F. Digital texturing technique

This involves using digital brushes, patterns or effects to represent surface qualities.

Applications:

- Creating rough tree bark.
- Painting grass.
- Representing clouds.
- Creating stone textures.
- Painting fabric.

5.7 Steps in creating a digital painting

1. Identify the subject to be painted.
2. Select an appropriate digital device.
3. Open a suitable painting application.
4. Create a new canvas.
5. Select the canvas dimensions and resolution.
6. Choose the appropriate brush.
7. Create a rough sketch.
8. Organise the artwork using layers.
9. Apply the background colours.
10. Paint the main objects.
11. Develop shapes and forms.

12. Apply highlights and shadows.
13. Add textures using appropriate brushes.
14. Refine the details.
15. Check the composition.
16. Save the artwork in an appropriate editable format.
17. Export a copy in a suitable image format such as PNG or JPEG.
18. Display or share the finished artwork responsibly.

5.8 Advantages of digital painting over traditional painting

Digital painting	Traditional painting
Uses electronic devices.	Uses physical materials.
Can undo many actions.	Corrections may require repainting.
Uses digital brushes.	Uses physical brushes and tools.
Can store several versions.	Physical work requires suitable storage.
Colours can be adjusted easily.	Colour changes require additional paint.
Artwork can be shared electronically.	Artwork may need scanning or photography.
Requires suitable devices and software.	Can be practised with simple physical materials.

Both approaches are valuable. Digital painting does not replace traditional painting; instead, the two approaches can complement each other.

5.9 Limitations of digital painting

1. Digital devices can be expensive.
2. Some applications require paid licences.
3. Devices require electricity or battery power.
4. Learners need digital skills.
5. Technical problems may interrupt work.
6. Prolonged screen use may cause eye strain.
7. Some devices have limited storage.
8. Digital files can be lost without proper backup.
9. Unauthorised copying can affect ownership of artwork.
10. Some digital tools require internet access for certain features.

5.10 Cybersecurity and responsible use of digital painting resources

Digital painting involves using electronic devices and sometimes online resources. Learners should observe cybersecurity principles.

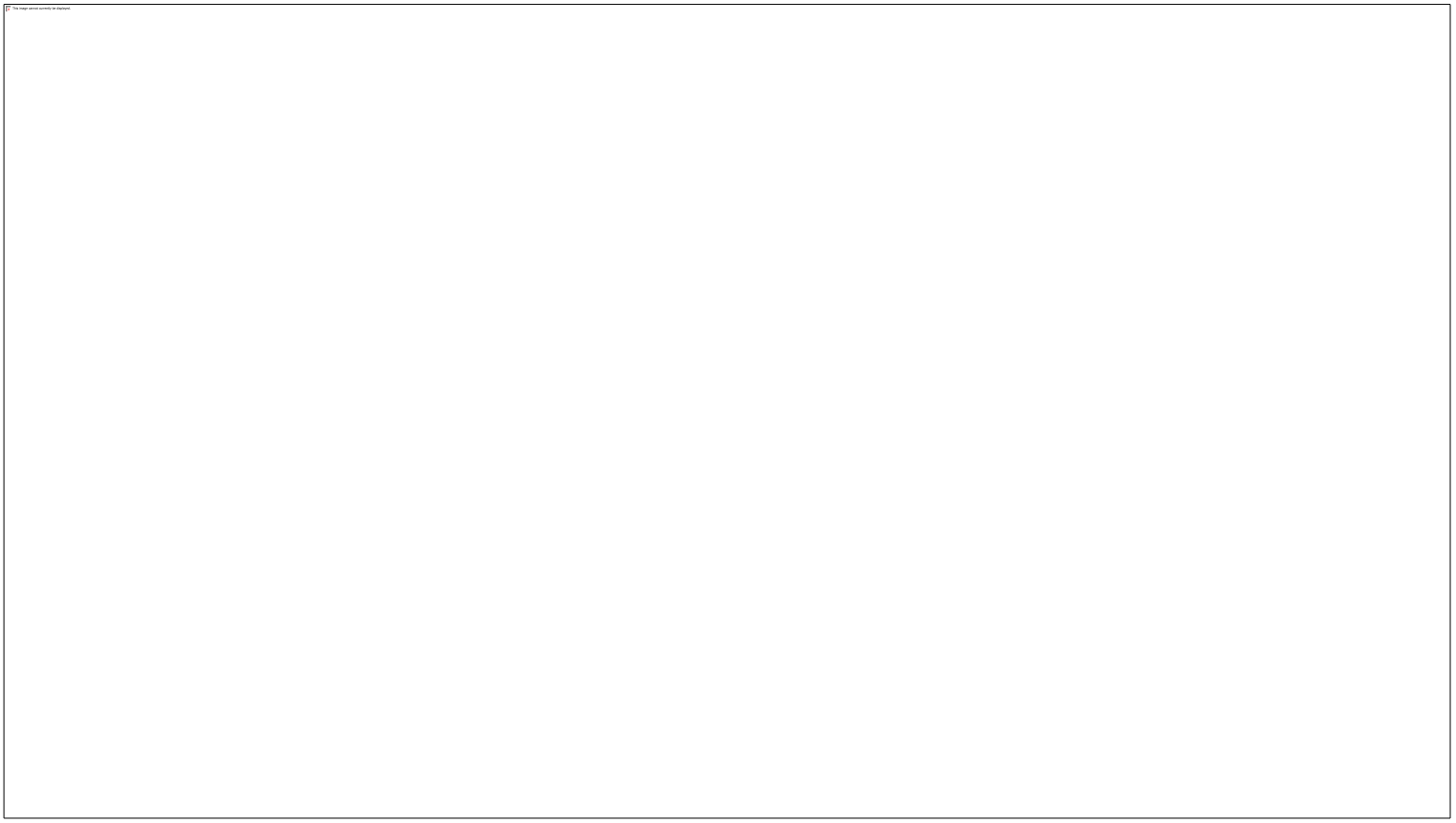
Important safety practices:

1. Use strong passwords on personal accounts.
2. Do not share passwords with other people.
3. Download software from trusted sources.
4. Avoid suspicious links and attachments.

5. Do not download pirated painting applications.
6. Avoid sharing personal information unnecessarily.
7. Obtain permission before using another person's artwork.
8. Acknowledge artists whose work is used for reference.
9. Use appropriate privacy settings.
10. Back up important artwork.
11. Scan downloaded files using appropriate security software.
12. Log out of shared computers after completing work.
13. Avoid using public Wi-Fi for sensitive account activities.
14. Respect copyright and intellectual property rights.
15. Report suspicious online activities to a responsible teacher or trusted adult.

Example: A learner downloading a digital painting application should obtain it from the developer's official website or an authorised application store rather than an unknown website.

6.0 PAINTING SCENERIES USING DIGITAL PAINTING TECHNIQUES





6.1 Meaning of scenery painting

Scenery painting is the artistic representation of natural or built environments through painting.

It involves representing elements such as mountains, rivers, lakes, forests, buildings, roads, vegetation, skies and other environmental features.

When scenery is created using electronic devices and digital painting applications, it is referred to as digital scenery painting.

6.2 Types of scenery paintings

A. Landscape painting

Landscape painting is the representation of land-based natural or built environments.

Features:

- Mountains.
- Hills.
- Valleys.
- Trees.
- Grasslands.
- Rivers.
- Buildings.
- Roads.

Kenyan examples:

- Maasai Mara grasslands.
- Mount Kenya scenery.
- Rift Valley landscapes.
- Tea plantations in Kericho.
- Agricultural landscapes in Trans Nzoia.

B. Seascape painting

Seascape painting is the representation of seas, oceans and coastal environments.

Features:

- Waves.
- Beaches.
- Ocean horizons.
- Boats.
- Rocks.
- Coastal vegetation.
- Clouds.

Kenyan examples:

- Diani Beach.
- Mombasa coastline.
- Watamu marine environment.
- Lamu Island coastline.

C. Cityscape painting

Cityscape painting is the representation of towns and cities.

Features:

- Buildings.
- Roads.
- Bridges.
- Vehicles.
- Streetlights.
- People.
- Commercial centres.

Kenyan examples:

- Nairobi city.
- Kisumu city.
- Nakuru town.
- Mombasa city.
- Eldoret city.

D. Rural scenery painting

This represents the natural and built environments found in rural communities.

Features:

- Farms.
- Homesteads.
- Grazing animals.
- Rural roads.
- Trees.
- Rivers.
- Hills.

Kenyan examples:

- A homestead in Narok County.
- A tea farm in Kericho County.
- A maize farm in Trans Nzoia County.
- A livestock grazing area in Kajiado County.

6.3 Elements to consider when painting digital sceneries

A. Definition of forms

Form refers to the three-dimensional appearance of objects, showing volume and solidity.

Although painting is two-dimensional, artists use shading, highlights, perspective and tonal variation to create the illusion of three-dimensional forms.

Examples:

- A mountain appears solid through light and shadow.
- A tree trunk appears cylindrical through tonal variation.
- A building appears three-dimensional through its visible sides.

Ways of creating form:

1. Using highlights.
2. Applying shadows.
3. Using tonal gradation.
4. Overlapping objects.
5. Applying perspective.
6. Using appropriate colour variation.

B. Texture

Texture refers to the surface quality or appearance of an object.

In painting, texture may be actual or visual.

Actual texture: The physical surface quality that can be felt by touch.

Visual texture: The appearance of a surface as represented through painting.

Examples of textures in scenery:

Object	Texture
Tree bark	Rough
Water	Smooth or rippled
Grass	Soft and uneven
Rocks	Hard and rough
Clouds	Soft and fluffy
Sand	Grainy
Leaves	Smooth or slightly rough
Mountain slopes	Rocky or uneven

Methods of representing texture digitally:

1. Using textured brushes.
2. Applying repeated marks.
3. Using digital dabbing.
4. Creating patterns.
5. Applying layers.
6. Using highlights and shadows.
7. Adjusting brush opacity.
8. Using suitable digital effects.

C. Colour

Colour is an element of art that describes the visual appearance of objects based on the light they reflect or emit.

Colour is important in scenery painting because it helps communicate mood, time, atmosphere, distance and environmental conditions.

Examples of colours in scenery:

- Blue: water and skies.
- Green: vegetation.
- Brown: soil and tree trunks.
- White: clouds and snow.
- Yellow: sunlight and dry grass.
- Grey: rocks and storm clouds.
- Orange: sunsets.

Colour considerations in digital scenery painting:

1. Select appropriate colours for the environment.
2. Use colour harmony.
3. Apply contrasting colours where necessary.
4. Use lighter colours for highlights.
5. Use darker colours for shadows.
6. Consider the time of day.
7. Consider atmospheric conditions.
8. Use colour intensity to create visual emphasis.

6.4 Other important elements of scenery painting

1. Line

Lines define edges, boundaries and directions.

Examples:

- The horizon.
- Tree branches.
- Roads.
- Building outlines.

2. Shape

Shape refers to a two-dimensional enclosed area.

Examples:

- Circular sun.
- Triangular mountain silhouettes.
- Rectangular buildings.

3. Space

Space refers to the area around, between and within objects.

It helps create a sense of distance and depth.

4. Value

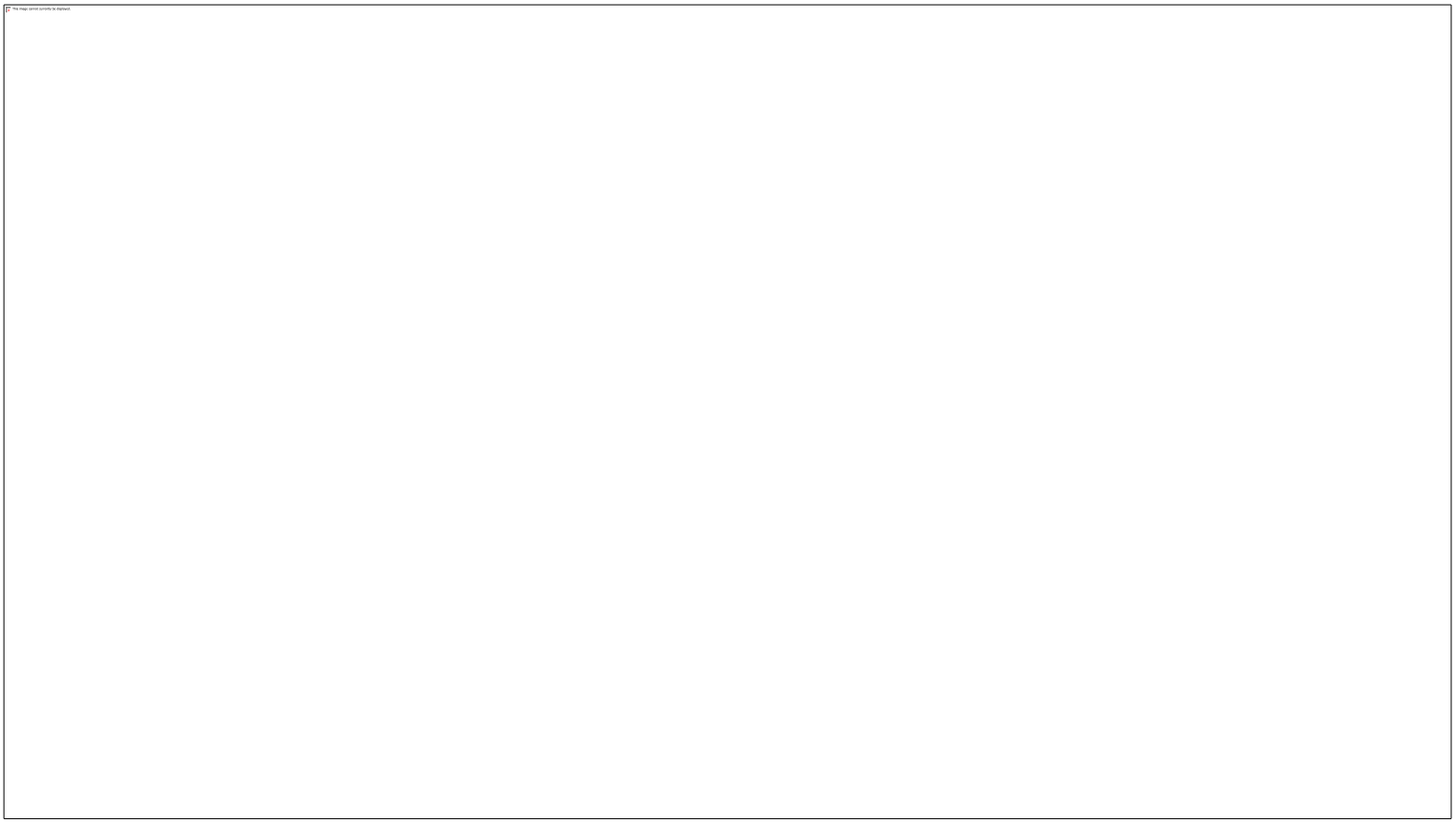
Value refers to the lightness or darkness of a colour.

It helps artists create highlights, shadows and depth.

6.5 Principles of art used in scenery painting

1. **Balance:** Arranging objects so the composition appears visually stable.
2. **Contrast:** Using differences in colour, tone, texture or shape to create emphasis.
3. **Unity:** Ensuring all elements work together.
4. **Rhythm:** Repeating visual elements to create movement.
5. **Emphasis:** Making an important object stand out.
6. **Proportion:** Maintaining appropriate size relationships.
7. **Harmony:** Combining colours and forms in a pleasing manner.
8. **Movement:** Directing the viewer's attention through the composition.

6.6 Understanding foreground, middle ground and background



A scenery composition can be organised into three major spatial areas.

A. Foreground

The foreground is the part of a composition that appears closest to the viewer.

Characteristics:

- Objects appear larger.

- Details are often clearer.
- Colours may be more intense.
- Textures are more visible.

Examples:

- Flowers near the viewer.
- Grass in front of a painting.
- A person standing nearby.
- Rocks along a riverbank.

B. Middle ground

The middle ground is the area between the foreground and background.

Characteristics:

- Objects appear smaller than foreground objects.
- Some details remain visible.
- Colours may be less intense.
- It connects the foreground and background.

Examples:

- Houses in a valley.
- Trees in a distant field.
- Animals grazing in the middle distance.

C. Background

The background is the part of a composition that appears furthest from the viewer.

Characteristics:

- Objects appear smaller.
- Details are less distinct.
- Colours may appear lighter or less intense.
- It establishes the setting.

Examples:

- Distant mountains.
- The sky.
- Faraway hills.
- Distant buildings.

6.7 Atmospheric perspective

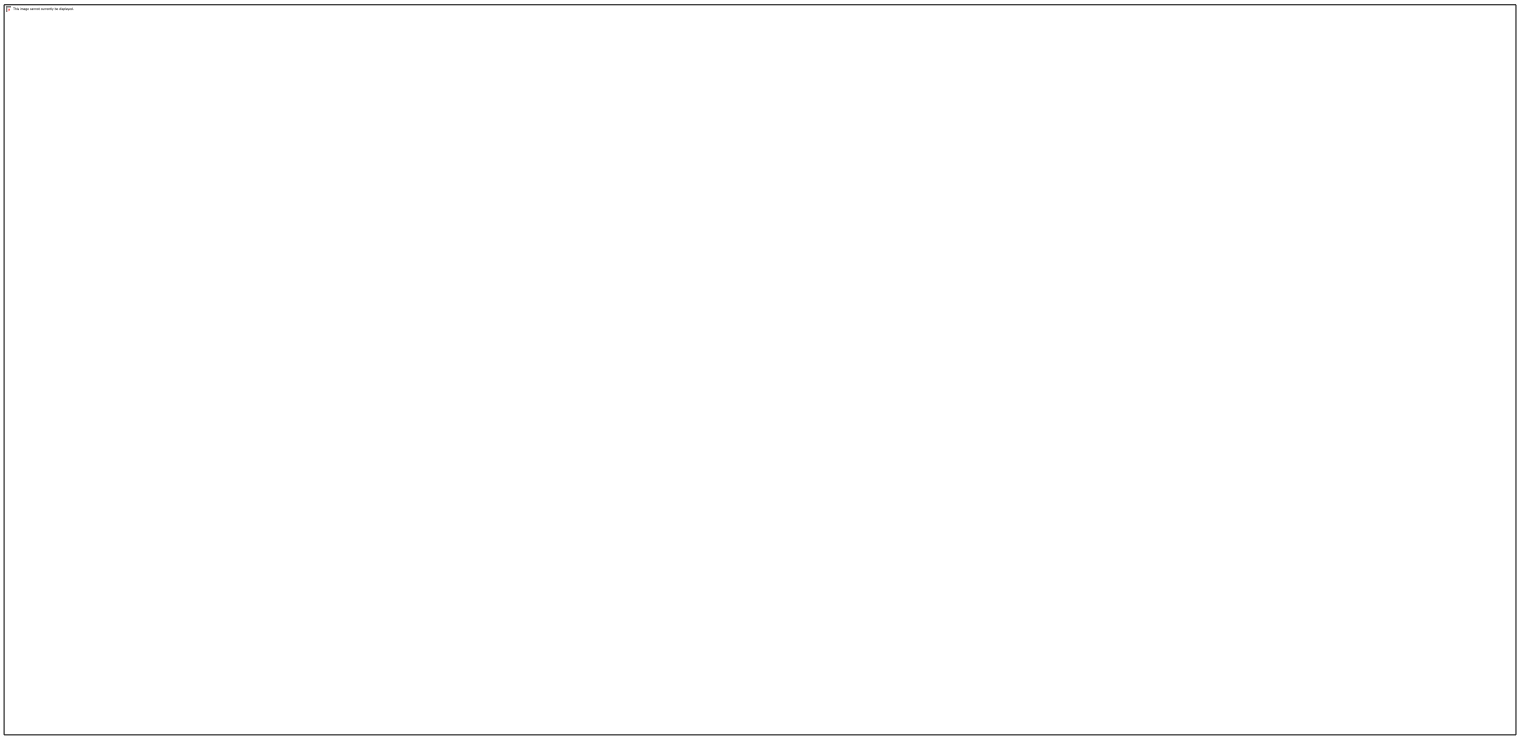
Atmospheric perspective is a technique used to create the illusion of distance by making distant objects appear lighter, less detailed and sometimes less distinct than nearby objects.

Features:

1. Distant objects appear less detailed.
2. Distant colours may appear lighter.
3. Contrast reduces with distance.
4. Nearby objects have clearer edges.
5. The technique helps create depth.

Application: When painting the Rift Valley, nearby trees may be painted in deep green while distant hills are represented using lighter, less saturated colours.

6.8 Steps in creating a digital landscape painting



1. Select a suitable digital device.
2. Open a digital painting application.
3. Create a new canvas.
4. Select the canvas size and resolution.
5. Identify the scenery to paint.
6. Collect suitable visual references.
7. Study the arrangement of natural and built features.
8. Sketch the horizon and main forms.
9. Divide the composition into foreground, middle ground and background.
10. Paint the background sky.
11. Paint distant mountains and hills.
12. Add the middle-ground features.
13. Develop foreground objects.
14. Use appropriate digital brush strokes.

15. Apply dabbing to create textures.
16. Add colour variations.
17. Create highlights and shadows.
18. Refine the forms and details.
19. Check perspective and composition.
20. Save and export the finished painting.

6.9 Example of a Kenyan digital scenery composition

Title: A Peaceful Rural Landscape in Narok County

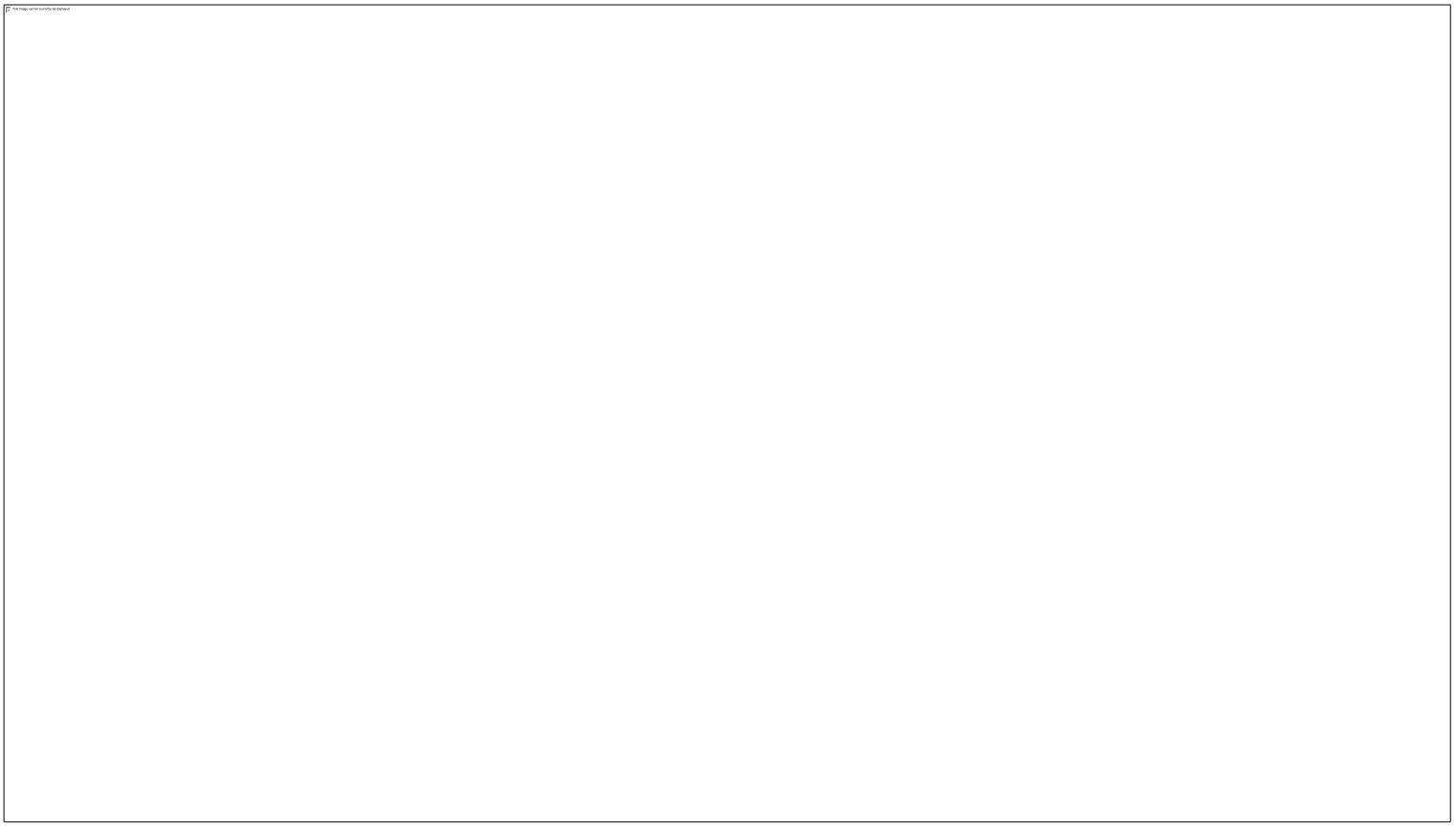
The composition may include:

- A blue sky.
- White clouds.
- Distant hills.
- Acacia trees.
- Green vegetation.
- A rural homestead.
- Grazing cattle.
- A winding footpath.
- Farmers working in a field.

Suggested technique application:

Scenery feature	Suggested technique
Sky	Digital wash and blending
Clouds	Soft brush strokes
Distant hills	Layering and blending
Acacia trees	Brush strokes and dabbing
Grass	Short strokes and textured brushes
Rocks	Dabbing and tonal variation
Cattle	Controlled brush strokes
Footpath	Broad brush strokes

6.10 Digital painting of a seascape



Suggested composition: A coastal scenery showing the Indian Ocean along the Kenyan coastline.

Features may include:

- Blue ocean water.
- White waves.
- Sandy beach.
- Palm trees.
- Boats.
- Rocks.
- Clouds.
- Coastal buildings.

Suggested techniques:

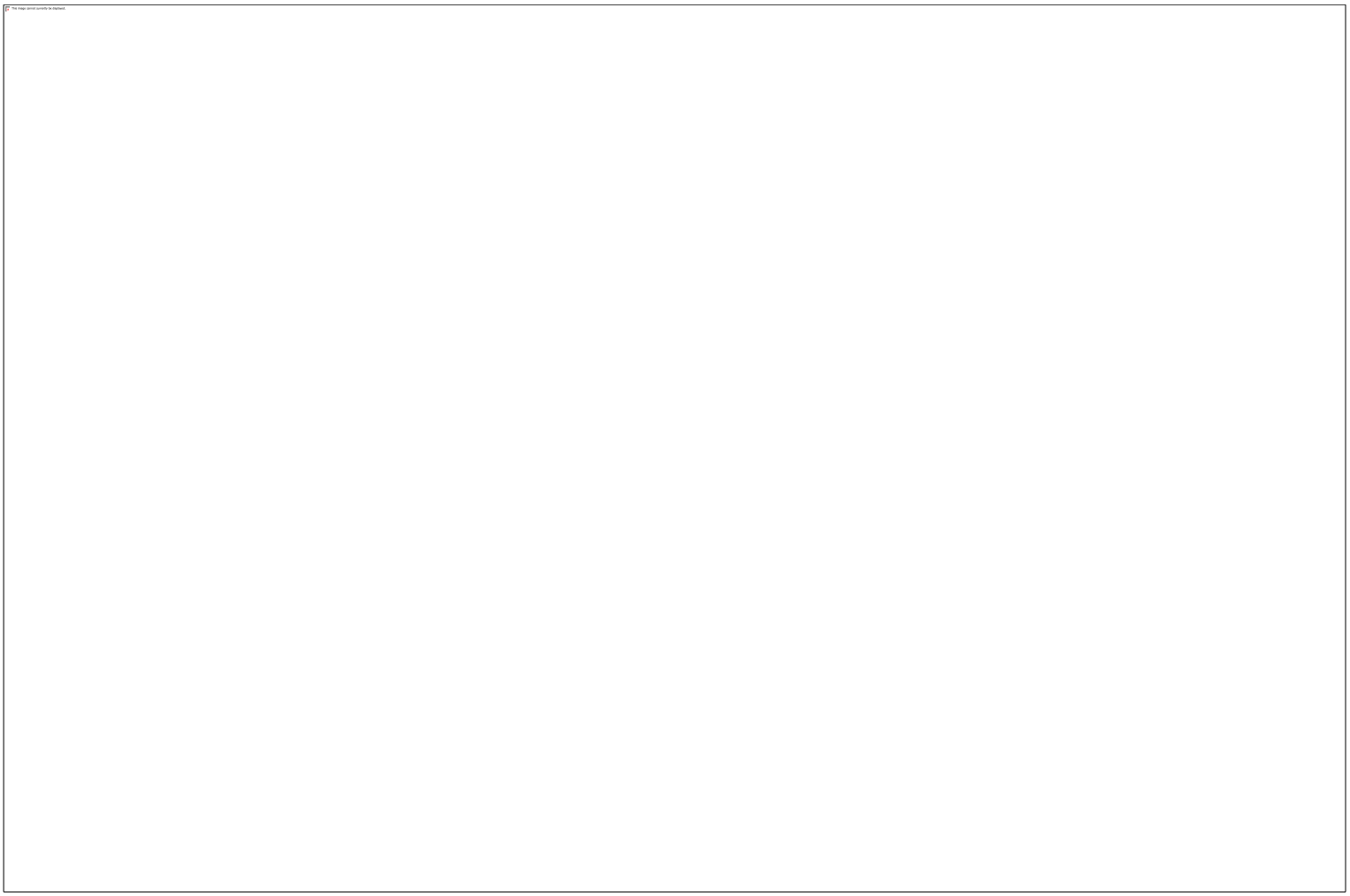
1. Use horizontal brush strokes for the sea.
2. Apply white highlights to represent waves.
3. Use dabbing to create sand textures.
4. Use curved strokes for palm leaves.
5. Use digital blending for the sky.
6. Apply tonal variations to create depth.

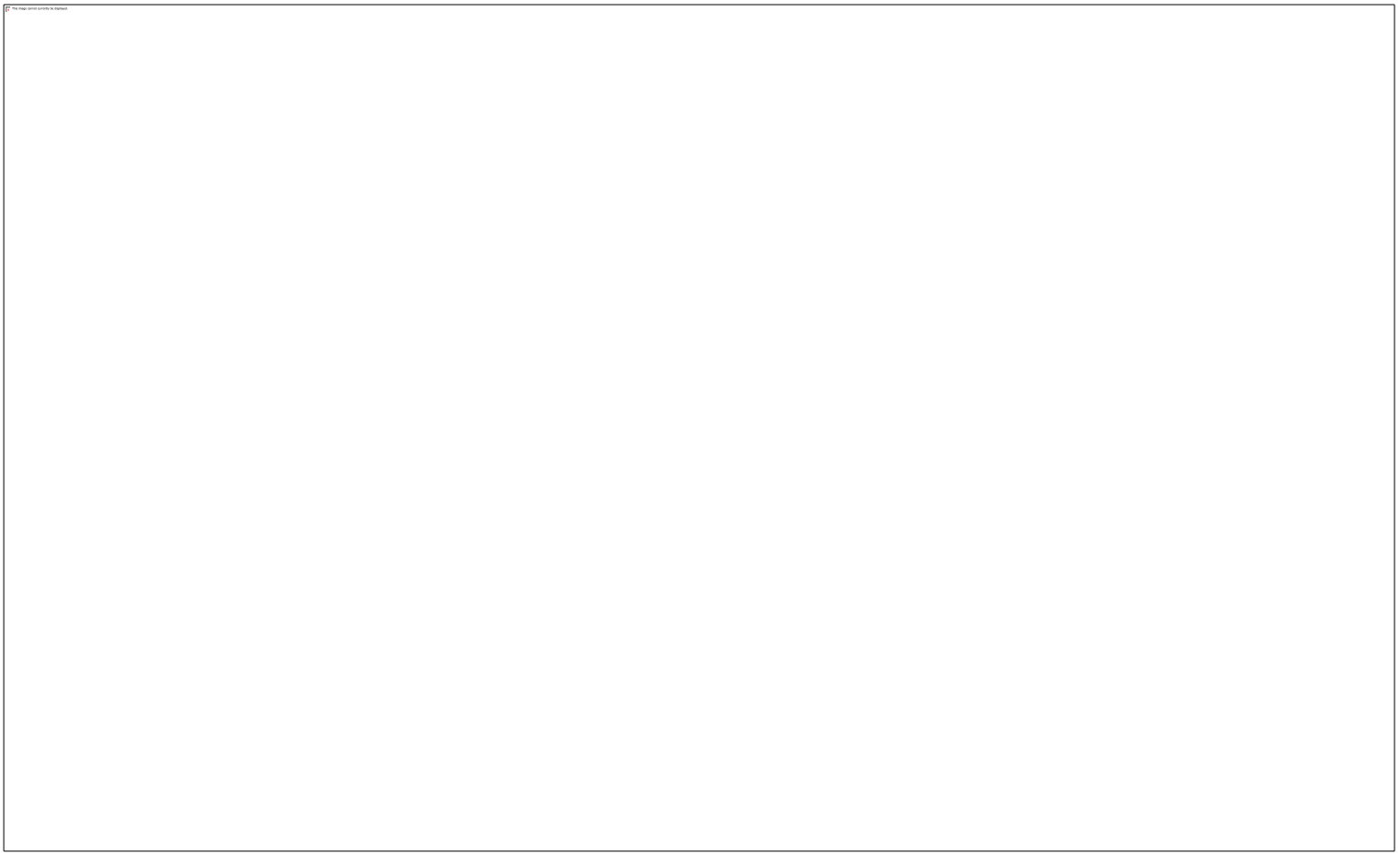
6.11 Importance of digital painting in scenery representation

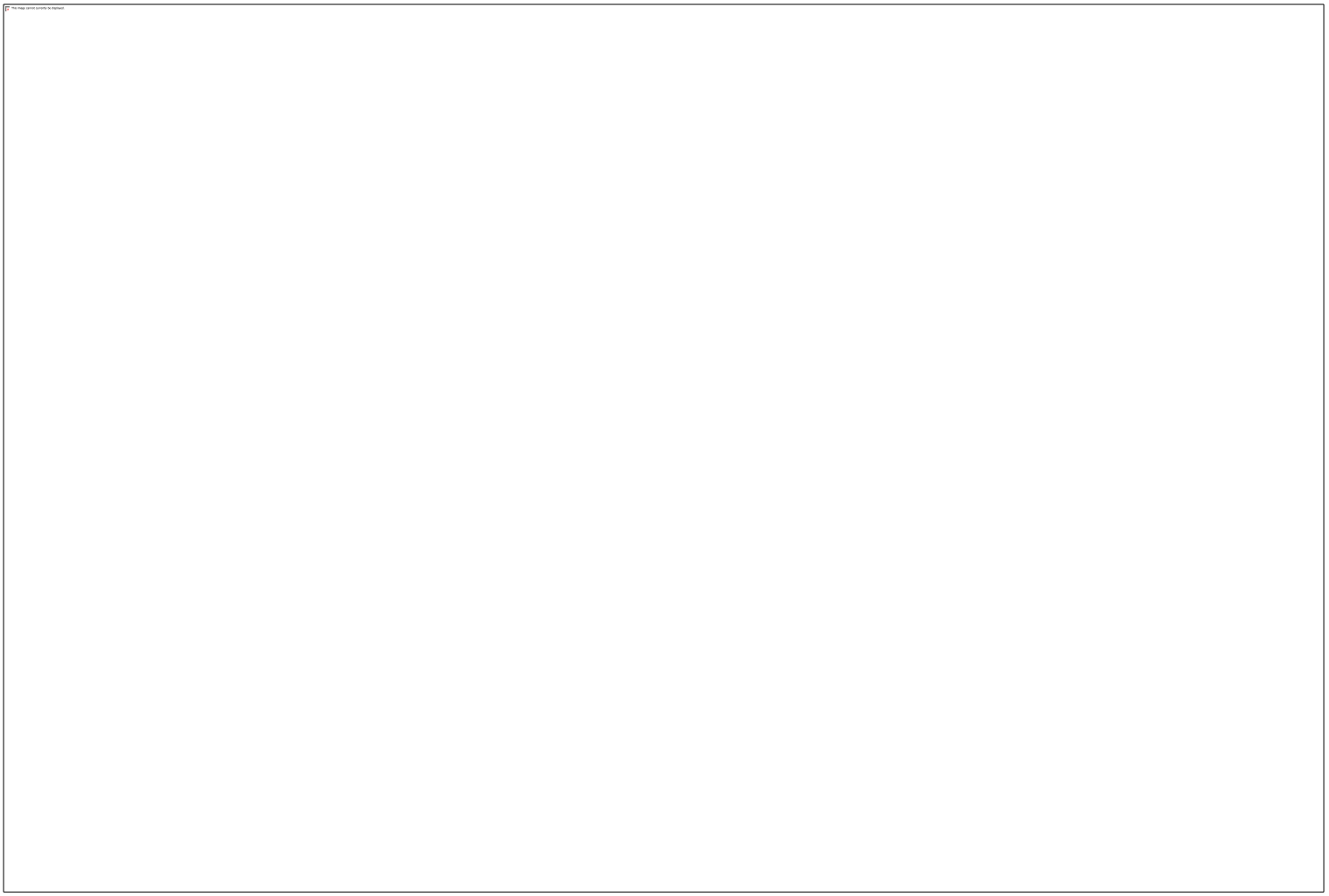
1. Enables artists to create imaginary environments.
2. Makes it easier to experiment with different weather conditions.

3. Allows adjustment of colour and light.
4. Supports the creation of realistic environments.
5. Makes it possible to create fantasy landscapes.
6. Supports environmental education.
7. Promotes digital creativity.
8. Allows easy correction and editing.
9. Supports visual communication.
10. Provides opportunities for commercial illustration.

7.0 PRESENTATION, APPRECIATION AND CRITIQUE OF PAINTINGS







7.1 Meaning of art appreciation

Art appreciation is the process of observing, understanding, enjoying and recognising the artistic qualities of an artwork.

It involves examining how an artist has used elements and principles of art to communicate an idea or message.

7.2 Meaning of art critique

Art critique is the systematic examination and evaluation of an artwork to identify its strengths, weaknesses, meaning and artistic qualities.

A critique should be constructive, respectful and supported by observations.

It should not be based merely on personal dislike or criticism of the artist.

7.3 Importance of appreciating and critiquing paintings

1. Helps learners recognise artistic strengths.
2. Identifies areas requiring improvement.
3. Develops observation skills.
4. Encourages constructive communication.
5. Promotes self-confidence.
6. Encourages creativity.
7. Helps learners understand different artistic styles.
8. Promotes respect for other people's work.
9. Develops critical thinking.
10. Improves future artistic performance.

7.4 Steps in appreciating a painting

Step 1: Observation

Look carefully at the painting.

Identify:

- The subject.
- Colours.
- Shapes.
- Forms.
- Textures.
- Painting techniques.

Step 2: Description

Describe what is visible without immediately judging the artwork.

For example:

"The painting shows three people harvesting maize in a rural field."

Step 3: Analysis

Examine how the artist has used elements and principles of art.

Consider:

- Colour harmony.
- Composition.
- Balance.
- Texture.
- Brush strokes.
- Contrast.
- Proportion.

Step 4: Interpretation

Explain the possible meaning or message of the painting.

For example:

"The artwork communicates the importance of agriculture and teamwork in rural communities."

Step 5: Evaluation

Give an informed judgement about the quality of the painting.

Identify:

- What has been done successfully.
- What could be improved.
- Whether the painting communicates its intended message.

7.5 Criteria for evaluating paintings

Criteria	What to examine
Composition	Arrangement of objects
Colour	Appropriateness and harmony
Texture	Effectiveness of surface representation
Form	Appearance of volume and solidity
Technique	Control of painting methods
Proportion	Appropriate size relationships
Creativity	Originality of ideas
Presentation	Neatness and finishing
Expression	Communication of feelings and ideas
Overall effect	Success in communicating the intended message

7.6 How to give constructive feedback

A learner should:

1. Begin by identifying a positive feature.
2. Describe the artwork objectively.
3. Explain what has been done effectively.
4. Identify a specific area for improvement.

5. Suggest a practical solution.
6. Use respectful language.
7. Avoid insulting or embarrassing the artist.
8. Allow the artist to respond.
9. Appreciate different artistic approaches.
10. Accept feedback from others positively.

Example of constructive feedback:

"Your painting has an attractive colour combination, and the use of dabbing creates interesting vegetation textures. You could improve the depth of the scenery by making the distant hills lighter and less detailed."

7.7 Methods of displaying paintings

1. Mounting on drawing boards.
2. Framing.
3. Pinning on exhibition boards.
4. Arranging on gallery walls.
5. Creating a classroom art exhibition.
6. Displaying digitally using a projector.
7. Sharing approved digital portfolios.
8. Creating an online art gallery.

7.8 Caring for and preserving paintings

- Allow wet paintings to dry properly.
- Avoid exposing paintings to excessive moisture.
- Keep paintings away from direct sunlight where possible.
- Store paintings in clean, dry environments.
- Avoid folding paintings.
- Handle artworks carefully.
- Use suitable protective materials.
- Label artworks appropriately.
- Keep digital copies backed up.
- Use suitable file formats for digital storage.

8.0 HEALTH, SAFETY AND ENVIRONMENTAL CONSERVATION IN PAINTING

8.1 Safety when using traditional painting materials

1. Read instructions on paint containers.
2. Avoid tasting or swallowing paints.
3. Do not inhale paint fumes.
4. Work in a well-ventilated room.

5. Avoid contact with eyes.
6. Wash hands after painting.
7. Do not use damaged brushes.
8. Store paints away from young children.
9. Clean spills immediately.
10. Dispose of paint waste responsibly.

8.2 Safety when using digital painting equipment

1. Place computers on stable surfaces.
2. Avoid handling electrical equipment with wet hands.
3. Keep liquids away from electronic devices.
4. Use appropriate screen brightness.
5. Take regular breaks.
6. Maintain correct sitting posture.
7. Avoid overloading electrical sockets.
8. Shut down devices appropriately.
9. Use trusted software.
10. Protect digital files through backups.

8.3 Environmental conservation during painting

1. Use materials efficiently.
2. Avoid unnecessary paint wastage.
3. Reuse suitable painting surfaces where possible.
4. Dispose of paint containers responsibly.
5. Avoid releasing harmful substances into water sources.
6. Use environmentally responsible materials.
7. Clean brushes without wasting water.
8. Recycle appropriate packaging.
9. Maintain a clean working environment.
10. Create paintings that communicate environmental conservation.

10.0 PRACTICAL LEARNING ACTIVITIES AND PROJECTS

Activity 1: Exploring brush stroke techniques

Task: Produce a painting experimentation sheet demonstrating different brush strokes.

Materials:

- Watercolour paints.
- Round brushes.
- Flat brushes.

- Painting paper.
- Palette.
- Water container.

Procedure:

1. Prepare the painting materials.
2. Draw separate spaces on the paper.
3. Practise horizontal strokes.
4. Practise vertical strokes.
5. Practise diagonal strokes.
6. Practise curved strokes.
7. Practise thick and thin strokes.
8. Compare the results.
9. Display the experimentation sheet.

Expected outcome: A painting experimentation sheet demonstrating a variety of brush strokes.

Activity 2: Exploring dabbing techniques

Task: Create a textured composition using brushes and sponges.

Procedure:

1. Select suitable painting materials.
2. Prepare different colours.
3. Experiment with sponge dabbing.
4. Experiment with brush dabbing.
5. Use cotton buds to create dots.
6. Combine different colours.
7. Create a composition showing trees, flowers or vegetation.
8. Allow the painting to dry.
9. Display the finished work.

Expected outcome: A textured painting demonstrating dabbing techniques.

Activity 3: Painting a human figure composition

Task: Paint a composition showing people participating in a Kenyan community activity.

Suggested themes:

- Farmers harvesting maize.
- Learners participating in sports.
- Traditional dancers.
- People planting trees.
- Traders in a market.

Procedure:

1. Identify the theme.
2. Observe human figures in the selected activity.
3. Sketch the figures.
4. Establish body proportions.
5. Arrange the figures in a composition.
6. Apply background colours.
7. Paint the figures using varied techniques.
8. Introduce texture and tonal variation.
9. Refine the composition.
10. Display and critique the work.

Expected outcome: A finished human figure composition showing effective use of painting techniques.

Activity 4: Digital landscape painting

Task: Create a digital landscape representing a Kenyan environment.

Suggested themes:

- Mount Kenya scenery.
- Maasai Mara grasslands.
- Rift Valley landscape.
- Lake Victoria scenery.
- A rural homestead.

Procedure:

1. Select a digital device.
2. Open suitable painting software.
3. Create a new canvas.
4. Sketch the landscape.
5. Create separate layers.
6. Paint the sky and background.
7. Add the middle ground.
8. Paint foreground objects.
9. Apply brush strokes and dabbing.
10. Introduce texture, form and colour.
11. Refine the details.
12. Save and export the painting.
13. Present the work for peer appraisal.

Expected outcome: A digital scenery painting demonstrating creativity and appropriate use of digital tools.

Activity 5: Peer appraisal exhibition

Task: Organise a classroom exhibition of completed paintings.

Procedure:

1. Select completed paintings.
2. Mount the artworks appropriately.
3. Arrange them for display.
4. Give each artwork a title.
5. Identify the techniques used.
6. Allow learners to view the artworks.
7. Discuss strengths and areas for improvement.
8. Provide constructive feedback.
9. Record suggestions for future improvement.

Expected outcome: Improved communication, appreciation and critical evaluation skills.

REVISION EXERCISES

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer all questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. Painting is best described as the process of:

A. Carving images from wood.

B. Applying pigments onto a surface to create images.

C. Joining pieces of metal.

D. Modelling objects using clay.

2. A brush stroke refers to:

A. A mark made using a paintbrush.

B. A mark made using a carving tool.

C. A pattern made using a ruler.

D. A shape cut from paper.

3. Which painting technique involves repeatedly pressing a tool onto a painting surface?

A. Blending.

B. Washing.

C. Dabbing.

D. Scraping.

4. Which of the following artists is particularly associated with expressive brush strokes?

A. Georges Seurat.

B. Vincent van Gogh.

C. Paul Signac.

D. Leonardo da Vinci.

5. The brush that has a broad and flat end is called:

A. Round brush.

B. Liner brush.

C. Flat brush.

D. Fan brush.

6. Which brush is most suitable for creating fine lines and delicate details?

A. Liner brush.

B. Flat brush.

C. Fan brush.

D. Large sponge.

7. Horizontal brush strokes are particularly suitable for representing:

A. Tall tree trunks.

B. Calm water surfaces.

C. Standing human figures.

D. Vertical buildings.

8. Which of the following tools is most suitable for creating textured effects through dabbing?

A. Compass.

B. Sponge.

C. Ruler.

D. Pencil sharpener.

9. Pointillism involves creating images using:

A. Long continuous lines.

B. Large areas of flat colour only.

C. Small dots of colour.

D. Cut-out paper shapes.

10. Georges Seurat is associated with:

A. Pointillism.

B. Cubism.

C. Sculpture.

D. Photography.

11. Which of the following materials is suitable for creating small dots in a painting?

A. Hammer.

B. Cotton bud.

C. Saw.

D. Chisel.

12. A wash technique involves applying:

A. Thick layers of undiluted paint only.

B. Thin, diluted layers of paint.

C. Dry charcoal powder.

D. Pieces of coloured paper.

13. Which of the following is an important consideration when painting the human figure?

A. Body proportions.

B. Computer speed.

C. Paper thickness only.

D. Paint container size.

14. The torso is the part of the human body consisting mainly of the:

A. Head and neck.

B. Chest, abdomen and back.

C. Hands and feet.

D. Knees and ankles.

15. Which of the following poses shows a person moving rapidly?

A. Sitting.

B. Kneeling.

C. Running.

D. Standing.

16. The technique of gradually merging two or more colours is known as:

A. Dabbing.

B. Blending.

C. Scraping.

D. Stencilling.

17. Digital painting involves creating images using:

A. Electronic devices and painting software.

B. Physical brushes only.

C. Stone and wood only.

D. Metal cutting tools.

18. Which of the following is a digital painting application?

A. Microsoft Calculator.

B. Krita.

C. Windows File Explorer.

D. Notepad.

19. A stylus is mainly used for:

A. Printing digital paintings.

B. Drawing on a compatible digital surface.

C. Cleaning a computer screen.

D. Storing digital files.

20. Which digital tool is used to remove unwanted marks?

A. Fill tool.

B. Eraser tool.

C. Zoom tool.

D. Colour picker.

21. In digital painting, layers are used to:

A. Separate different parts of an artwork.

B. Increase the weight of a computer.

C. Clean painting brushes.

D. Mix physical paints.

22. Which of the following file formats is commonly used to export digital paintings?

A. PNG.

B. MP3.

C. EXE.

D. ZIP only.

23. Which of the following is an example of a digital scenery painting subject?

A. A Kenyan rural landscape.

B. A physical clay model.

C. A wooden sculpture.

D. A metal carving.

24. The part of a scenery composition that appears closest to the viewer is called the:

A. Background.

B. Middle ground.

C. Foreground.

D. Horizon.

25. The representation of distant objects using lighter and less distinct colours is associated with:

A. Atmospheric perspective.

B. Linear lettering.

C. Symmetrical carving.

D. Paper folding.

26. Which element of art describes the surface quality or appearance of an object?

A. Texture.

B. Space.

C. Line.

D. Shape.

27. The three-dimensional appearance of an object in a painting is known as:

A. Pattern.

B. Form.

C. Outline.

D. Rhythm.

28. Which of the following is an appropriate cybersecurity practice when using digital painting software?

A. Sharing passwords with strangers.

B. Downloading software from unknown websites.

C. Using trusted software sources.

D. Opening suspicious attachments.

29. Art critique involves:

A. Insulting other artists.

B. Examining and evaluating an artwork constructively.

C. Destroying unsuccessful paintings.

D. Copying another person's artwork.

30. Which of the following demonstrates constructive feedback?

A. Your painting is completely useless.

B. You cannot paint well.

C. Your use of colour is effective, but the distant objects could be lighter.

D. You should stop painting.

SECTION B: STRUCTURED QUESTIONS (50 MARKS)

50 MARKS

Instructions: Answer all questions. Show clear understanding of painting techniques, human figure painting, digital painting and appreciation of artworks.

QUESTION 1: INTRODUCTION TO PAINTING (8 MARKS)

a) Define the term painting. (2 marks)

b) State three painting surfaces that can be used by an artist. (3 marks)

c) Explain three importance of painting in society. (3 marks)

QUESTION 2: BRUSH STROKE PAINTING TECHNIQUE (8 MARKS)

a) Explain the meaning of brush stroke painting technique. (2 marks)

b) Describe three types of brush strokes and give one application of each. (3 marks)

c) Explain three factors that influence the appearance of brush strokes in a painting. (3 marks)

QUESTION 3: DABBING PAINTING TECHNIQUE (8 MARKS)

a) Define dabbing technique. (2 marks)

b) Identify three tools that can be used when applying dabbing technique. (3 marks)

c) Explain three advantages of using dabbing technique in painting. (3 marks)

QUESTION 4: HUMAN FIGURE PAINTING (8 MARKS)

a) Explain the meaning of human figure painting. (2 marks)

b) State three human figure poses that can be represented in a painting. (3 marks)

c) Explain three considerations when painting human figures using varied painting techniques. (3 marks)

QUESTION 5: DIGITAL PAINTING TECHNIQUES (9 MARKS)

a) Define digital painting. (2 marks)

b) Identify four digital painting tools or equipment used by an artist. (4 marks)

c) Explain three advantages of digital painting over traditional painting. (3 marks)

QUESTION 6: DIGITAL SCENERY PAINTING AND APPRAISAL (9 MARKS)

a) Differentiate between landscape painting and seascape painting. (2 marks)

b) Explain three ways in which an artist can create texture when painting digital scenery. (3 marks)

c) Describe four criteria that can be used when appraising a completed painting. (4 marks)

ANSWERS AND MARKING SCHEME

SECTION A: MULTIPLE CHOICE ANSWERS

Question	Answer	Question	Answer
1	B	16	B
2	A	17	A
3	C	18	B
4	B	19	B
5	C	20	B
6	A	21	A
7	B	22	A
8	B	23	A
9	C	24	C
10	A	25	A
11	B	26	A
12	B	27	B
13	A	28	C
14	B	29	B
15	C	30	C

TOTAL: 30 MARKS

SECTION B: SUGGESTED MARKING SCHEME

QUESTION 1: INTRODUCTION TO PAINTING (8 MARKS)

a) Define painting. (2 marks)

Painting is a visual art process that involves applying pigments or coloured materials onto a surface to create images, pictures, patterns or compositions.

- Applying pigments or coloured materials. (1 mark)
- Creating images or compositions on a surface. (1 mark)

b) State three painting surfaces. (3 marks)

Award 1 mark each:

1. Paper.
2. Canvas.
3. Wood.
4. Cardboard.
5. Fabric.

6. Walls.
7. Masonite boards.

c) Explain three importance of painting in society. (3 marks)

Award 1 mark each for a relevant point with explanation.

1. Communication – paintings communicate messages and ideas.
2. Cultural preservation – paintings preserve cultural practices and heritage.
3. Employment – painting creates income-generating opportunities.
4. Environmental awareness – paintings communicate conservation messages.
5. Creativity – painting promotes imagination and innovation.
6. Education – paintings help communicate information visually.
7. Decoration – paintings improve the appearance of spaces.

QUESTION 2: BRUSH STROKE PAINTING TECHNIQUE (8 MARKS)

a) Explain the meaning of brush stroke painting technique. (2 marks)

It is a painting method involving the application of paint using different movements, pressures and directions of a paintbrush to create various marks and visual effects.

b) Describe three types of brush strokes and give one application of each. (3 marks)

Award 1 mark each.

1. Horizontal strokes – produced by moving the brush sideways; used for painting calm water.
2. Vertical strokes – produced by moving the brush upwards or downwards; used for painting tree trunks.
3. Diagonal strokes – produced by moving the brush in a slanting direction; used for painting slopes.
4. Curved strokes – produced through curved brush movements; used for painting clouds.
5. Short strokes – small separate marks; used for painting grass.
6. Long strokes – continuous marks; used for painting flowing water.

c) Explain three factors that influence the appearance of brush strokes. (3 marks)

Award 1 mark each.

1. Brush size – large brushes create broad marks while small brushes create narrow marks.
2. Brush shape – different shapes produce different effects.
3. Pressure – heavy pressure creates wider marks while light pressure creates delicate marks.
4. Paint consistency – thick paint creates strong textured marks.
5. Water content – more water creates thinner and more transparent marks.
6. Direction of movement – produces different patterns and effects.
7. Surface texture – rough and smooth surfaces influence the marks produced.
8. Quantity of paint – determines the intensity and thickness of the stroke.

QUESTION 3: DABBING PAINTING TECHNIQUE (8 MARKS)

a) Define dabbing technique. (2 marks)

Dabbing is a painting technique in which paint is applied by repeatedly touching or pressing a tool onto a surface to create dots, patterns and textured effects.

b) Identify three tools used in dabbing. (3 marks)

Award 1 mark each.

1. Sponge.
2. Round brush.
3. Cotton buds.
4. Foam pieces.
5. Stencils.
6. Suitable finger-painting tools.

c) Explain three advantages of dabbing technique. (3 marks)

Award 1 mark each.

1. Creates texture – produces interesting surface effects.
2. Produces patterns – repeated marks create decorative designs.
3. Encourages creativity – artists experiment with different tools.
4. Uses readily available materials – sponges and cotton buds can be used.
5. Creates visual interest – different colours and marks improve compositions.
6. Represents natural surfaces – useful for painting leaves, flowers and rocks.

QUESTION 4: HUMAN FIGURE PAINTING (8 MARKS)

a) Explain the meaning of human figure painting. (2 marks)

Human figure painting is the artistic representation of the human body using paint on a two-dimensional surface.

b) State three human figure poses. (3 marks)

Award 1 mark each.

1. Standing pose.
2. Sitting pose.
3. Walking pose.
4. Running pose.
5. Bending pose.
6. Kneeling pose.

c) Explain three considerations when painting human figures using varied painting techniques. (3 marks)

Award 1 mark each.

1. Proportion – maintain appropriate relationships between body parts.
2. Colour – select suitable colours for the human figure and environment.

3. Texture – represent the different surface qualities of clothing and other features.
4. Form – use shading and highlights to create volume.
5. Composition – arrange figures attractively.
6. Gesture – represent the intended action or movement.
7. Expression – communicate emotions through facial features and body language.
8. Technique – select appropriate painting methods for different effects.

QUESTION 5: DIGITAL PAINTING TECHNIQUES (9 MARKS)

a) Define digital painting. (2 marks)

Digital painting is the process of creating painted images using electronic devices and specialised software.

b) Identify four digital painting tools or equipment. (4 marks)

Award 1 mark each.

1. Computer.
2. Graphics tablet.
3. Stylus.
4. Monitor.
5. Mouse.
6. Keyboard.
7. Smartphone.
8. Digital painting software.

c) Explain three advantages of digital painting over traditional painting. (3 marks)

Award 1 mark each.

1. Easy correction – mistakes can be corrected using the undo function.
2. Flexible editing – colours and shapes can be adjusted.
3. Easy storage – artwork can be stored electronically.
4. Easy sharing – paintings can be shared digitally.
5. Reduced physical materials – it does not require physical paint for every painting.
6. Multiple versions – artists can save different versions.
7. Experimentation – different digital brushes and effects can be tested.

QUESTION 6: DIGITAL SCENERY PAINTING AND APPRAISAL (9 MARKS)

a) Differentiate between landscape painting and seascape painting. (2 marks)

- Landscape painting represents land-based environments such as mountains, hills, forests and valleys. (1 mark)
- Seascape painting represents seas, oceans, beaches and coastal environments. (1 mark)

b) Explain three ways of creating texture when painting digital scenery. (3 marks)

Award 1 mark each.

1. Textured brushes – used to represent rough or soft surfaces.
2. Dabbing – creates dots and irregular marks.
3. Layering – builds up different surface effects.
4. Repeated brush strokes – creates patterns and visual texture.
5. Digital patterns – produces repeated surface designs.
6. Highlights and shadows – help communicate surface qualities.

c) Describe four criteria used when appraising a completed painting. (4 marks)

Award 1 mark each.

1. Composition – examines the arrangement of objects.
2. Colour – examines colour harmony and appropriateness.
3. Texture – examines the effectiveness of surface representation.
4. Creativity – examines originality of ideas.
5. Technique – examines control of painting methods.
6. Proportion – examines the size relationships of objects.
7. Presentation – examines neatness and finishing.
8. Expression – examines how effectively the painting communicates ideas.
9. Form – examines the appearance of volume and solidity.

TOTAL SECTION B: 50 MARKS

13.0 SUMMARY OF THE SUB-STRAND

Painting Making Techniques (2D Art) equips learners with practical and theoretical knowledge of traditional and digital painting.

The major techniques covered are:

1. **Brush stroke technique:** Applying paint using controlled brush movements to create lines, marks, patterns and textures.
2. **Dabbing technique:** Applying paint through repeated touches or presses to create dots and textured effects.
3. **Human figure painting:** Representing the human body in different poses and compositions using varied techniques.
4. **Digital painting:** Creating images using electronic devices and specialised painting applications.
5. **Digital scenery painting:** Representing landscapes, seascapes and other environments using digital tools.
6. **Art appreciation and critique:** Observing, describing, analysing, interpreting and evaluating completed paintings.

Sub-Strand 2.2: 2D Digital Animation (Stop Motion)

1.0 INTRODUCTION TO 2D DIGITAL ANIMATION

1.1 Meaning of Animation

Animation is the process of creating an illusion of movement by displaying a sequence of still images, drawings, photographs or objects in rapid succession.

- Each image shows a slight change in the position, shape or appearance of an object or character.
- When the images are displayed continuously, the human eye perceives them as moving.
- Animation is widely used in films, television programmes, advertisements, educational videos, computer games and digital storytelling.
- Animation combines artistic creativity with technology to communicate ideas and tell stories.

Examples of animation in the Kenyan context:

1. Animated educational videos explaining mathematics and science concepts.
2. Animated advertisements promoting Kenyan products.
3. Animated stories based on African folktales.
4. Digital cartoons featuring characters dressed in traditional Kenyan clothing.
5. Animated environmental awareness messages about wildlife conservation.

1.2 Meaning of 2D Digital Animation

2D digital animation is the creation of moving images in a two-dimensional space using digital devices and animation software.

The two dimensions are:

- **Width:** The horizontal measurement of an object or character.
- **Height:** The vertical measurement of an object or character.

Unlike three-dimensional animation, 2D animation does not normally represent objects with full depth.

2D animation can be created using:

- Digital drawings.
- Photographs.
- Paper cut-outs.
- Puppets.
- Clay models.
- Hand-drawn illustrations.
- Digitally created characters.

Examples:

- A digitally animated bird flying across a screen.
- A cartoon character walking.
- A paper-cut character waving its hand.
- A clay model appearing to jump through successive photographs.

1.3 Meaning of Stop Motion Animation

Stop motion animation is a technique of creating movement by physically manipulating an object or character slightly, taking a photograph after each adjustment and combining the photographs into a moving sequence.

The process involves:

1. Creating or selecting a character.
2. Placing the character in a suitable setting.
3. Taking the first photograph.
4. Slightly changing the character's position.
5. Taking another photograph.
6. Repeating the process until the desired movement is completed.
7. Importing the photographs into animation software.
8. Arranging the photographs in sequence and adjusting their timing.
9. Playing the sequence to produce an animated presentation.

Example: A learner creates a clay model of a tortoise. The learner photographs it, moves it slightly forward, photographs it again and repeats the process. When the photographs are played consecutively, the tortoise appears to crawl.

1.4 Characteristics of Stop Motion Animation

1. **Frame-by-frame production:** Each photograph represents an individual frame in the animation.
2. **Physical manipulation:** The animator physically moves objects or characters between photographs.
3. **Small movement changes:** Movement is created through gradual changes in the position of objects.
4. **Sequential images:** Photographs are arranged in a logical order.
5. **Fixed camera position:** The camera is preferably kept steady to maintain consistency.
6. **Controlled lighting:** Lighting should remain consistent throughout the shooting process.
7. **Creative storytelling:** Characters and objects are used to communicate a storyline.
8. **Timing:** The duration of each frame determines the speed of movement.
9. **Digital processing:** Photographs are imported into software for editing and playback.

1.5 Types of Stop Motion Animation

a) Clay animation (Claymation)

- This is a stop motion technique that uses clay models as characters or objects.
- The animator moulds clay into different shapes.
- The clay character is adjusted slightly after each photograph.
- Clay is suitable because it can be reshaped easily.

Examples:

- A clay elephant walking.
- A clay person waving.

- A clay bird opening and closing its beak.





b) Puppet animation

- Uses articulated puppets as characters.
- Puppets may be made from fabric, wire, wood, foam or other materials.
- The puppet is moved slightly between photographs.
- Joints allow controlled movement of the head, arms and legs.

Examples:

- A puppet dancing.
- A puppet waving at another character.
- A puppet walking across a miniature stage.





c) Cut-out animation

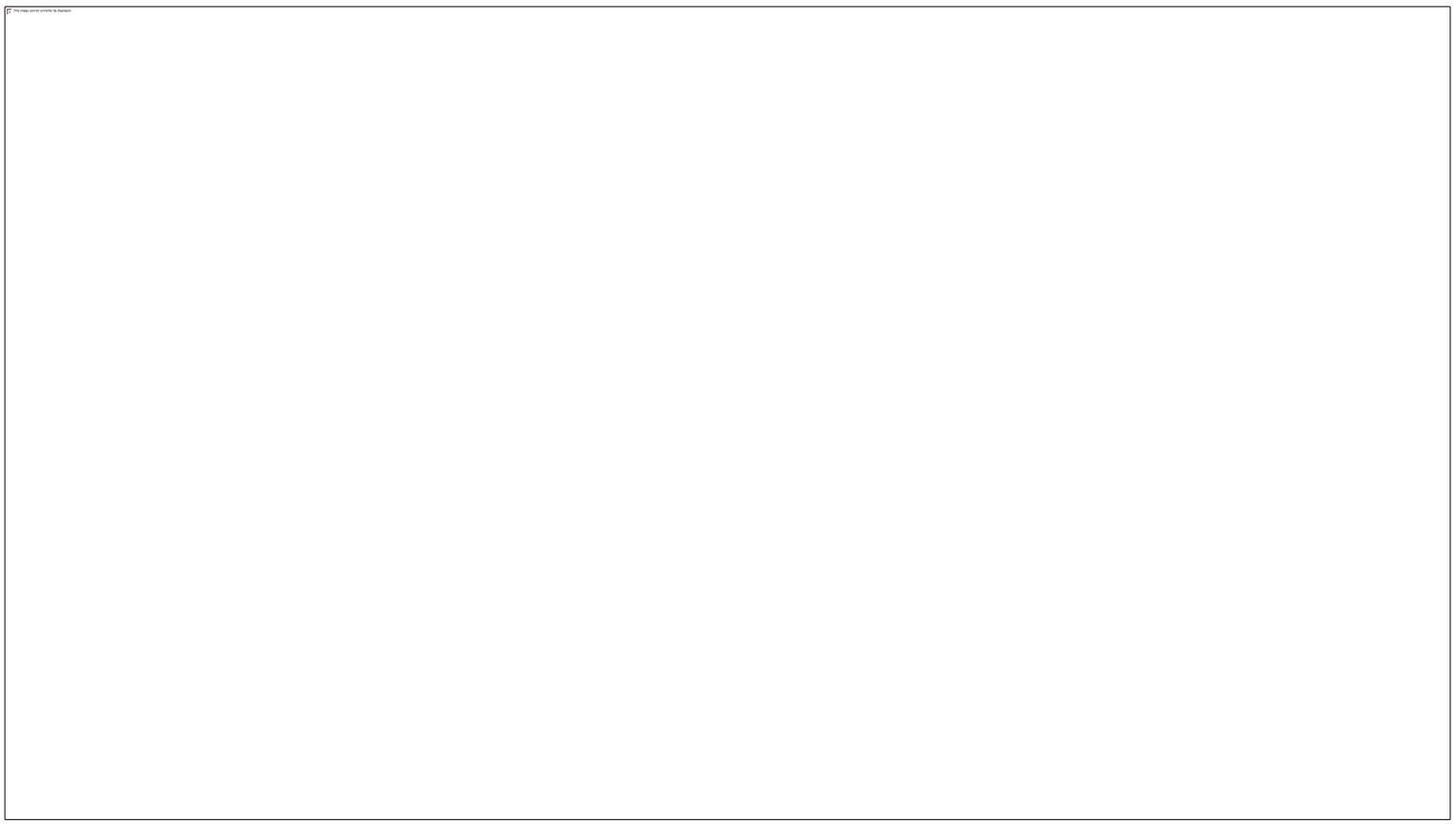
- Uses flat paper, cardboard or other cut-out shapes.

- Characters are created by cutting different body parts.
- Body parts are moved gradually between photographs.
- It is relatively inexpensive and suitable for school projects.

Examples:

- A paper person walking.
- A paper butterfly flying.
- A paper tree moving in the wind.





d) Object animation

- Uses ordinary objects to create animated movements.
- Objects are photographed after being moved slightly.
- Common objects include pencils, cups, books, toys and stationery.

Examples:

- A pencil appearing to write by itself.
- A ball rolling across a table.
- A book opening and closing.



e) Pixilation

- This is a stop motion technique that uses real human beings as the subjects.
- A person changes position slightly after each photograph.
- The photographs are combined to create unusual movements.
- It can make people appear to slide, jump or move in unnatural ways.

Example: A learner appears to move across a classroom without walking by changing position between photographs.



2.0 BASIC PRINCIPLES OF 2D DIGITAL ANIMATION

2.1 Simplicity of Character

Character simplicity refers to designing an animated character using basic shapes and easily recognisable features.

A simple character is easier to create, manipulate and animate.

Common shapes used in character creation:

- Circles – used for heads, eyes and wheels.
- Ovals – used for faces, bodies and limbs.
- Rectangles – used for torsos, legs and buildings.
- Triangles – used for ears, noses and decorative features.
- Lines – used for arms, legs, tails and other details.

Importance of simple characters

1. They are easy to construct using locally available materials.
2. They require fewer adjustments during animation.
3. They are easier to recognise.
4. They reduce production time.

5. They make character movement easier to control.
6. They reduce the possibility of unwanted changes in appearance.

Example: A learner can create a simple animated character using a circular cardboard head, rectangular body and paper arms and legs.

2.2 Minimal Transition in Movement

Transition in animation refers to the gradual change from one position, action or frame to another.

Minimal movement transition means making small, controlled changes to a character's position between successive photographs.

For example, when animating a character walking:

1. Position the right leg slightly forward.
2. Take a photograph.
3. Move the left leg forward.
4. Take another photograph.
5. Adjust the arms to match the walking action.
6. Continue until the character completes the movement.

Importance of minimal movement transitions

- They create smooth movement.
- They prevent sudden jumps between frames.
- They improve the quality of animation.
- They make actions appear natural.
- They allow the animator to control the speed of movement.

2.3 Camera Setting in Stop Motion Animation

Camera setting refers to the positioning and adjustment of a camera before and during photography.

The camera captures successive images of the character as it moves.

Important camera settings and considerations

a) Camera position

- The camera should be placed at an appropriate angle.
- It should face the character or scene clearly.
- The position should remain consistent during shooting.

b) Camera stability

- A tripod or stable support should be used.
- The camera should not move accidentally.
- Movement of the camera can cause unwanted shaking in the final animation.

c) Focus

- Focus ensures that the character appears clear.
- The camera should be focused on the main subject.

- Blurred photographs reduce animation quality.

d) Lighting

- Adequate lighting should be provided.
- Natural or artificial light can be used.
- Lighting should remain consistent to avoid flickering between frames.

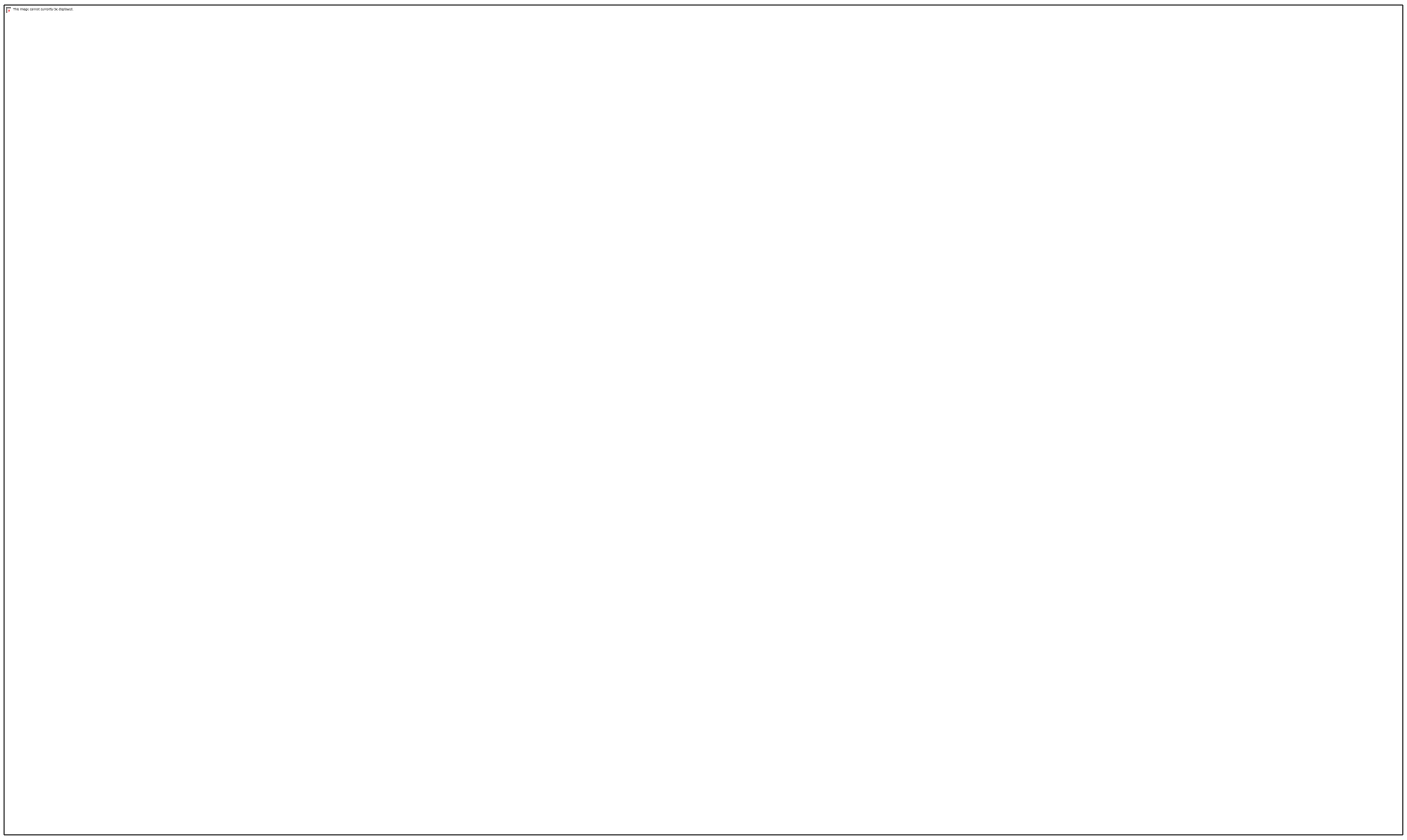
e) Exposure

- Exposure determines how bright or dark the photograph appears.
- Consistent exposure helps maintain a uniform appearance.

f) Background

- A suitable background should be selected.
- Distracting objects should be removed.
- The background should support the storyline.





2.4 Frames Per Second (FPS)

Frames per second (FPS) refers to the number of individual images displayed in one second during animation playback.

FPS determines how smoothly or quickly an animated sequence appears to move.

Examples:

- 6 FPS means six frames are displayed every second.
- 12 FPS means twelve frames are displayed every second.
- 24 FPS means twenty-four frames are displayed every second.
- 30 FPS means thirty frames are displayed every second.

Relationship between FPS and movement

1. Higher FPS generally produces smoother movement when the sequence has enough appropriate frames.
2. Lower FPS may produce a jerky or stepped appearance.
3. FPS influences the number of photographs required.
4. FPS determines the duration of the animation when the total number of frames is fixed.

Worked example

A learner creates an animation containing 60 photographs and uses 12 FPS.

Duration:

$$Duration = \frac{Total\ frames}{FPSD}$$

=60/12=5 seconds

Therefore, the animation will last 5 seconds.

Important: For the Grade 11 practical project, the complete animation should not exceed 30 seconds.

2.5 Panels in Animation

A panel is an individual section or rectangular area in a storyboard that represents a particular scene, action or moment in a story.

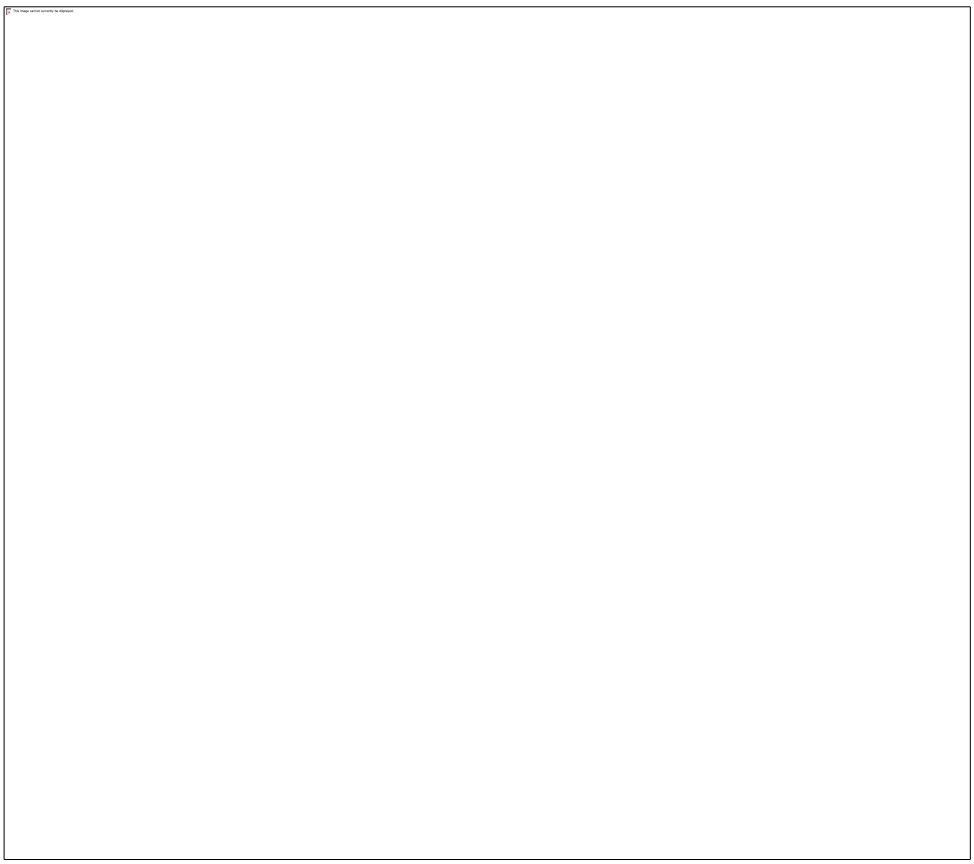
Panels help the animator plan the sequence of events before production begins.

A storyboard consists of several panels arranged in a logical order.

Functions of storyboard panels

1. They organise the storyline.
2. They show the order of events.
3. They indicate character positions.
4. They communicate important actions.
5. They help plan camera angles.
6. They reduce confusion during production.
7. They help identify the beginning, middle and ending of a story.

Example of a four-panel storyboard



A learner planning an animation about a pupil entering a classroom may use these panels:

- Panel 1: The pupil approaches the classroom.
- Panel 2: The pupil opens the door.
- Panel 3: The pupil enters and greets the teacher.

- Panel 4: The pupil sits down.

2.6 Difference Between a Frame and a Panel

A frame and a panel are related but have different meanings.

Frame	Panel
A single image in an animation sequence.	A section of a storyboard.
Creates the illusion of movement when combined with other frames.	Helps plan the storyline and actions.
Used during animation production and playback.	Mainly used during story planning.
Can represent a very small movement change.	Can represent an entire action or moment.
Many frames may be used to animate one panel's action.	One panel may be represented by several animation frames.

Remember: A panel is used mainly to plan a story, while a frame is an individual image used to create movement.

3.0 CHARACTER DEVELOPMENT FOR STOP MOTION ANIMATION

3.1 Meaning of an Animated Character

An animated character is a person, animal, imaginary creature or object that is designed to perform actions and communicate ideas in an animation.

Characters are the main subjects used to communicate the storyline.

Examples:

- Human characters such as pupils, teachers and farmers.
- Animal characters such as elephants, lions, goats and birds.
- Imaginary characters such as fairies and robots.
- Object characters such as talking pencils and moving books.

3.2 Qualities of a Good Animated Character

A good animated character should have the following qualities:

1. **Simplicity:** The character should be easy to create and manipulate.
2. **Recognisability:** It should have distinctive features that make it easy to identify.
3. **Appropriate proportions:** The body parts should be arranged in a suitable manner.
4. **Durability:** The materials used should withstand repeated movement.
5. **Flexibility:** The character should allow the required movements.
6. **Consistency:** Its appearance should remain relatively unchanged throughout the animation.
7. **Creativity:** It should demonstrate originality and imagination.
8. **Suitability:** It should match the intended storyline.

9. **Expressiveness:** It should communicate emotions through facial expressions and body movements.

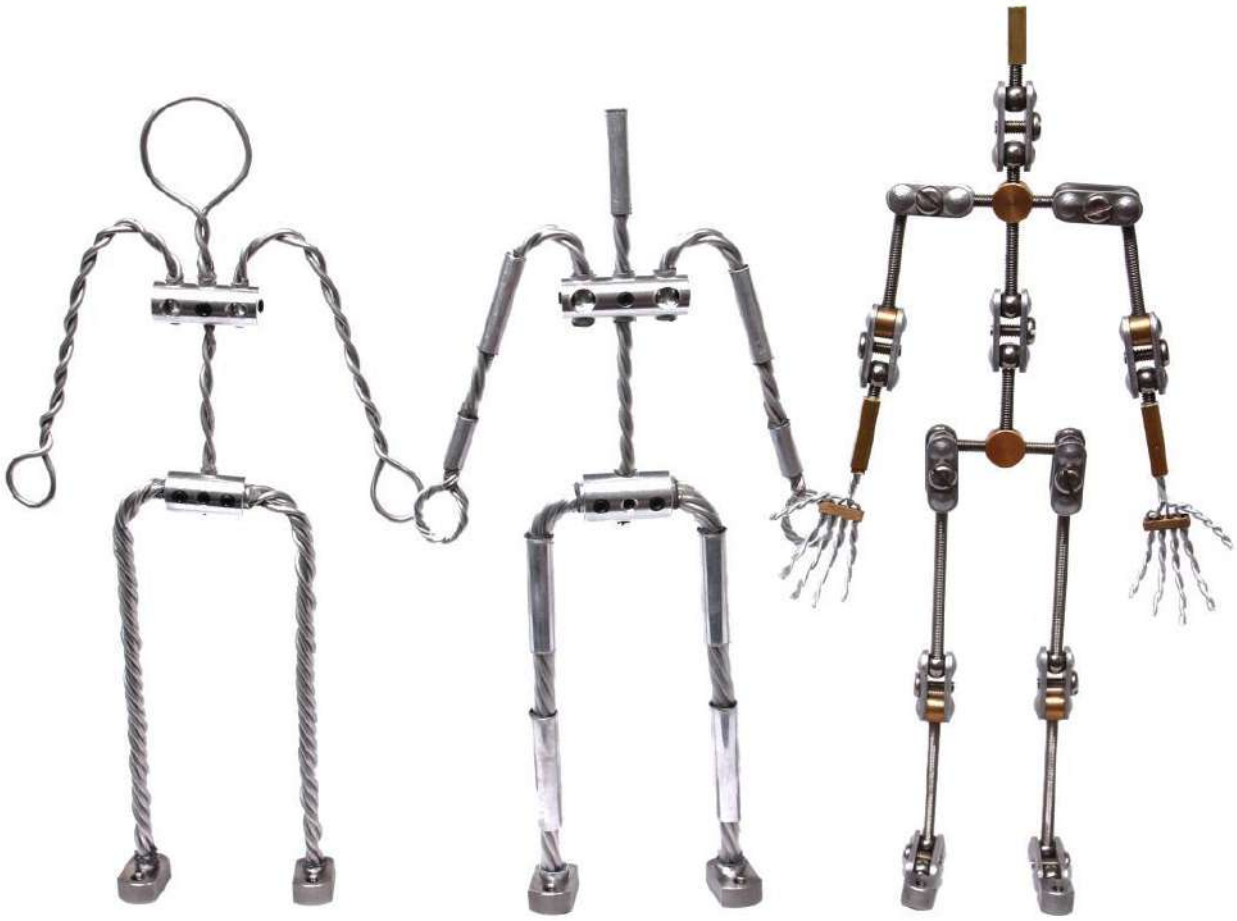
3.3 Materials Used in Making Stop Motion Characters

Locally available materials can be used to create stop motion characters in Kenyan schools.

Material	Application
Modelling clay	Making flexible characters and body parts.
Cardboard	Constructing flat characters and body structures.
Coloured paper	Making facial features, clothes and decorations.
Wire	Making internal supports and movable limbs.
Fabric	Making puppet bodies and clothes.
Foam	Making lightweight puppet characters.
Glue	Joining different character parts.
Plasticine	Modelling characters and accessories.
Cotton wool	Making hair, clouds and animal features.
Recycled materials	Making creative characters from discarded objects.




Memes



3.4 Tools and Equipment Used in Character Creation

1. **Scissors:** Used for cutting paper, cardboard and fabric.
2. **Craft knife:** Used for cutting thick materials under appropriate supervision.
3. **Ruler:** Used for measuring and drawing straight lines.
4. **Pencil:** Used for sketching character designs.
5. **Paintbrushes:** Used for applying paint.
6. **Modelling tools:** Used for shaping clay.
7. **Pliers:** Used for bending and shaping wire.
8. **Glue gun:** Used for joining materials under adult supervision.
9. **Camera or smartphone:** Used for capturing photographs.
10. **Tripod:** Used for keeping the camera stable.

3.5 Steps in Designing and Creating a 2D Stop Motion Character

Step 1: Identify the character

- Decide whether the character will be a human being, animal or imaginary creature.
- Consider the storyline and the intended audience.
- Identify the actions the character will perform.

Step 2: Develop character ideas

- Brainstorm different character designs.
- Research similar characters for inspiration.
- Identify the character's unique features.
- Consider the character's personality.

Step 3: Sketch the character

- Draw the character on paper.
- Use basic shapes to develop the body.
- Show the front, side and other relevant views.
- Indicate facial expressions and body parts.

Step 4: Select suitable materials

- Choose materials according to the character design.
- Consider availability, durability and flexibility.
- Prefer affordable and locally available materials.

Step 5: Construct the character

- Cut, mould or assemble the materials.
- Attach body parts appropriately.
- Add facial features and decorations.
- Ensure that movable parts can be adjusted.

Step 6: Test the character

- Move the arms, legs and head.
- Check whether the character can perform the required actions.
- Correct any weak or unstable parts.

Step 7: Prepare the character for photography

- Place the character in the intended setting.
- Ensure that it is stable.
- Arrange the background and lighting.



3.6 Character Expressions and Exaggeration

Character expression refers to the use of facial features and body movements to communicate feelings, thoughts and emotions.

Examples of emotions include:

- Happiness.
- Sadness.
- Anger.
- Fear.
- Surprise.
- Confusion.

- Excitement.

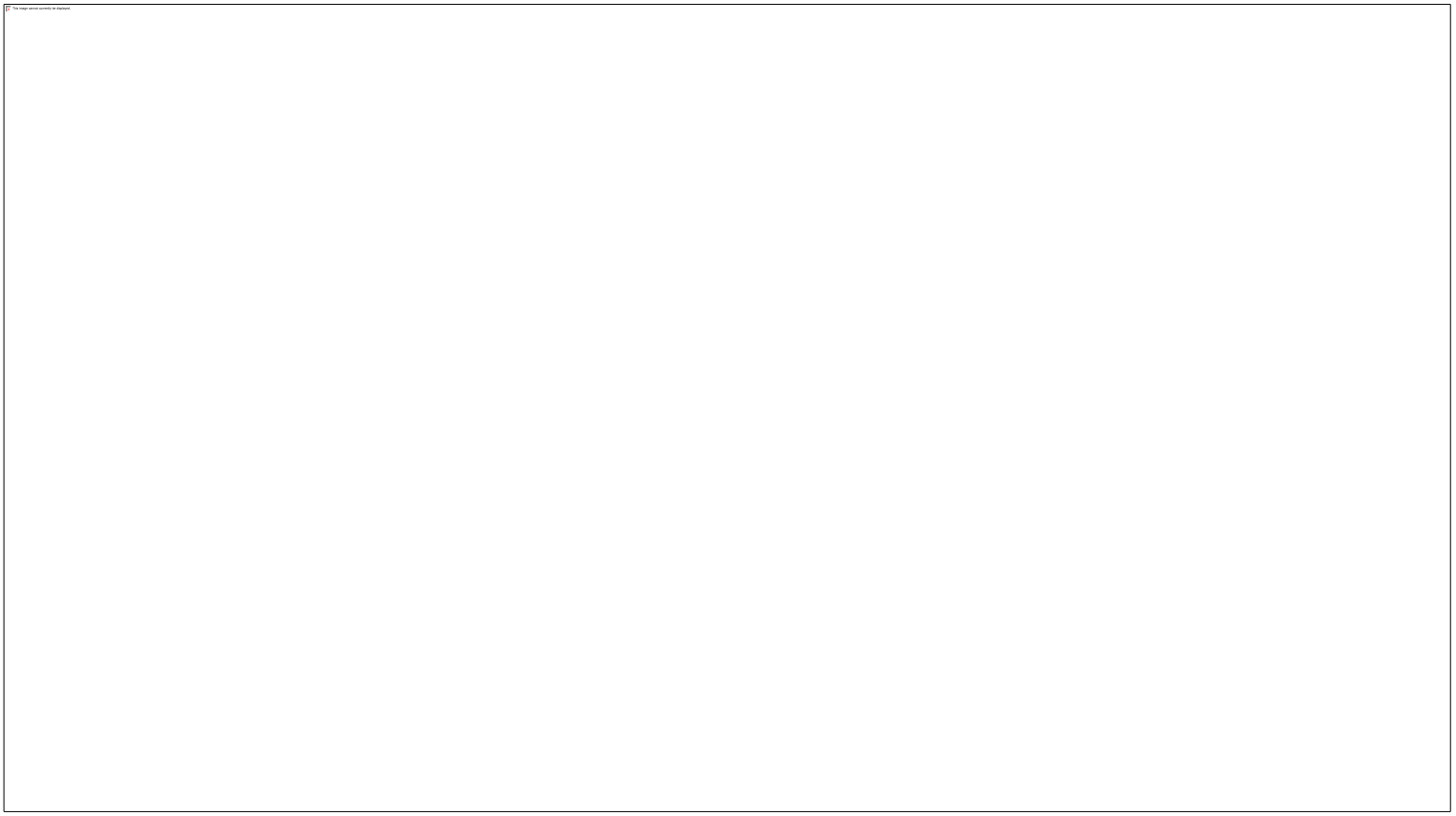
Exaggeration is the deliberate enlargement or emphasis of an action, feature or movement to make it more noticeable and expressive.

Examples:

1. Making a character's eyes very wide to show surprise.
2. Raising the arms high to demonstrate excitement.
3. Making a character jump higher to show happiness.
4. Bending the body dramatically to communicate fear.

Importance of exaggeration in animation

- Makes characters more expressive.
- Helps communicate emotions clearly.
- Makes actions interesting.
- Improves storytelling.
- Attracts the audience's attention.



4.0 STORYLINE DEVELOPMENT IN STOP MOTION ANIMATION

4.1 Meaning of a Storyline

A storyline is the organised sequence of events that forms the basis of an animated presentation.

It explains what happens, who participates, where the events occur and how the story ends.

A good storyline should have a clear beginning, middle and ending.

4.2 Main Elements of a Storyline

a) Characters

- These are the individuals, animals or objects involved in the story.
- They perform the actions and communicate the message.

b) Setting

- The setting is the place and time in which the story occurs.
- Examples include a classroom, farm, home, market, forest or school playground.

c) Plot

- The plot refers to the sequence of events in a story.
- It explains how the story develops from beginning to end.

d) Conflict or problem

- This is the challenge or difficulty experienced by the characters.
- It creates interest and gives the story direction.

e) Resolution

- This is how the problem is solved.
- It provides an ending to the storyline.

f) Theme

- The theme is the main idea or message communicated by the story.
- Examples include environmental conservation, honesty, teamwork and responsibility.

g) Dialogue

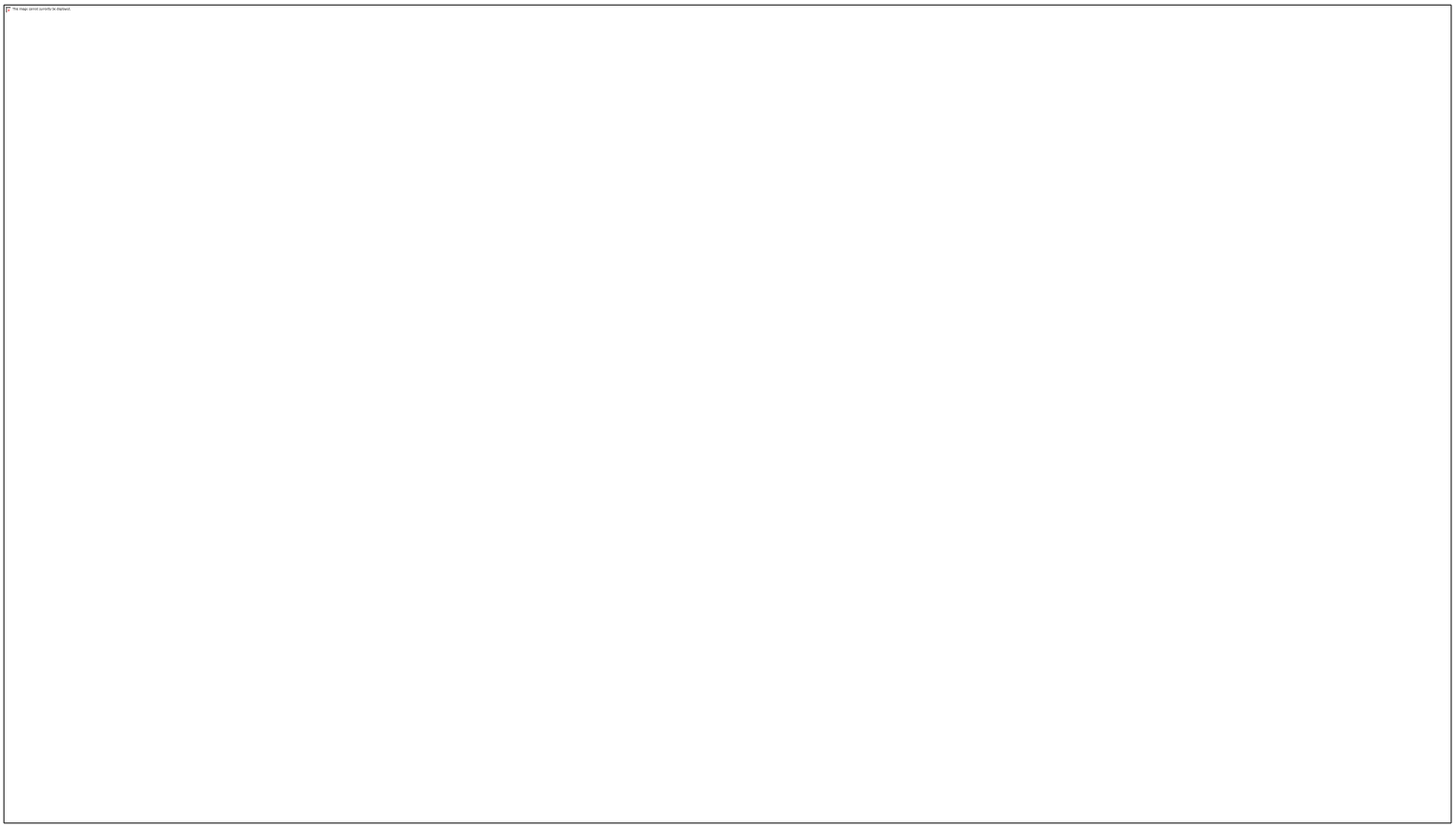
- Dialogue refers to the words spoken by characters.
- It helps communicate information and develop relationships between characters.

4.3 Steps in Developing a Storyline

1. Identify the main message.
2. Choose the characters.
3. Select the setting.
4. Develop the beginning of the story.
5. Identify the main events and problem.
6. Determine how the problem will be solved.
7. Develop the ending.
8. Organise the events into storyboard panels.
9. Review the storyline for clarity and logical flow.

4.4 Example of a Kenyan Stop Motion Storyline

Title: Keeping Our School Environment Clean



Theme: Environmental conservation.

Characters:

- Two pupils.
- A teacher.
- A school cleaner.

Setting: A Kenyan primary school compound.

Storyline:

- Beginning: Two pupils enter the school compound and notice litter scattered around.
- Development: They discuss the problem and decide to collect the rubbish.
- Middle: They encourage other learners to join the cleaning activity.
- Resolution: The pupils separate recyclable materials from other waste and dispose of rubbish appropriately.
- Ending: The teacher congratulates the pupils for keeping the environment clean.

Moral lesson: Everyone has a responsibility to maintain a clean and healthy environment.

4.5 Storyboarding

Storyboarding is the process of planning an animation by arranging sketches or illustrations in a sequence of panels.

It helps the animator visualise the events before taking photographs.

Information included in a storyboard

- Panel number.

- Sketch of the action.
- Character position.
- Background or setting.
- Camera angle.
- Description of the action.
- Dialogue or sound effects where necessary.
- Notes on transitions.

Example of a storyboard planning table

Panel	Visual action	Description
1	Pupil enters the compound.	The pupil notices litter.
2	Pupil points at rubbish.	The pupil decides to clean.
3	Pupil collects rubbish.	Cleaning activity begins.
4	Other pupils join.	Teamwork is demonstrated.
5	Clean compound.	The environment is clean.

4.6 Importance of Storyboarding

1. Helps organise the sequence of events.
2. Makes animation production easier.
3. Helps identify the number of scenes required.
4. Guides camera positioning.
5. Helps estimate the number of photographs required.
6. Prevents unnecessary repetition.
7. Encourages creativity and planning.
8. Improves communication among group members.
9. Helps maintain continuity in the storyline.

5.0 TECHNIQUES USED IN 2D DIGITAL ANIMATION

5.1 Traditional 2D Animation

Traditional 2D animation is a technique in which individual drawings are created to represent successive stages of movement.

The drawings are displayed in sequence to produce an illusion of motion.

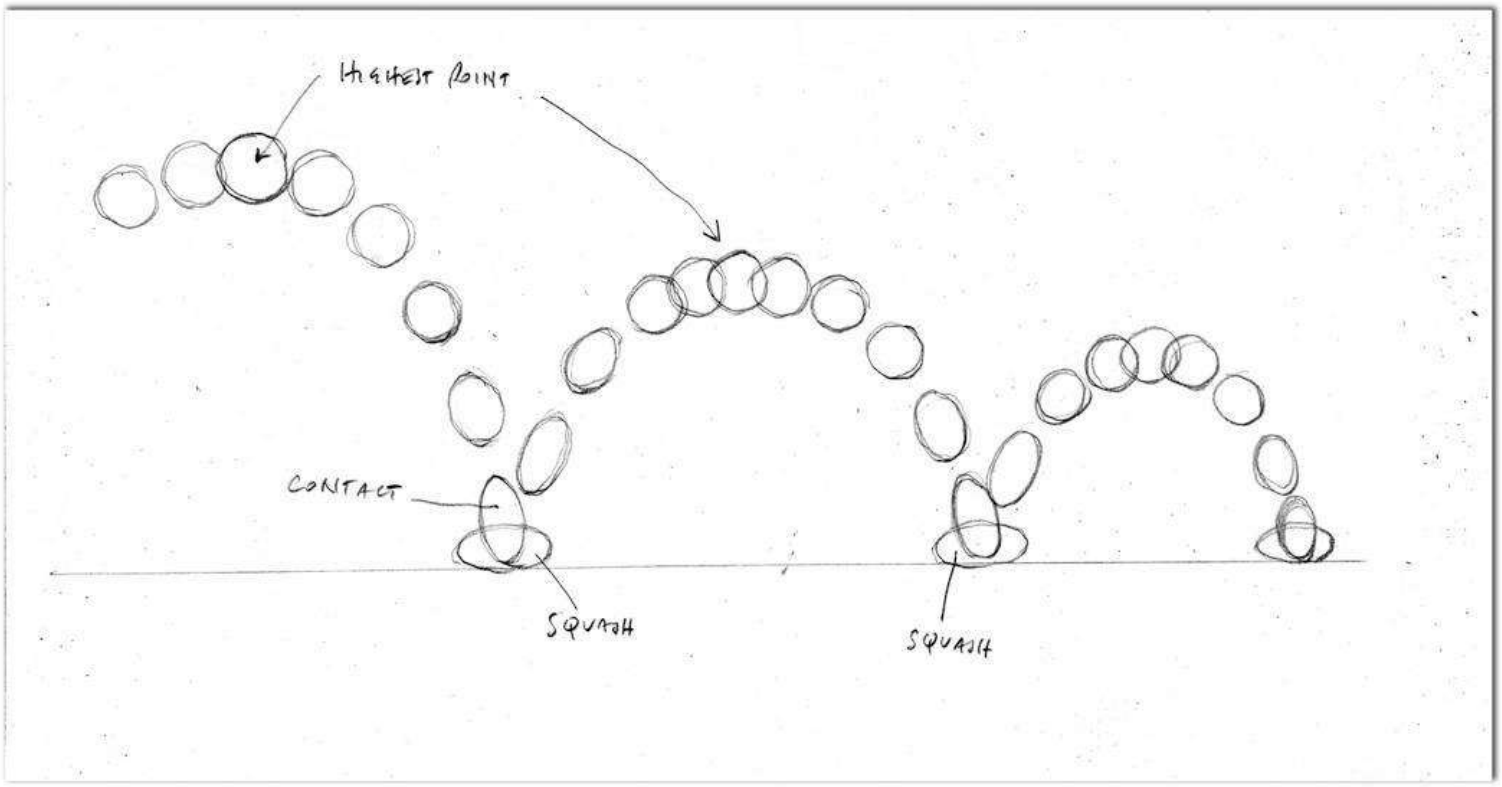
Process

1. Draw the first image.
2. Draw the next image with a slight movement change.

3. Continue drawing successive images.
4. Arrange the drawings in sequence.
5. Display them at a selected frame rate.
6. Observe the resulting movement.

Examples:

- Hand-drawn cartoons.
- Animated drawings of a bouncing ball.
- A character walking.
- A bird flapping its wings.



5.2 Digital 2D Animation

Digital 2D animation involves creating and manipulating drawings or images using digital devices and specialised software.

The animator uses a computer, tablet or smartphone to create, arrange and edit images.

Features

- Uses digital drawing tools.
- Allows editing and correction.
- Supports layers.
- Allows addition of sound.
- Enables control of timing and frames.
- Allows export into digital video formats.

5.3 Stop Motion Technique

This technique uses photographs of physically manipulated objects or characters.

Production procedure

1. Prepare the character.
2. Arrange the background.
3. Set up the camera.
4. Take the first photograph.
5. Move the character slightly.
6. Capture the next photograph.
7. Repeat until the action is complete.
8. Import the photographs into animation software.
9. Arrange them in the correct order.
10. Adjust the timing and playback speed.
11. Preview the animation.
12. Export the completed animation.

5.4 Other Animation Techniques

a) Frame-by-frame animation

- Each frame is created or adjusted individually.
- It provides direct control over movement.
- It is suitable for detailed actions.

b) Cut-out animation

- Uses flat characters made from paper or cardboard.
- Different body parts are moved between frames.
- It is suitable for simple school projects.

c) Puppet animation

- Uses movable puppets.
- The puppets are adjusted slightly between photographs.
- It allows expressive character movement.

d) Clay animation

- Uses mouldable clay characters.
- The characters are reshaped or repositioned.
- It allows flexible movement and changes in appearance.

e) Object animation

- Uses ordinary objects as animated subjects.
- Objects are moved gradually and photographed.

6.0 FRAMES, TIMING AND PROGRESSION IN STOP MOTION

6.1 Meaning of a Frame

A frame is one individual image or photograph that forms part of an animation sequence.

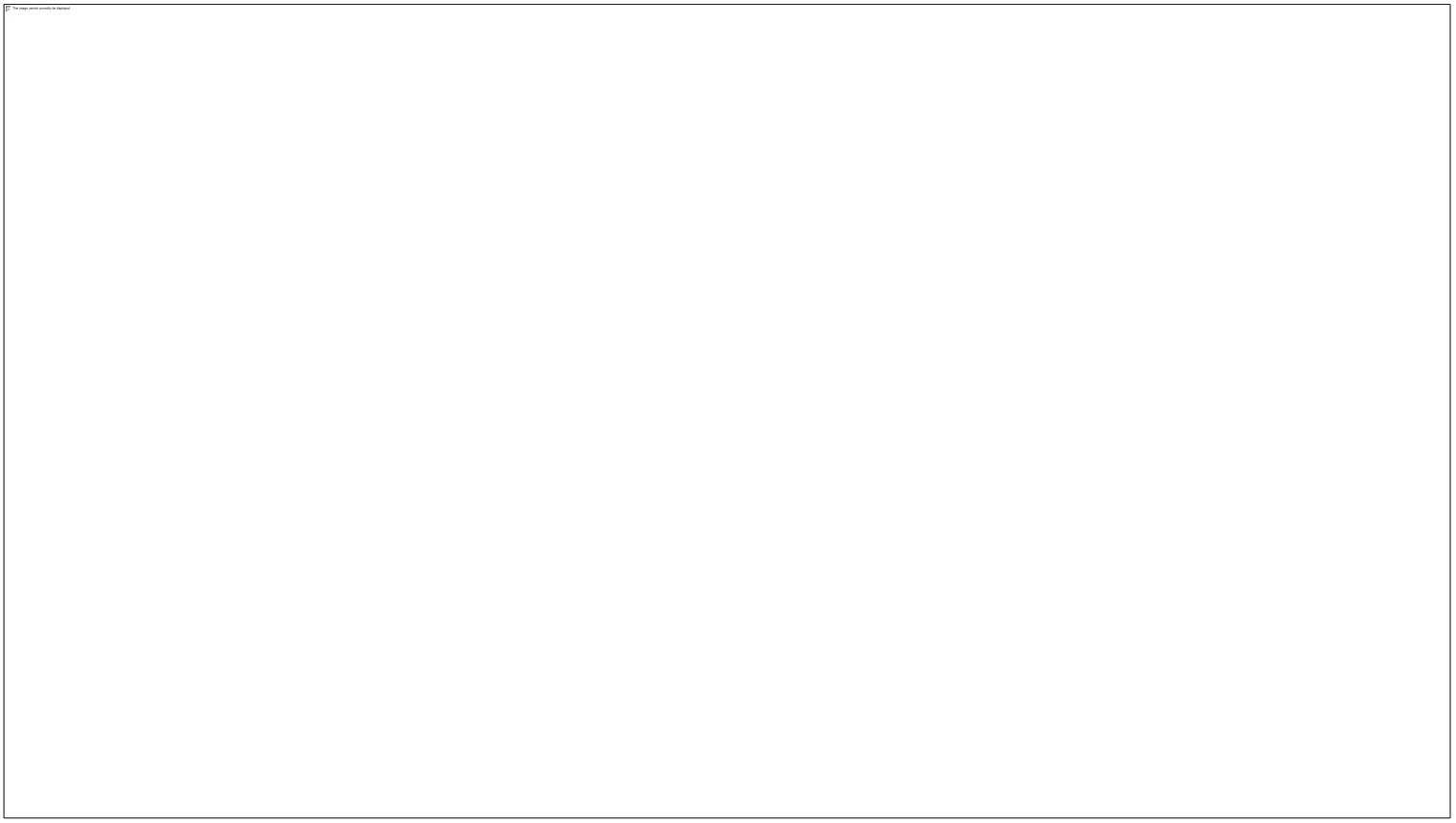
Each frame captures a particular position or appearance of the animated character.

6.2 Frame Progression

Frame progression refers to the logical arrangement of successive images to show the development of movement or action.

For example, when animating a ball bouncing:

1. Frame 1: The ball is at the top.
2. Frame 2: The ball begins descending.
3. Frame 3: The ball moves closer to the ground.
4. Frame 4: The ball touches the ground.
5. Frame 5: The ball begins moving upwards.
6. Frame 6: The ball rises again.



6.3 Timing in Animation

Timing refers to the duration taken by an animated action or the length of time an individual frame is displayed.

Timing affects the speed, rhythm and appearance of movement.

Examples:

- A character moving slowly may require longer timing.
- A character running may require faster frame changes.
- A ball falling rapidly requires appropriate timing to show realistic movement.

Importance of timing

1. Controls the speed of movement.
2. Helps communicate the character's actions.
3. Makes animation more realistic.
4. Improves coordination between action and sound.
5. Creates emphasis and dramatic effects.

6.4 Calculating Animation Duration

The duration of an animation can be calculated using:

Duration=Number of framesFrames per secondDuration=Frames per secondNumber of frames

Example 1

A learner captures 120 photographs and plays them at 12 FPS.

$$Duration = \frac{120}{12} = 10\ seconds$$

Example 2

An animation has 300 frames and is played at 15 FPS.

$$Duration = \frac{300}{15} = 20\ seconds$$

Example 3

A learner wants to create a 30-second animation at 12 FPS.

Frames=30×12=360Frames=30×12=360

The learner requires 360 frames.

Grade 11 practical requirement

The completed animation should be controlled to a maximum duration of 30 seconds.

6.5 Continuity in Animation

Continuity refers to maintaining consistency in the appearance, movement and arrangement of characters and objects throughout an animation.

Ways of maintaining continuity

1. Keep the camera in a fixed position.
2. Maintain consistent lighting.
3. Avoid unnecessary changes to the background.
4. Move characters gradually.
5. Maintain the same character design.
6. Arrange photographs in the correct order.
7. Avoid accidentally moving the camera or set.
8. Check each frame before taking the next photograph.

6.6 Common Problems in Stop Motion Production

Problem	Possible solution
Blurred photographs	Focus the camera properly.
Shaky animation	Use a tripod or stable support.
Uneven lighting	Maintain consistent lighting.
Sudden character jumps	Make smaller movement adjustments.
Character falling over	Strengthen the character's support.
Missing photographs	Check the sequence during production.
Incorrect frame order	Arrange photographs logically.
Flickering background	Avoid changing lighting and camera exposure.
Jerky movement	Capture more intermediate positions.
Animation exceeding 30 seconds	Reduce the number of frames or adjust the frame rate appropriately.

7.0 SOFTWARE AND DIGITAL TOOLS FOR 2D ANIMATION

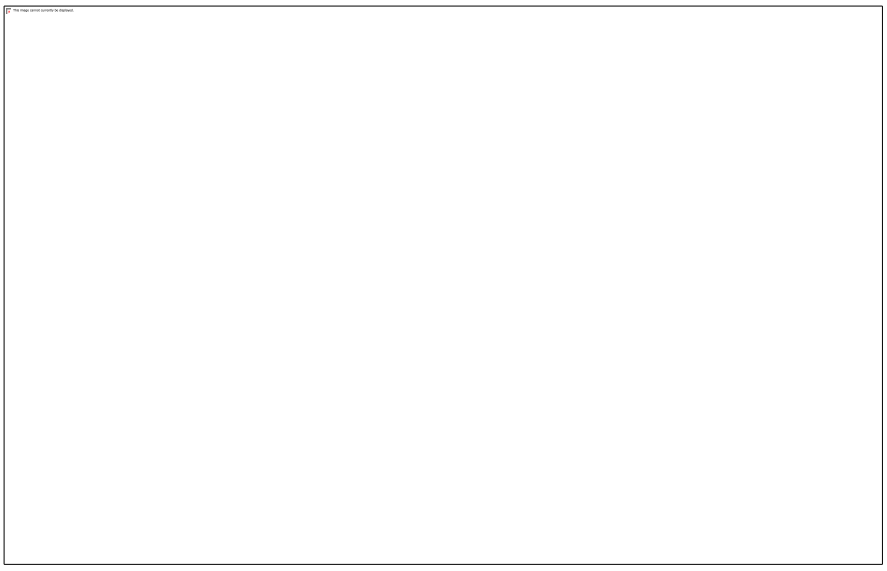
7.1 Meaning of Animation Software

Animation software refers to computer or mobile applications used to create, edit, arrange and play animated images.

7.2 Examples of Animation Software

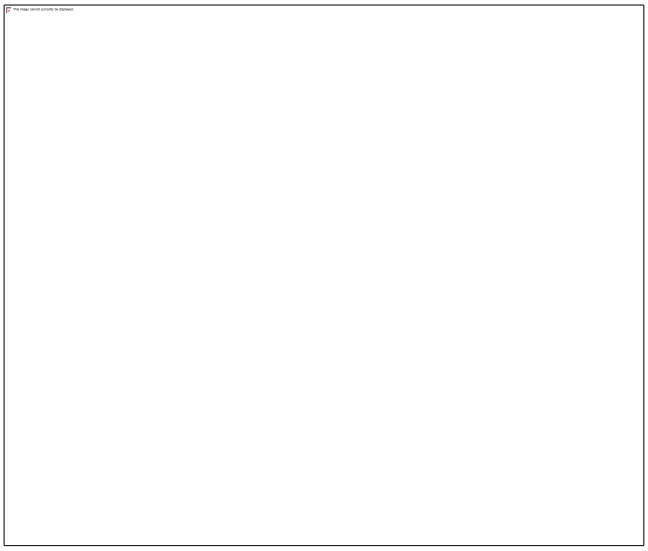
1. Stop Motion Studio

- Used to capture and arrange photographs.
- Allows users to create stop motion animations.
- Supports frame-by-frame production.
- Suitable for school projects using smartphones and tablets.



2. FlipaClip

- Used for creating 2D animations.
- Supports frame-by-frame drawing.
- Provides drawing tools and layers.
- Suitable for beginners.



3. Krita

- Provides digital drawing and painting tools.
- Supports animation features.
- Allows creation of digital characters and backgrounds.



4. Pencil2D

- Used for traditional-style 2D animation.
- Supports bitmap and vector drawings.
- Suitable for creating hand-drawn animated sequences.



5. OpenToonz

- Used for producing 2D animation.

- Supports digital drawing and animation production.
- Provides tools for organising animation scenes.

7.3 Basic Steps in Importing Photographs into Animation Software

1. Transfer the photographs from the camera or smartphone to a computer or tablet.
2. Open the selected animation software.
3. Create a new project.
4. Import the photographs.
5. Arrange the photographs in the correct sequence.
6. Set the frame rate.
7. Adjust the timing of the frames.
8. Preview the animation.
9. Correct errors in the sequence.
10. Add suitable titles, sound effects or background music where appropriate.
11. Export the completed animation into a suitable video format.
12. Save a backup copy of the project.

7.4 Basic Functions of Animation Software

- **Import:** Brings photographs, drawings or other media into a project.
- **Timeline:** Organises frames and their timing.
- **Play:** Displays the animation.
- **Pause:** Temporarily stops playback.
- **Delete:** Removes unwanted frames.
- **Duplicate:** Creates a copy of a frame or object.
- **Undo:** Reverses the most recent action.
- **Redo:** Restores an undone action.
- **Export:** Produces the final animation file.
- **Save:** Stores the project for future editing.

8.0 SETTING UP A STOP MOTION ANIMATION PROJECT

8.1 Equipment Required

A learner may use:

1. Smartphone or digital camera.
2. Tripod or stable camera support.
3. Computer, tablet or smartphone.
4. Clay, paper puppets or cardboard characters.
5. Modelling materials.
6. Lighting equipment.

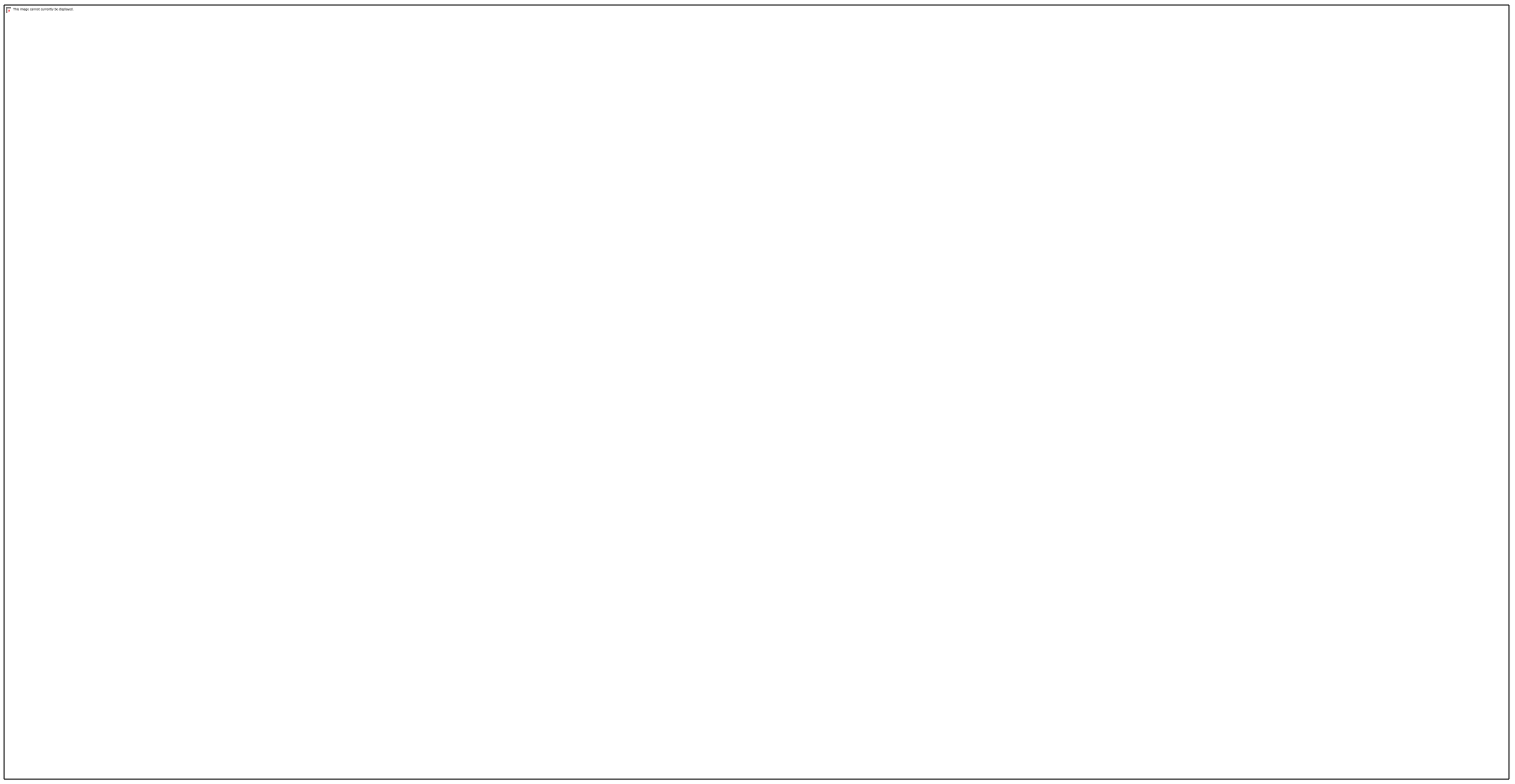
7. Background materials.
8. Animation software.
9. Storage device where available.
10. Headphones or speakers for reviewing sound.

8.2 Preparing the Shooting Environment

The shooting environment is the physical area where photographs are taken.

Important considerations

- Select a quiet and clean working area.
- Provide adequate lighting.
- Use a stable table or platform.
- Arrange the background.
- Keep the camera fixed.
- Remove unnecessary objects.
- Ensure that the character is visible.
- Keep materials organised.



8.3 Camera Angles Used in Animation

a) Eye-level angle

- The camera is placed at the same level as the character.
- It creates a natural viewing perspective.
- It is suitable for conversations between characters.

b) High-angle shot

- The camera is positioned above the subject.
- It looks down towards the character.
- It can show the arrangement of objects on a surface.

c) Low-angle shot

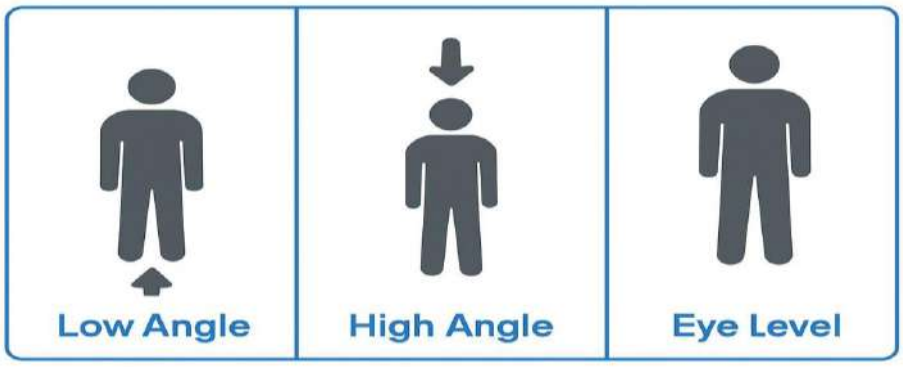
- The camera is positioned below the subject.
- It looks upwards towards the character.
- It can make a character appear powerful or important.

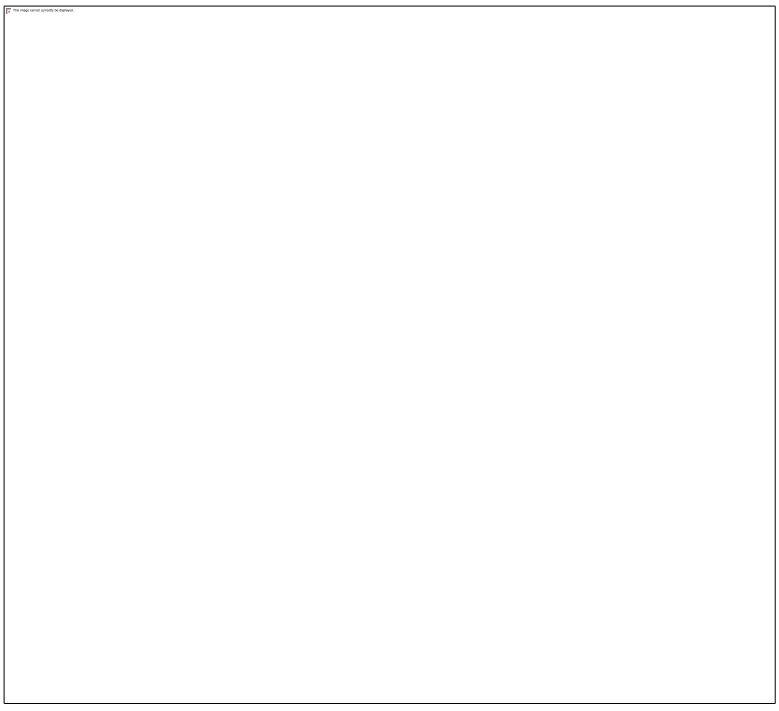
d) Bird's-eye view

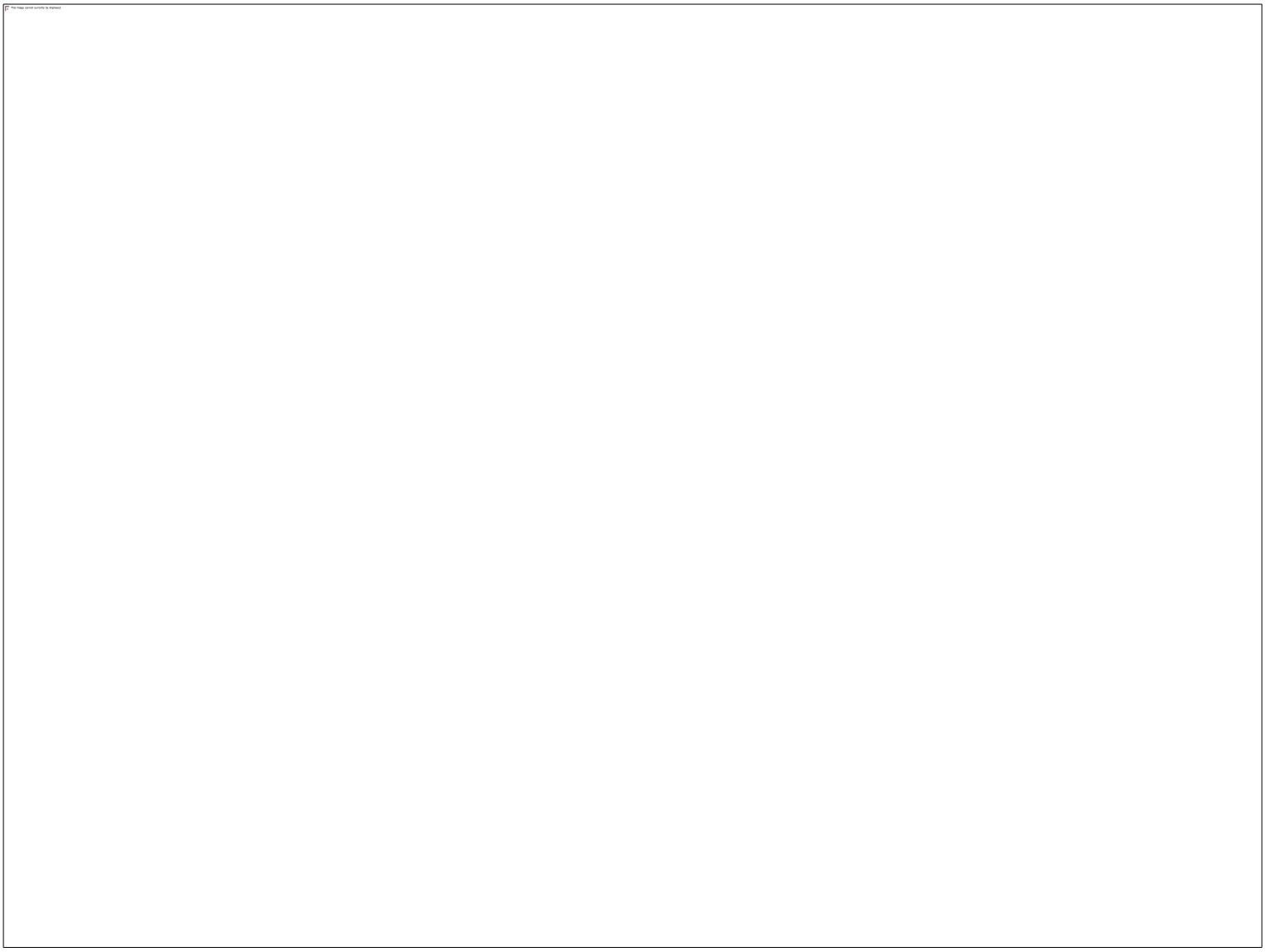
- The camera is positioned directly above the subject.
- It shows the scene from an overhead position.
- It is useful when animating objects moving on a flat surface.

e) Close-up shot

- Shows a small or detailed part of the character.
- It can emphasise facial expressions or important objects.







8.4 Practical Production Procedure

Activity: Creating a 2D Stop Motion Animation of a Walking Animal

Objective: To create a short animation showing an animal walking.

Materials:

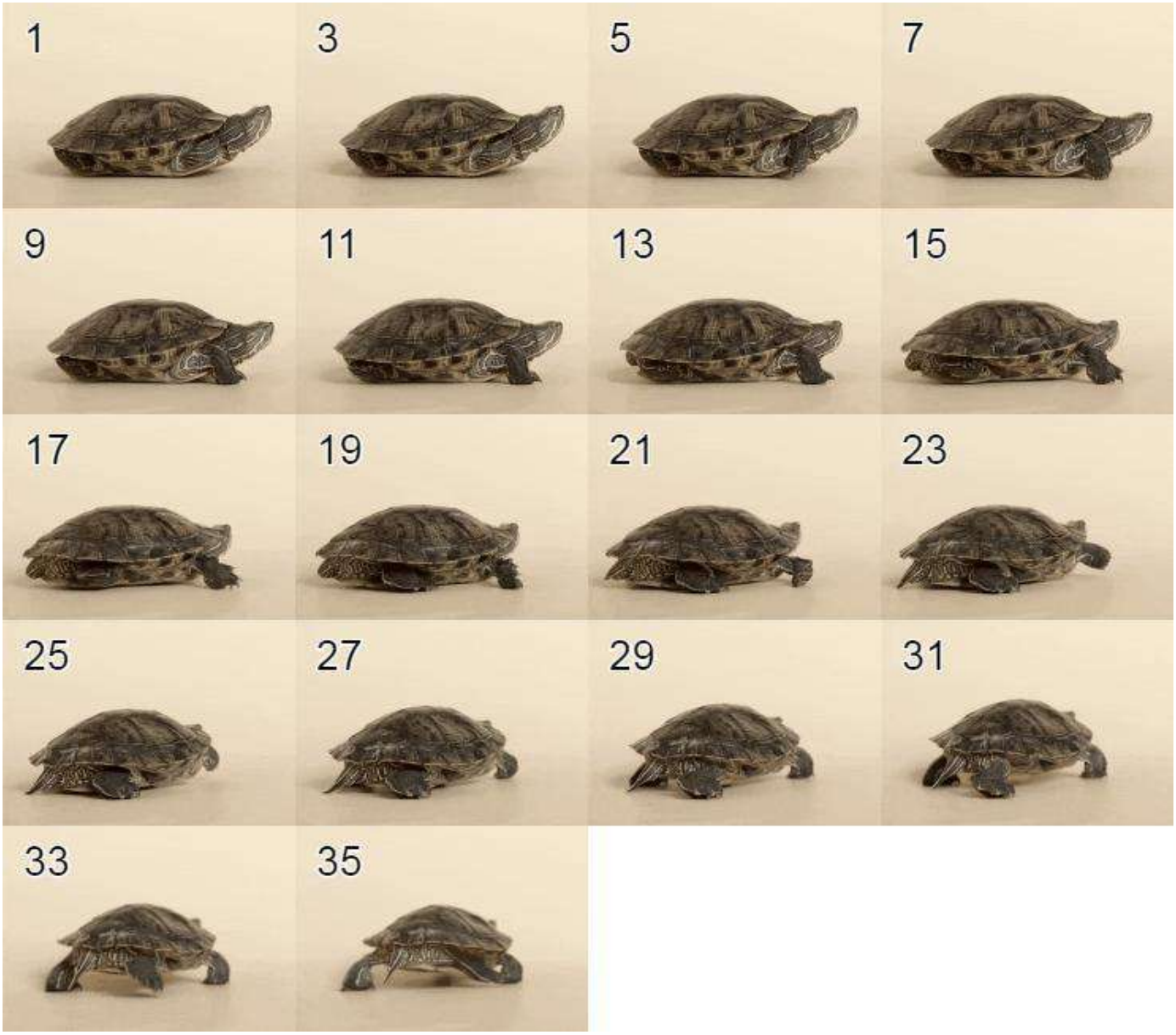
- Modelling clay or cardboard.
- Smartphone or digital camera.
- Tripod.
- Plain background.
- Computer or smartphone with animation software.

Procedure

1. Select an animal, for example a tortoise.
2. Sketch the animal on paper.
3. Create the character using clay or cardboard.
4. Prepare a suitable background.
5. Position the camera on a stable support.

6. Place the character in the starting position.
7. Capture the first photograph.
8. Move the character slightly forward.
9. Adjust its legs to represent walking.
10. Capture the next photograph.
11. Repeat the movement and photography process.
12. Import all photographs into animation software.
13. Arrange them in the correct order.
14. Select a suitable frame rate.
15. Preview the movement.
16. Make corrections where necessary.
17. Export the animation.
18. Save it in the learner's digital portfolio.

Expected outcome: A short animation showing a tortoise walking smoothly across a surface.



9.0 PRESENTATION OF 2D DIGITAL ANIMATION

9.1 Meaning of Animation Presentation

Animation presentation is the process of displaying a completed animated project to an audience for viewing, appreciation, discussion and evaluation.

It allows the animator to communicate creative ideas through digital media.

9.2 Preparing an Animation for Presentation

1. Preview the completed animation.
2. Check the order of the frames.
3. Confirm that the animation does not exceed 30 seconds.
4. Check the quality of photographs.
5. Confirm that the characters are clearly visible.
6. Check the background and lighting.
7. Ensure that the sound is appropriate.
8. Save the final video.
9. Prepare a short explanation of the production process.
10. Arrange the equipment required for presentation.

9.3 Methods of Presenting Animation

- Using a computer monitor.
- Using a projector and screen.
- Using a smartphone or tablet.
- Through a digital classroom platform.
- Through a digital portfolio.
- Through an offline video presentation.

9.4 Importance of Presenting Animated Work

1. Enables learners to share creative ideas.
2. Develops communication skills.
3. Encourages confidence.
4. Provides opportunities for feedback.
5. Promotes appreciation of different artistic styles.
6. Encourages collaboration.
7. Develops digital literacy.
8. Helps learners identify areas for improvement.

9.5 Appreciating Own and Others' Animated Work

Appreciation refers to recognising, valuing and acknowledging the creativity, effort and artistic qualities demonstrated in an animation.

Ways of appreciating animated presentations

1. Watching the animation attentively.
2. Recognising the creativity demonstrated.
3. Identifying effective character designs.
4. Appreciating smooth movements.
5. Recognising the originality of the storyline.
6. Giving constructive feedback.
7. Respecting different artistic approaches.
8. Avoiding unfair criticism.
9. Acknowledging the contributions of group members.

9.6 Critiquing an Animated Presentation

Critiquing is the process of examining and evaluating an artwork to identify its strengths and areas requiring improvement.

Areas to consider when evaluating an animation

Evaluation area	What to examine
Character design	Is the character attractive and recognisable?
Creativity	Does the animation demonstrate originality?
Storyline	Is the story clear and logical?
Movement	Are the movements smooth and understandable?
Camera setting	Are photographs clear and stable?
Lighting	Is the lighting consistent?
Frame progression	Are frames arranged correctly?
Timing	Is the animation speed appropriate?
Presentation	Is the final work well organised?
Message	Does the animation communicate its intended message?

Examples of constructive feedback

- The character design is creative and easy to recognise.
- The storyline communicates an important environmental message.
- The animation would improve with smaller movement changes between photographs.
- The camera should be kept more stable.
- The lighting should remain consistent throughout the production.

10.0 DIGITAL PORTFOLIO FOR 2D DIGITAL ANIMATION

10.1 Meaning of a Digital Portfolio

A digital portfolio is an organised electronic collection of a learner's creative work, photographs, videos, sketches, research materials and reflections.

It provides evidence of the learner's learning progress and artistic development.

10.2 Contents of a Stop Motion Digital Portfolio

1. Project title.
2. Learner's name and class.
3. Project objectives.
4. Research findings.
5. Character sketches.
6. Photographs of materials and tools.
7. Photographs showing character development.
8. Storyboard panels.
9. Camera setup photographs.
10. Selected animation frames.
11. Completed animation video.
12. Reflection on the production process.
13. Peer feedback.
14. Self-assessment.
15. Acknowledgement of sources and collaborators.

10.3 Importance of a Digital Portfolio

- Provides evidence of learning.
- Records artistic progress.
- Helps organise creative work.
- Encourages self-reflection.
- Makes it easier to share completed projects.
- Demonstrates digital skills.
- Supports assessment.

- Encourages responsibility and ownership of artwork.

10.4 Ethical Considerations in Digital Animation

Learners should observe responsible practices when producing and sharing digital animation.

1. Respect other people's original artwork.
2. Acknowledge sources of borrowed images and sounds.
3. Obtain permission before using another person's photographs.
4. Avoid copying another learner's animation and presenting it as original work.
5. Use appropriate content.
6. Respect the privacy of people appearing in photographs.
7. Avoid offensive or discriminatory messages.
8. Use digital devices responsibly.
9. Protect project files from unauthorised access.
10. Give credit to all group members who contributed to the project.

11.0 SAFETY PRECAUTIONS WHEN CREATING STOP MOTION ANIMATION

1. Handle scissors carefully when cutting paper and cardboard.
2. Use craft knives only under appropriate supervision.
3. Avoid touching the hot nozzle of a glue gun.
4. Keep electrical cables properly arranged.
5. Avoid placing liquids near electrical equipment.
6. Use tripods and camera stands safely.
7. Do not overload electrical sockets.
8. Maintain cleanliness in the working area.
9. Wash hands after handling modelling materials.
10. Avoid prolonged screen exposure without breaks.
11. Store sharp tools safely.
12. Handle cameras, smartphones and computers carefully.

SUGGESTED LEARNING ACTIVITIES AND PROJECTS

Project 1: Creating a Clay Character

Task: Create a simple clay character that can perform at least two movements.

Expected evidence:

- Character sketches.
- Photographs of the modelling process.
- Completed clay character.
- Photographs of the character in different positions.

Project 2: Creating a Paper Cut-out Character

Task: Design and construct a paper character that can wave its hands.

Expected evidence:

- Character design.
- Cut-out body parts.
- Completed character.
- Photographs showing hand movement.

Project 3: Producing a Stop Motion Animation

Task: Produce an animation showing a character performing a simple action.

Possible actions:

- A pupil walking.
- A bird flying.
- A ball bouncing.
- A farmer planting a seed.
- A person cleaning the environment.

Requirements:

- The animation should not exceed 30 seconds.
- Use successive photographs.
- Maintain a stable camera.
- Arrange frames in a logical sequence.
- Import photographs into animation software.
- Present the completed work.

Project 4: Animation Appreciation

Task: Watch animations produced by classmates and provide constructive feedback.

Learners should evaluate:

- Character design.
- Movement.

- Storyline.
- Camera setting.
- Lighting.
- Frame progression.
- Overall creativity.

REVISION QUESTIONS

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer all questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. What is animation?

A. The process of painting objects using watercolours.

B. The process of creating an illusion of movement through successive images.

C. The process of printing photographs on paper.

D. The process of designing buildings using computers.

2. Which statement best describes 2D digital animation?

A. Creating images with width, height and full depth.

B. Creating moving images in a two-dimensional space using digital technology.

C. Creating sculptures from stone.

D. Printing drawings on different materials.

3. Stop motion animation mainly involves:

A. Recording continuous video of moving objects.

B. Drawing pictures on a wall.

C. Taking successive photographs of physically manipulated objects.

D. Painting pictures using brushes.

4. Which of the following materials is most suitable for creating a flexible clay character?

A. Glass.

B. Modelling clay.

C. Concrete.

D. Metal sheet.

5. A learner wants to create an animation of a paper character walking. Which technique would be most appropriate?

A. Cut-out animation.

B. Stone carving.

C. Weaving.

D. Pottery.

6. Which equipment is most appropriate for keeping a camera stable during stop motion photography?

A. Paintbrush.

B. Ruler.

C. Tripod.

D. Palette.

7. What is the main purpose of a storyboard?

A. To determine the cost of animation materials.

B. To plan and organise scenes in a story.

C. To decorate the animation studio.

D. To measure the weight of characters.

8. Which statement correctly describes a frame?

A. A rectangular section of a storyboard.

B. An individual image forming part of an animation sequence.

C. A type of camera stand.

D. A drawing tool.

9. A panel in animation is mainly used to:

A. Control the brightness of a photograph.

B. Organise and plan scenes in a storyline.

C. Increase the weight of a character.

D. Store digital photographs.

10. What does FPS stand for?

A. Frames Per Second.

B. Files Per Screen.

C. Frames Per Story.

D. Film Production System.

11. An animation containing 60 frames is played at 12 FPS. What is its duration?

A. 2 seconds.

B. 5 seconds.

C. 10 seconds.

D. 12 seconds.

12. Which factor helps prevent camera shaking during photography?

A. Changing the background.

B. Moving the character rapidly.

C. Using a stable camera support.

D. Switching off the camera.

13. Why should lighting remain consistent during stop motion production?

A. To increase the number of characters.

B. To prevent unwanted brightness changes between photographs.

C. To reduce the number of storyboard panels.

D. To change the storyline.

14. Which of the following is an example of puppet animation?

A. Drawing a picture using charcoal.

B. Photographing a movable puppet after each adjustment.

C. Painting a landscape.

D. Carving a wooden sculpture.

15. What is exaggeration in animation?

A. Removing all character movements.

B. Deliberately emphasising actions or features to make them more noticeable.

C. Reducing the number of photographs.

D. Deleting the storyline.

16. Which of the following is an example of object animation?

A. A pencil appearing to write by itself.

B. A photograph hanging on a wall.

C. A painting displayed in a gallery.

D. A sculpture placed on a table.

17. What is the main function of animation software?

A. To construct classrooms.

B. To organise, edit and play animated images.

C. To manufacture cameras.

D. To produce clay materials.

18. Which of the following is a 2D animation application?

A. FlipaClip.

B. Calculator.

C. Spreadsheet.

D. File manager.

19. Which term refers to the logical arrangement of successive images to show movement?

A. Frame progression. B. Character modelling.

C. Colour mixing. D. Image printing.

20. A learner is creating an animation of a bouncing ball. What should the learner do between successive photographs?

A. Change the entire background.

B. Move the ball gradually to represent its movement.

C. Move the camera randomly.

D. Remove the ball from the scene.

21. Which of the following is an element of a storyline?

A. Exposure.

B. Setting.

C. Tripod.

D. Frame rate.

22. What is the main purpose of a character sketch?

A. To plan the appearance of the character before construction.

B. To determine the price of a camera.

C. To arrange photographs in a folder.

D. To calculate the duration of a video.

23. Which technique uses real people as subjects who change positions between photographs?

A. Clay animation.

B. Pixilation.

C. Cut-out animation.

D. Traditional drawing.

24. Which of the following is a function of the timeline in animation software?

A. Measuring the character's height.

B. Organising frames and their timing.

C. Cutting cardboard.

D. Mixing modelling clay.

25. What does exporting an animation mean?

A. Deleting all photographs.

B. Producing the completed animation in a suitable digital format.

C. Drawing a new character.

D. Changing the camera position.

26. Which of the following is the most appropriate way of appreciating another learner's animation?

A. Laughing at mistakes.

B. Ignoring the presentation.

C. Giving constructive and respectful feedback.

D. Copying the animation without permission.

27. What is the importance of a digital portfolio?

A. It provides an organised collection of a learner's creative work.

B. It replaces all animation equipment.

C. It prevents learners from sharing their work.

D. It increases the number of camera angles.

28. Which of the following demonstrates responsible digital citizenship?

A. Copying another person's animation without acknowledgement.

B. Sharing private photographs without permission.

C. Acknowledging sources of borrowed materials.

D. Presenting another person's work as original.

29. A learner's animation has jerky movements. Which action would best improve the movement?

A. Make larger and random movements.

B. Capture more intermediate positions between movements.

C. Change the camera angle after every photograph.

D. Reduce the number of photographs without adjusting the timing.

30. The maximum duration recommended for the Grade 11 stop motion animation project is:

A. 10 seconds.

B. 15 seconds.

C. 30 seconds.

D. 60 seconds.

SECTION B: STRUCTURED QUESTIONS (50 MARKS)

Instructions: Answer all questions.

1. a) Define the term 2D digital animation. (2 marks)

b) Explain four characteristics of stop motion animation. (4 marks)

c) State two examples of stop motion animation that can be produced using locally available materials in Kenya. (2 marks)

2.

a) Differentiate between a frame and a panel in digital animation. (4 marks)

b) Explain three factors that should be considered when setting up a camera for stop motion animation. (6 marks)

3.

a) Identify four materials that can be used to create a stop motion character. (4 marks)

b) Explain three qualities of a good animated character. (3 marks)

c) State three steps followed when creating a character for stop motion animation. (3 marks)

4.

a) Explain five steps involved in producing a stop motion animation using a smartphone or digital camera. (5 marks)

b) A learner captures 240 photographs and plays them at 12 frames per second.

Calculate the duration of the animation. (2 marks)

c) State three ways of maintaining continuity during stop motion production. (3 marks)

5.

a) Explain four functions of animation software during the production of a stop motion animation. (4 marks)

b) State three contents of a digital portfolio for a stop motion animation project. (3 marks)

c) Explain three ways of appreciating and evaluating another learner's animated presentation. (3 marks)

6.

a) Explain four ways in which stop motion animation promotes creativity among learners. (4 marks)

b) State three safety precautions to observe when producing stop motion animation. (3 marks)

c) Identify three core competencies developed through collaborative stop motion animation production. (3 marks)

Total: 50 marks

ANSWER GUIDE

Section A: Multiple-Choice Answer Key

Question	Answer	Question	Answer
1	B	16	A
2	B	17	B
3	C	18	A
4	B	19	A
5	A	20	B
6	C	21	B
7	B	22	A
8	B	23	B
9	B	24	B
10	A	25	B
11	B	26	C
12	C	27	A
13	B	28	C
14	B	29	B
15	B	30	C

Section B: Suggested Marking Scheme

1.

a) Creation of moving images in a two-dimensional space using digital technology. (2)

b)

- Uses successive photographs.
- Involves physical manipulation of objects.
- Requires small changes in position.
- Produces movement through sequential playback. (Any 4 × 1 = 4)

c)

- Clay character animation.
- Paper cut-out animation.
- Puppet animation.
- Object animation. (Any 2 × 1 = 2)

2.

a)

- A frame is an individual image forming part of an animation sequence.
- A panel is a section of a storyboard representing a scene or action. (4 marks: award suitable differences)

b)

- Camera stability – prevents shaking.
- Focus – ensures clear photographs.
- Lighting – ensures consistent brightness.
- Camera position – maintains a suitable viewing angle.
- Exposure – maintains consistent image brightness.
- Background – provides a suitable setting. (Any 3 well-explained × 2 = 6)

3.

a) Clay, cardboard, coloured paper, wire, fabric, foam, plasticine or recycled materials. (Any 4 × 1 = 4)

b)

- Simplicity – easy to construct and manipulate.
- Recognisability – has identifiable features.
- Flexibility – allows movement.
- Durability – withstands repeated handling.
- Expressiveness – communicates emotions. (Any 3 × 1 = 3)

c)

- Identify the character.
- Sketch the character.
- Select suitable materials.
- Construct the character.
- Test the character.
- Prepare it for photography. (Any 3 × 1 = 3)

4.

a)

- Develop the storyline.
- Create the character.
- Set up the camera.
- Capture the first photograph.
- Move the character slightly.
- Capture successive photographs.

- Import photographs into software.
- Arrange frames and adjust timing.
- Preview and export the animation. (Any 5 × 1 = 5)

b)

Duration=24012=20 secondsDuration=12240=20 seconds

Correct formula (1), correct answer (1).

c)

- Keep the camera fixed.
- Maintain consistent lighting.
- Move the character gradually.
- Maintain the same background.
- Maintain character appearance. (Any 3 × 1 = 3)

5.

a)

- Importing photographs.
- Arranging frames.
- Adjusting frame timing.
- Previewing animation.
- Editing unwanted frames.
- Exporting the final video. (Any 4 × 1 = 4)

b)

- Character sketches.
- Storyboard.
- Research findings.
- Photographs of production.
- Completed animation.
- Reflection and feedback. (Any 3 × 1 = 3)

c)

- Watch the animation attentively.
- Identify strengths in character design and movement.
- Give constructive feedback.
- Respect the creator's ideas.
- Suggest improvements politely. (Any 3 × 1 = 3)

6.

a)

- Encourages original character design.
- Promotes imagination through storytelling.
- Develops experimentation with materials.
- Encourages innovative movement.
- Promotes creative problem-solving. (Any 4 × 1 = 4)

b)

- Handle scissors carefully.
- Use hot glue guns under supervision.
- Keep electrical cables safely arranged.
- Avoid liquids near electrical equipment.
- Handle cameras carefully. (Any 3 × 1 = 3)

c)

- Communication and collaboration.
- Creativity and imagination.
- Digital literacy.
- Critical thinking and problem-solving.
- Self-efficacy.
- Learning to learn. (Any 3 × 1 = 3)

Strand 2.0: Multimedia **Sub-Strand**

2.3: Fabric Arts – Decoration (Screen Printing / Serigraphy)

Main techniques covered:

1. Computer-aided motif generation.
2. Screen printing using cut stencils.
3. Screen printing using a block-out screen (photo-emulsion technique).

1.0 INTRODUCTION TO FABRIC DECORATION

1.1 Meaning of Fabric Decoration

Fabric decoration is the process of improving the appearance of fabrics by applying patterns, colours, images, textures and other decorative features.

It involves using artistic designs and different techniques to make fabrics attractive, functional and suitable for various purposes.

Fabric decoration can be carried out through:

- Screen printing.
- Block printing.
- Tie and dye.
- Batik.
- Embroidery.
- Appliqué.
- Fabric painting.
- Stencilling.
- Digital textile printing.

Examples of decorated fabrics in Kenya:

1. Printed cotton fabrics used for dresses and shirts.
2. Kitenge fabrics decorated with colourful repeated motifs.
3. Maasai-inspired fabrics featuring geometric patterns.
4. Printed lesos and kangas.
5. Decorative fabrics used for curtains, tablecloths and cushion covers.
6. Printed school uniforms and sportswear.





1.2 Meaning of Screen Printing

Screen printing is a fabric decoration technique in which ink or dye is transferred onto a fabric through a specially prepared mesh screen using a squeegee.

Selected areas of the screen are blocked so that printing ink passes only through the open sections, producing the desired design on the fabric.

Screen printing is also known as **serigraphy**.

The technique is commonly used to decorate:

- T-shirts.
- Shirts.
- Dresses.
- Kitenge fabrics.
- Lesos.
- Bags.
- Tablecloths.
- Curtains.
- School uniforms.
- Promotional materials.

1.3 Meaning of Serigraphy

Serigraphy is another name for the screen printing process, particularly when used as an artistic printing technique.

The term refers to producing images by forcing ink through a fine mesh screen onto a printing surface.

The mesh allows ink to pass through selected open areas while blocked areas prevent ink from reaching the fabric.

1.4 Historical Development of Screen Printing

Screen printing developed from earlier stencil-printing methods used in different parts of the world.

- Early stencil techniques involved applying colour through cut-out designs.
- Japanese craftsmen developed sophisticated stencil techniques for decorating textiles.

- Screen printing developed further with the use of fine mesh materials and framed screens.
- Modern screen printing uses synthetic mesh, photo-sensitive emulsions and specialised inks.
- Digital technology now allows artists to generate complex motifs before transferring them to printing screens.

Screen printing in the Kenyan context

Screen printing is used by:

- Textile and fashion designers.
- Clothing manufacturers.
- Printing businesses.
- Promotional merchandise producers.
- Artists and craft entrepreneurs.
- Small-scale garment decoration businesses.

Examples include printing school logos on T-shirts, decorating uniforms, producing branded shopping bags and creating artistic patterns on cotton fabrics.

2.0 IMPORTANCE OF SCREEN PRINTING IN FABRIC DECORATION

Screen printing is an important technique in the textile, fashion and creative industries.

2.1 Decorative Importance

1. Improves the appearance of fabrics.
2. Produces attractive patterns and motifs.
3. Creates unique artistic designs.
4. Allows the use of different colours.
5. Adds visual interest to plain fabrics.

2.2 Commercial Importance

1. Supports the production of printed garments for sale.
2. Creates business opportunities for textile decorators.
3. Supports small-scale printing enterprises.
4. Promotes the fashion and garment industries.
5. Enables the production of branded clothing.

2.3 Cultural Importance

1. Helps communicate cultural identity through textile patterns.
2. Preserves traditional decorative motifs.
3. Promotes African artistic heritage.
4. Allows designers to reinterpret traditional patterns.
5. Supports cultural expression through fabric decoration.

2.4 Industrial Importance

1. Supports mass production of decorated textiles.

2. Produces consistent designs on several fabric pieces.
3. Supports advertising and promotional industries.
4. Facilitates the branding of uniforms and merchandise.
5. Creates employment opportunities.



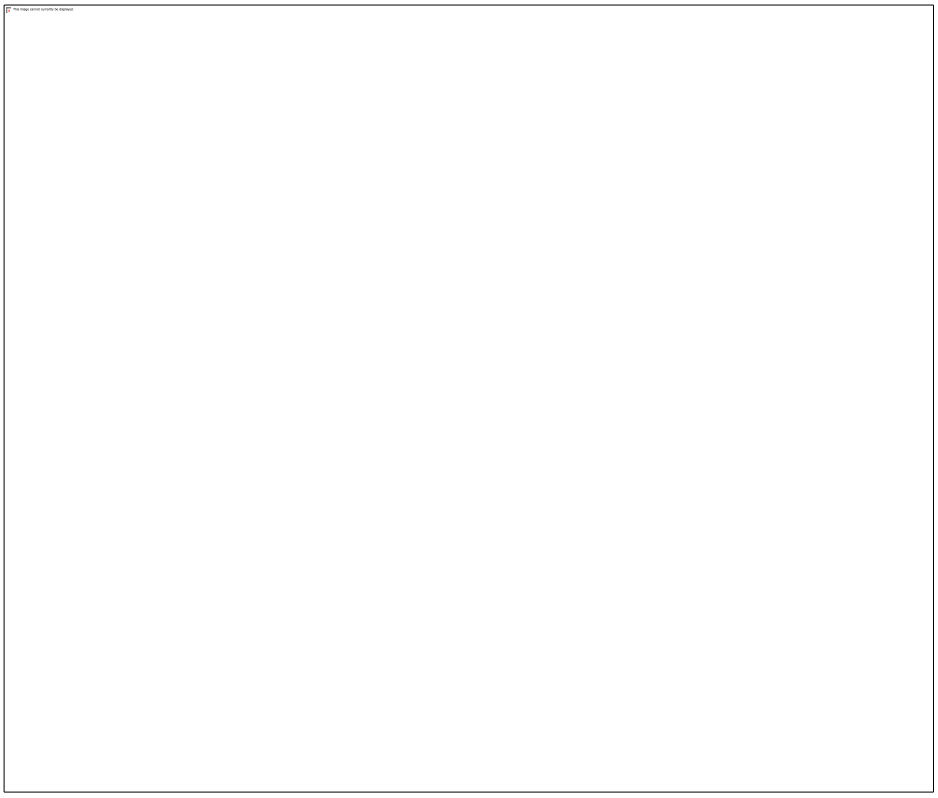
3.0 BASIC PRINCIPLES OF SCREEN PRINTING

3.1 How Screen Printing Works

Screen printing works through the controlled transfer of ink from a mesh screen onto a fabric.

The process involves the following:

1. A design or motif is prepared.
2. A mesh screen is mounted onto a frame.
3. Selected sections of the screen are blocked.
4. The screen is positioned over the fabric.
5. Printing ink is placed on the screen.
6. A squeegee is used to push ink across the screen.
7. Ink passes through the open mesh sections.
8. The printed design is transferred onto the fabric.
9. The screen is lifted carefully.
10. The printed fabric is dried or cured according to the ink manufacturer's instructions.



3.2 Main Components of a Screen Printing System

a) Screen frame

- A screen frame is a rigid structure used to support the mesh.
- It is commonly made from wood or aluminium.
- It keeps the mesh stretched and stable.
- It makes it easier to position the screen during printing.

b) Mesh

- Mesh is a fine woven material stretched over the frame.
- It allows ink to pass through selected open areas.
- Polyester mesh is commonly used in modern screen printing.
- The fineness of the mesh influences ink flow and the level of detail that can be printed.

c) Stencil

- A stencil is a cut-out or blocked design that controls where ink passes through the mesh.
- Open areas allow ink to reach the fabric.
- Blocked areas prevent ink from passing through.

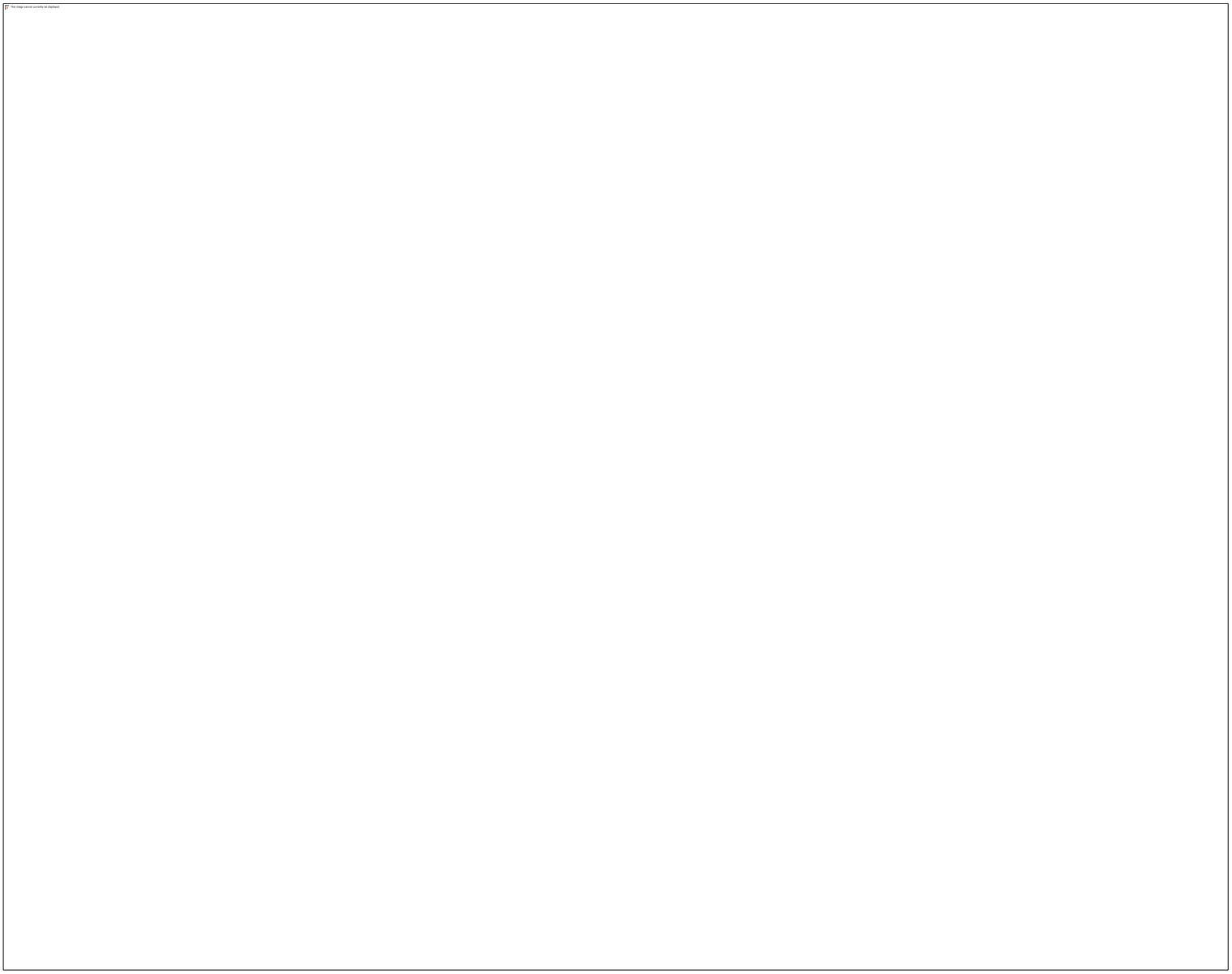
d) Squeegee

- A squeegee is a tool with a rubber or polyurethane blade used to push ink through the mesh.
- It helps distribute ink evenly.
- It controls the pressure applied during printing.

e) Printing ink or dye

- This is the colouring medium used to produce the design.

- It may be water-based textile ink, plastisol ink or another suitable textile printing medium.
- The choice depends on the fabric and printing method.



3.3 The Role of the Mesh in Screen Printing

The mesh is one of the most important components of a printing screen.

Its functions include:

1. Supporting the stencil.
2. Allowing ink to pass through selected areas.
3. Controlling ink distribution.
4. Helping reproduce detailed designs.
5. Maintaining consistency during repeated printing.

3.4 The Role of the Squeegee

A squeegee is used to force printing ink through the open areas of the mesh.

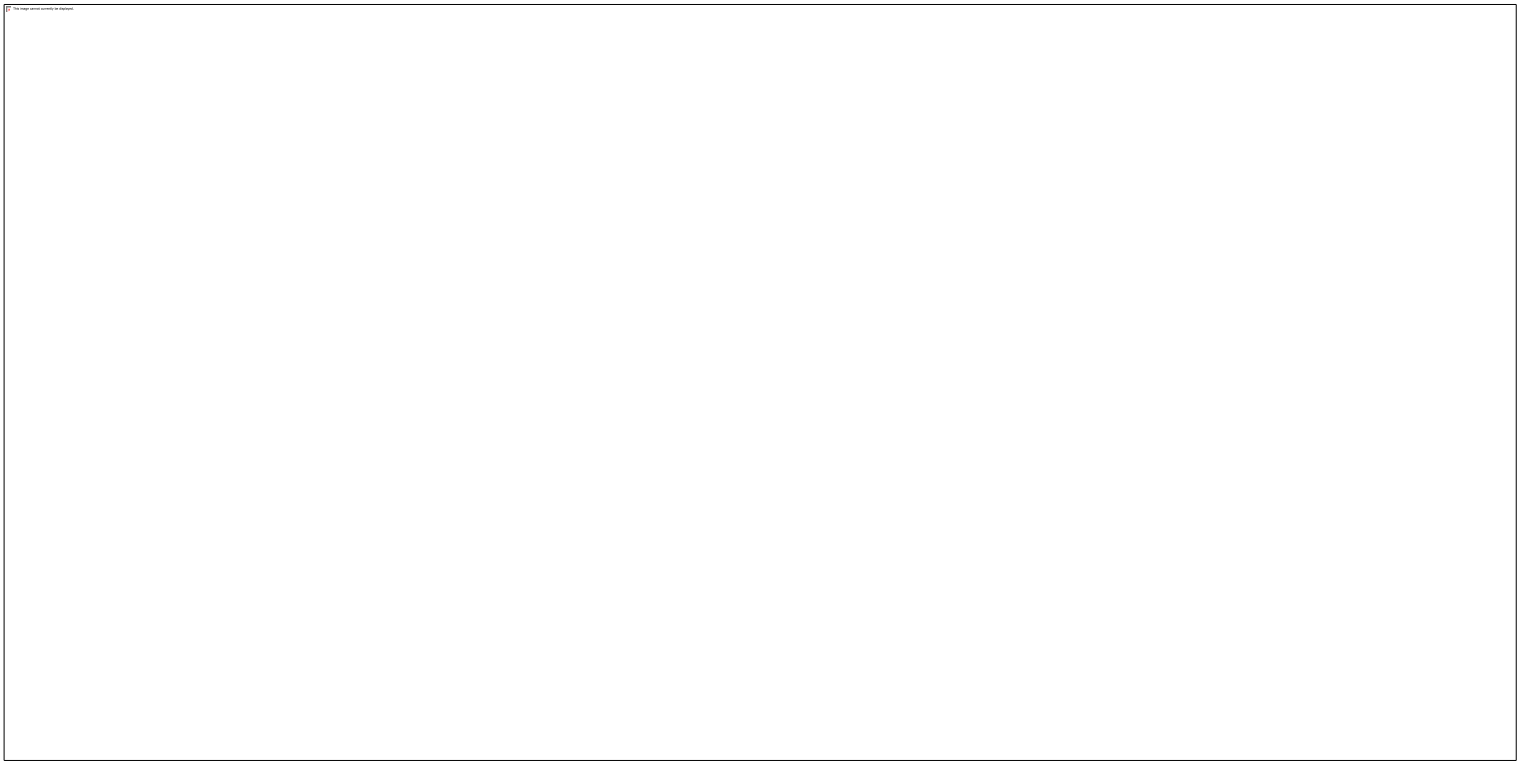
Its functions include:

- Spreading ink over the screen.

- Applying controlled pressure.
- Ensuring ink reaches the fabric.
- Producing even printed surfaces.
- Reducing uneven printing.

Correct use of a squeegee

1. Hold the squeegee firmly.
2. Position it at a suitable angle.
3. Apply even pressure.
4. Pull it steadily across the screen.
5. Avoid excessive pressure.
6. Clean it after use.



4.0 MOTIF DESIGN FOR SCREEN PRINTING

4.1 Meaning of a Motif

A motif is a single decorative unit or visual element used as the basis of a larger pattern or design.

It may be inspired by natural objects, cultural symbols, geometric forms, human activities or imaginary shapes.

A motif can be repeated, rotated, reflected, enlarged or reduced to create decorative patterns.

4.2 Sources of Inspiration for Motif Design

Motifs can be developed from various sources.

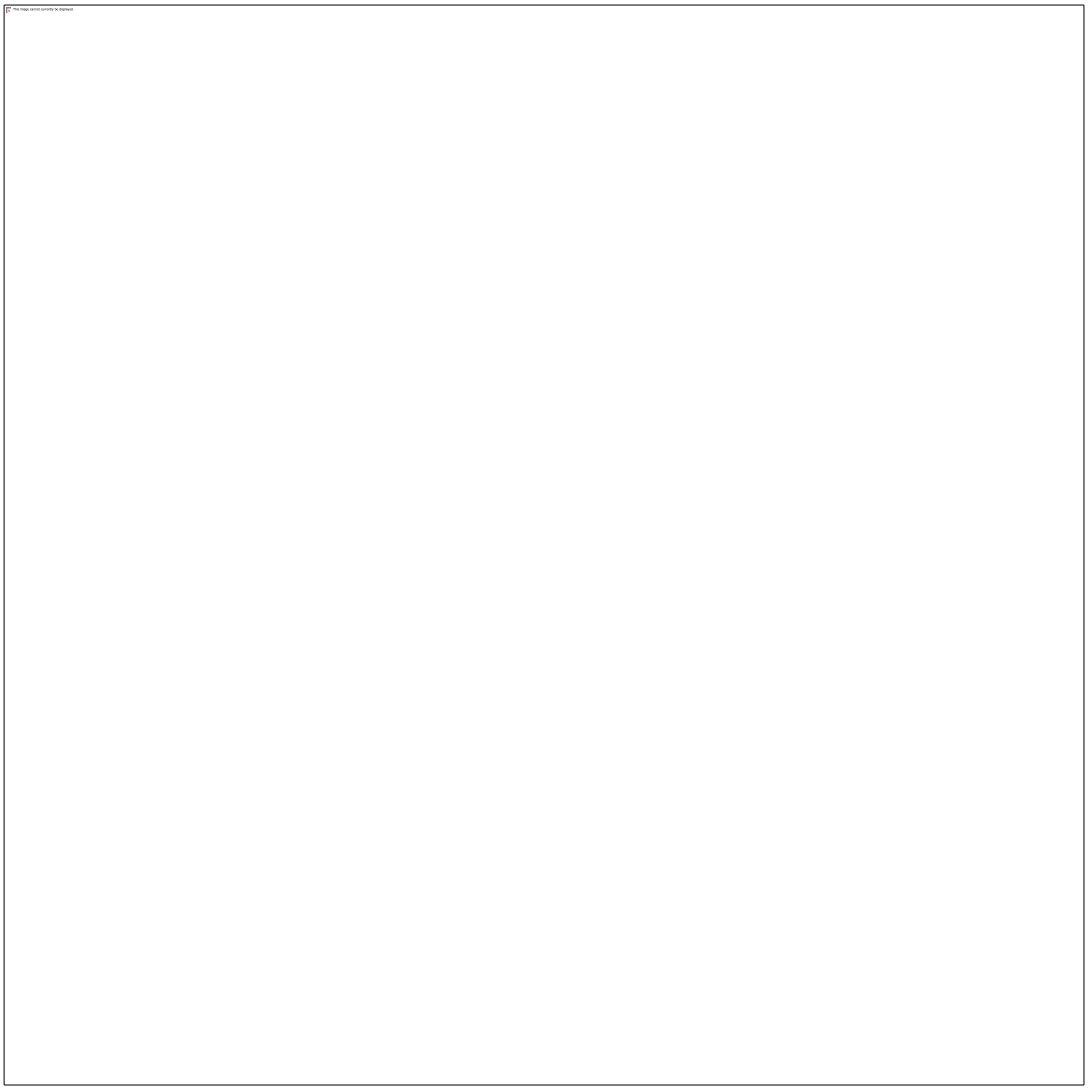
A. Nature-inspired motifs

These are designs based on natural forms.

Examples:

1. Leaves.
2. Flowers.
3. Trees.
4. Birds.
5. Butterflies.
6. Fish.
7. Animal footprints.
8. Sun and moon.
9. Mountains.
10. Rivers and waves.





B. Cultural motifs

These are designs inspired by cultural practices, traditions and artistic heritage.

Examples:

- Traditional beadwork arrangements.
- Basketry patterns.
- Traditional pottery decorations.
- Cultural geometric patterns.
- Traditional ornaments.
- Cultural architecture.
- Traditional musical instruments.

In Kenya, designers may draw inspiration from the decorative arrangements found in Maasai beadwork, Kamba basketry, Luo traditional ornaments and other cultural art forms.

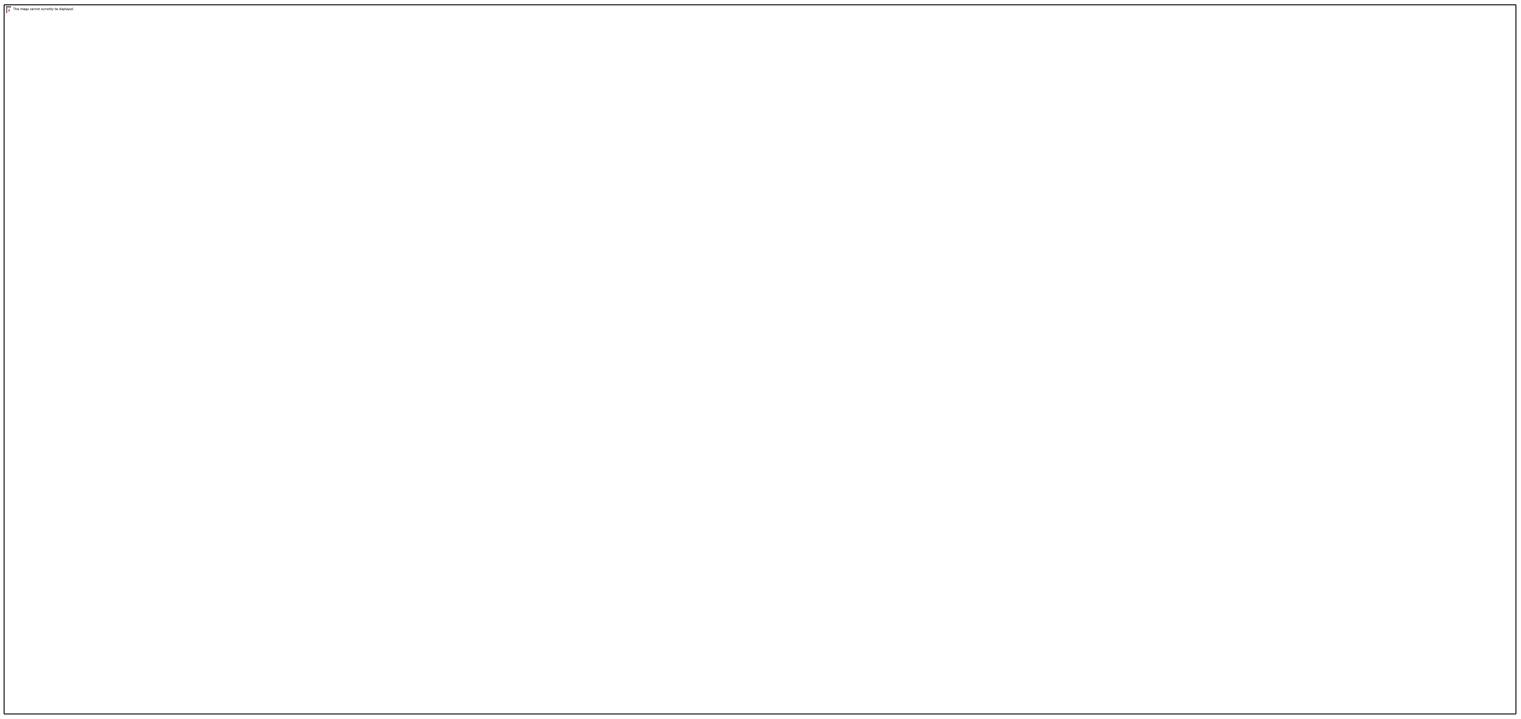
C. Geometric motifs

These are motifs developed using geometric shapes.

Examples:

- Circles.
- Squares.

- Triangles.
- Rectangles.
- Diamonds.
- Zigzag lines.
- Spirals.
- Hexagons.



D. Human-made objects

Motifs can also be inspired by manufactured objects.

Examples:

- Buildings.
- Bicycles.
- Vehicles.
- Tools.
- Musical instruments.
- Household objects.
- Agricultural equipment.

E. Imaginative motifs

These are designs developed from the artist's imagination rather than direct observation.

Examples:

- Imaginary plants.
- Fantasy animals.
- Abstract symbols.

- Imaginary creatures.
- Creative combinations of geometric forms.

4.3 Qualities of a Good Motif

1. **Simplicity:** It should be easy to identify and reproduce.
2. **Originality:** It should demonstrate creative thinking.
3. **Clarity:** Its shapes should be clearly defined.
4. **Suitability:** It should be appropriate for the intended fabric.
5. **Balance:** Its elements should be arranged harmoniously.
6. **Reproducibility:** It should be easy to transfer onto a printing screen.
7. **Appropriate spacing:** It should have sufficient space between design elements.
8. **Visual appeal:** It should attract attention.
9. **Cultural relevance:** Where culturally inspired, it should demonstrate respect and understanding.
10. **Technical suitability:** It should be designed with screen printing limitations in mind.

4.4 Positive and Negative Space in Motif Design

Positive space

Positive space refers to the area occupied by the main shapes, objects or forms in a design.

It is the part of the design that attracts the viewer's attention.

Examples:

- A flower shape.
- A bird silhouette.
- A leaf.
- A geometric symbol.

Negative space

Negative space refers to the empty or unoccupied areas surrounding or between the main shapes in a design.

It helps define the shapes and creates visual balance.

Importance of positive and negative space

1. Helps create visual balance.
2. Improves the clarity of motifs.
3. Prevents overcrowding.
4. Helps create interesting patterns.
5. Determines which areas are printed and which remain unprinted.
6. Improves the readability of the design.

4.5 Relationship Between Positive and Negative Space in Stencil Printing

In stencil printing, the relationship between positive and negative space determines how the final design appears on the fabric.

- Open stencil areas allow ink to pass through.
- Blocked stencil areas prevent ink from passing through.
- The resulting design is formed by the contrast between printed and unprinted areas.

The designer should plan both spaces carefully before cutting a stencil.

4.6 Rhythm in Motif Design

Rhythm is the visual movement created by the repetition or organised arrangement of design elements.

In fabric decoration, rhythm is achieved through repeated motifs, lines, shapes and colours.

Types of rhythm

a) Regular rhythm

- Motifs are repeated at equal intervals.
- The arrangement is consistent.
- It creates order and uniformity.

b) Alternating rhythm

- Two or more different motifs are repeated alternately.
- It creates visual variety.
- Example: alternating flower and leaf motifs.

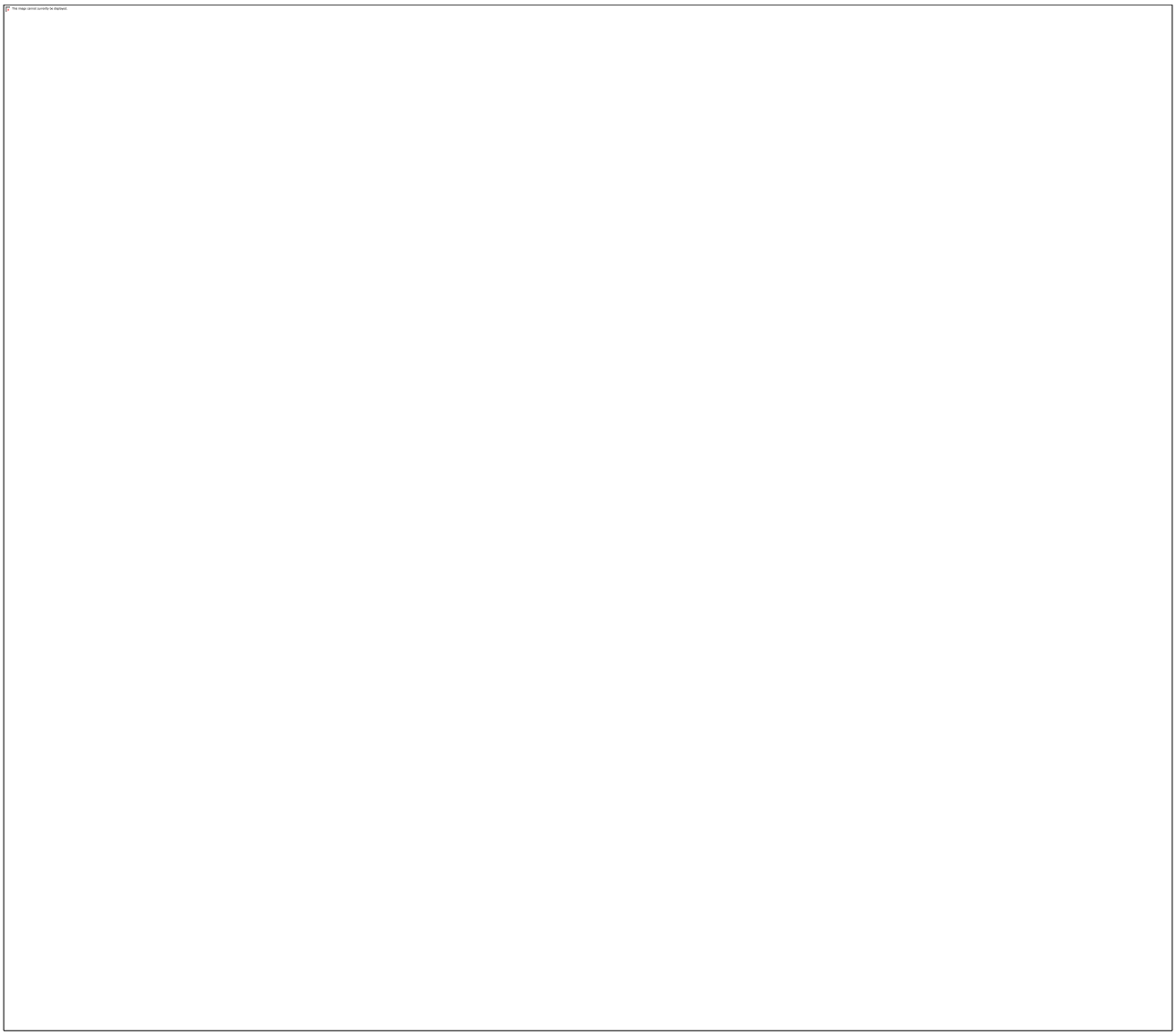
c) Progressive rhythm

- Motifs gradually change in size, colour or shape.
- It creates a sense of development.
- Example: small circles gradually increasing in size.

d) Flowing rhythm

- Motifs are arranged along curved or flowing lines.
- It creates a natural sense of movement.
- Example: repeated leaf motifs arranged along a winding stem.





4.7 Movement in Motif Design

Movement refers to the visual direction or flow that guides the viewer's eyes through a design.

Movement can be created through:

1. Repetition of shapes.
2. Curved lines.
3. Diagonal arrangements.
4. Alternating motifs.
5. Directional shapes.
6. Gradual changes in size.

7. Colour arrangements.

Example: Repeated diagonal leaf motifs can create an impression of movement across a fabric.

4.8 Bridges and Islands in Stencil Design

These are important technical concepts in stencil preparation.

A. Bridges

Bridges are narrow connecting sections of stencil material that hold separate parts of a design together.

They prevent isolated sections from falling out when the stencil is cut.

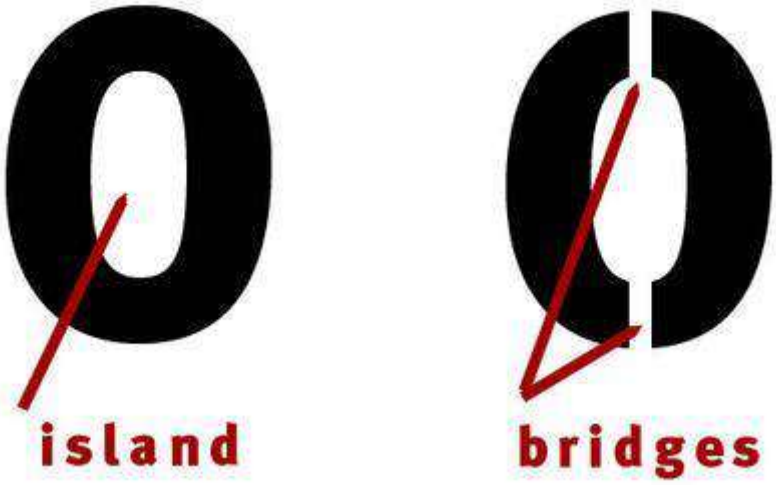
Example: In a stencil of a flower, the central section and petals may require small connecting bridges depending on the design construction.

B. Islands

Islands are isolated areas of stencil material that are completely surrounded by cut-out sections.

Without support, these areas may become detached from the main stencil.

Example: The centre of a letter such as O may form an island.



Importance of bridges

1. Hold stencil sections together.
2. Prevent unwanted detached pieces.
3. Improve the strength of the stencil.
4. Maintain the original design.
5. Make printing easier.

Importance of understanding islands

1. Helps identify unsupported stencil sections.
2. Prevents accidental loss of design details.
3. Helps determine where bridges are needed.
4. Improves the accuracy of the final printed image.

Practical example

When designing the letter A as a cut-out stencil, the enclosed triangular area may become an island. A small bridge can be introduced to connect the inner section to the surrounding stencil material.

4.9 Colour Selection in Motif Design

Colour selection is the process of choosing suitable colours for a design to achieve the intended visual effect.

Factors to consider

- The colour of the fabric.
- The purpose of the decorated fabric.
- Cultural meaning of colours.
- Colour harmony.
- Visibility of the motif.
- Type of printing ink.
- Intended audience.

Examples of colour combinations

- Red and black.
- Blue and white.
- Green and yellow.
- Orange and brown.
- Purple and cream.



5.0 COMPUTER-AIDED MOTIF GENERATION

5.1 Meaning of Computer-Aided Motif Generation

Computer-aided motif generation is the process of using digital devices and graphic design software to create, modify, arrange and prepare decorative motifs for printing.

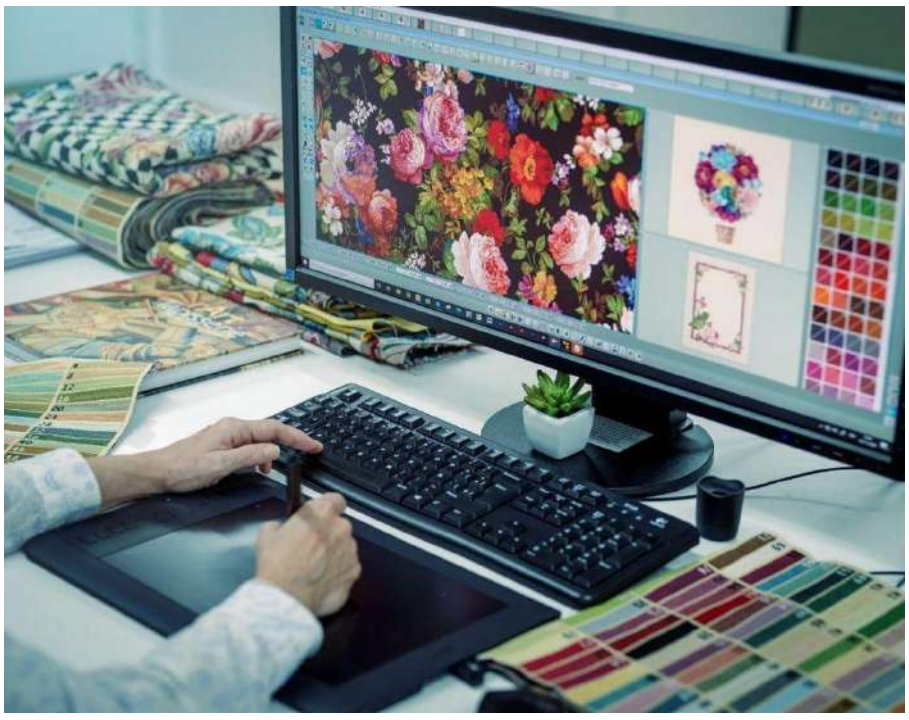
It allows artists to develop accurate, repeatable and well-organised designs before transferring them onto a stencil or screen.

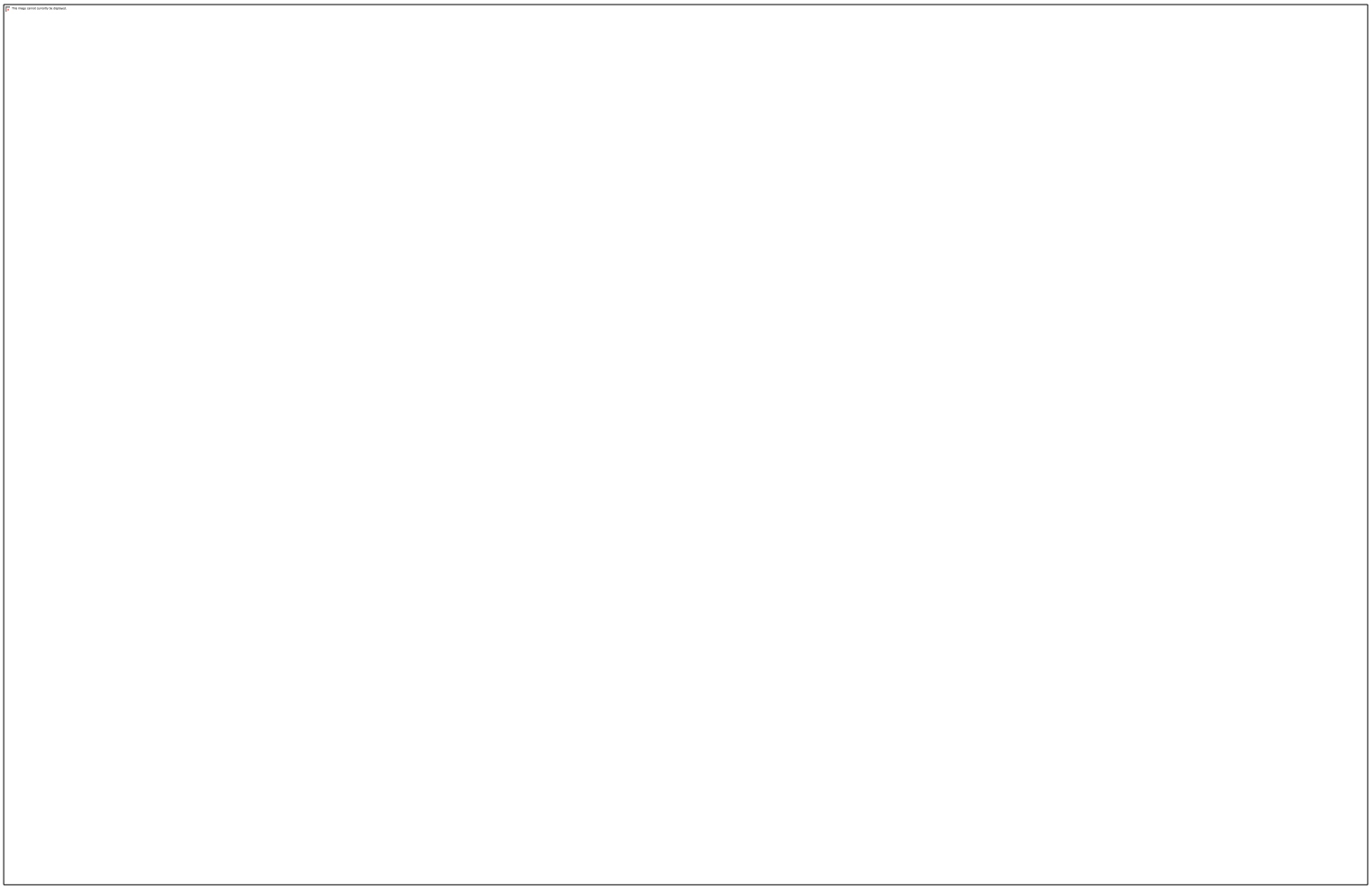
5.2 Importance of Computer-Aided Motif Generation

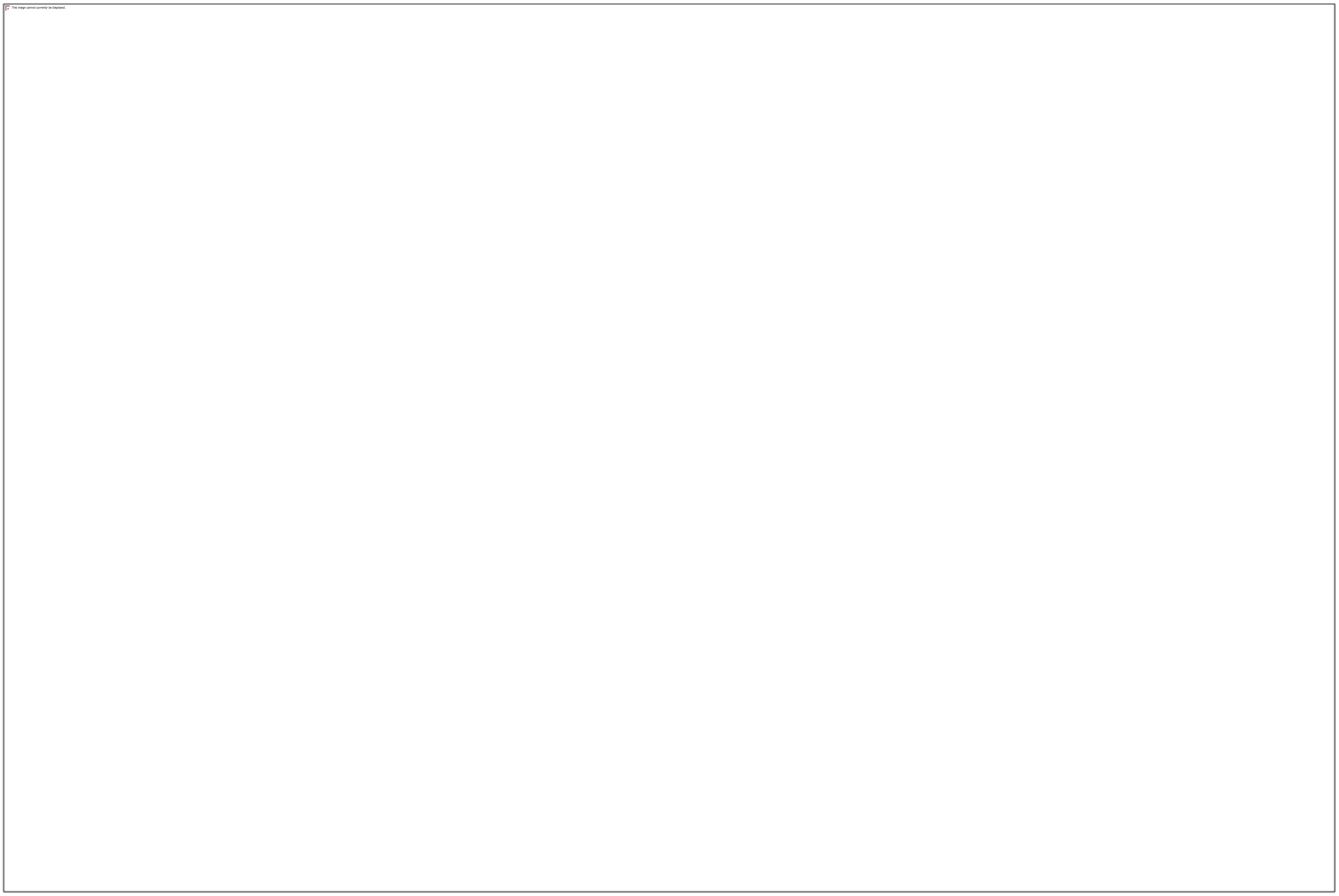
1. Enables accurate drawing of shapes.
2. Makes it easy to edit designs.
3. Allows duplication of motifs.
4. Facilitates the creation of repeat patterns.
5. Supports experimentation with colours.
6. Makes it easy to resize and rotate motifs.
7. Reduces repeated manual drawing.
8. Improves design consistency.
9. Allows storage and retrieval of artwork.
10. Facilitates preparation of designs for stencil cutting and screen printing.

5.3 Digital Devices Used in Motif Generation

1. **Desktop computer:** Used to create and edit digital designs.
2. **Laptop:** Provides portable digital design facilities.
3. **Tablet:** Allows drawing using a stylus or touchscreen.
4. **Smartphone:** Can be used for simple digital motif creation.
5. **Graphics tablet:** Enables precise digital drawing.
6. **Scanner:** Converts hand-drawn motifs into digital images.
7. **Printer:** Produces printed designs for stencil preparation.







5.4 Examples of Software Used in Motif Generation

a) CorelDRAW

- Used for creating vector graphics.
- Allows drawing of geometric and decorative motifs.
- Supports duplication and arrangement of design elements.
- Suitable for preparing stencil artwork.

b) Adobe Illustrator

- Used for creating vector-based designs.
- Allows precise drawing and editing.
- Supports the development of repeat patterns.
- Useful for professional textile design.

c) Inkscape

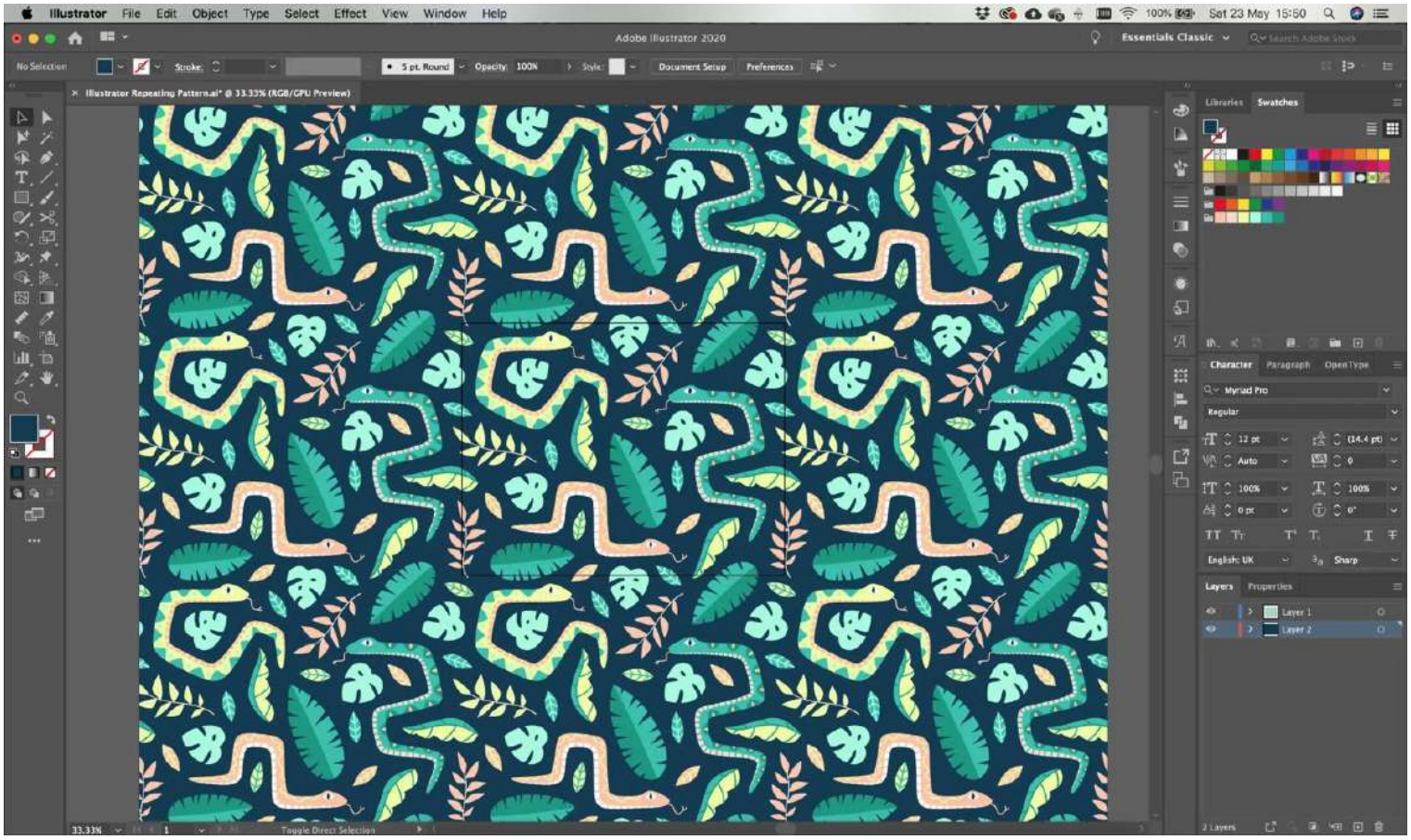
- A vector graphics application.
- Supports drawing and editing of motifs.
- Can be used to create stencil-ready artwork.
- Useful in schools and small design studios.

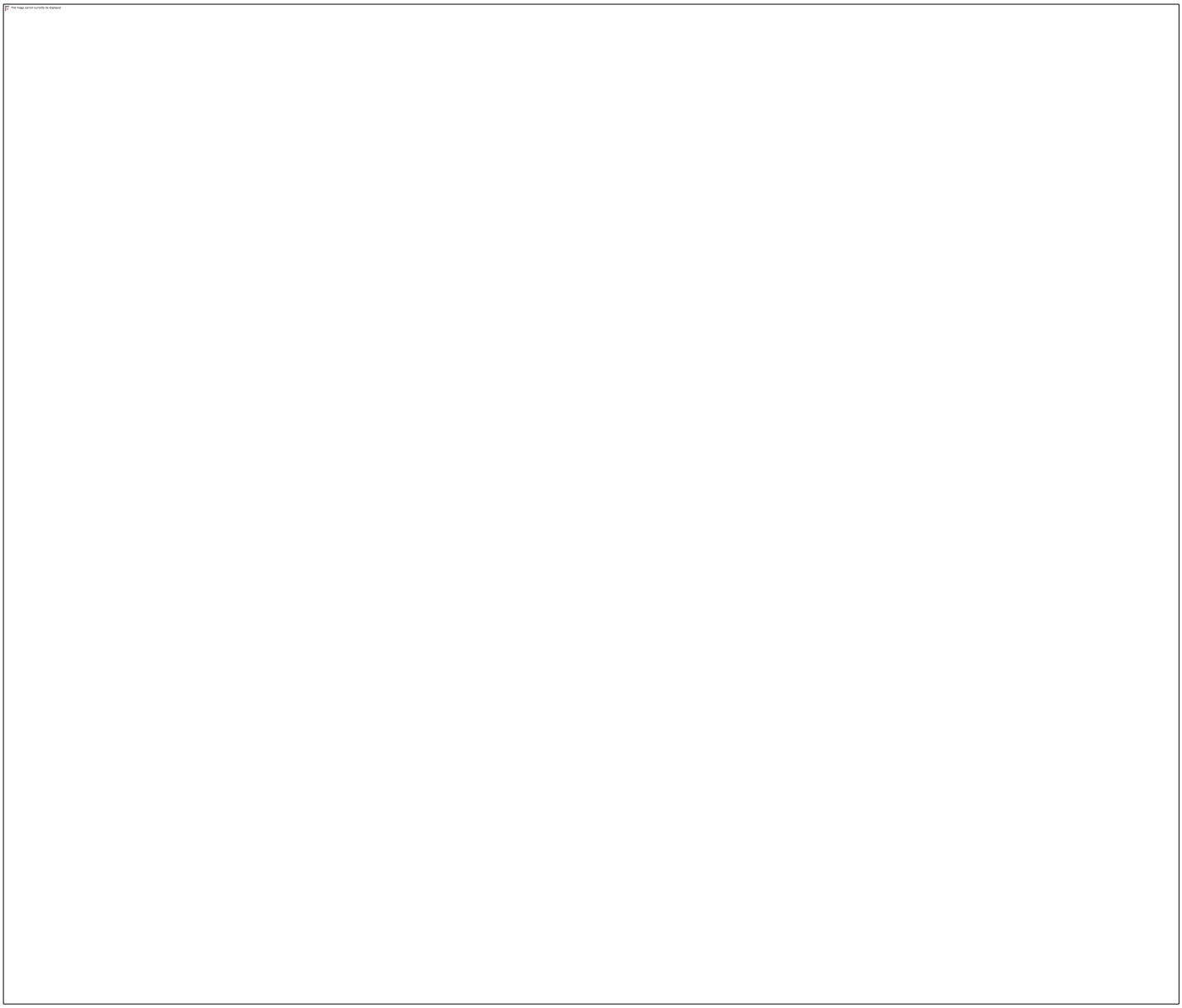
d) GIMP

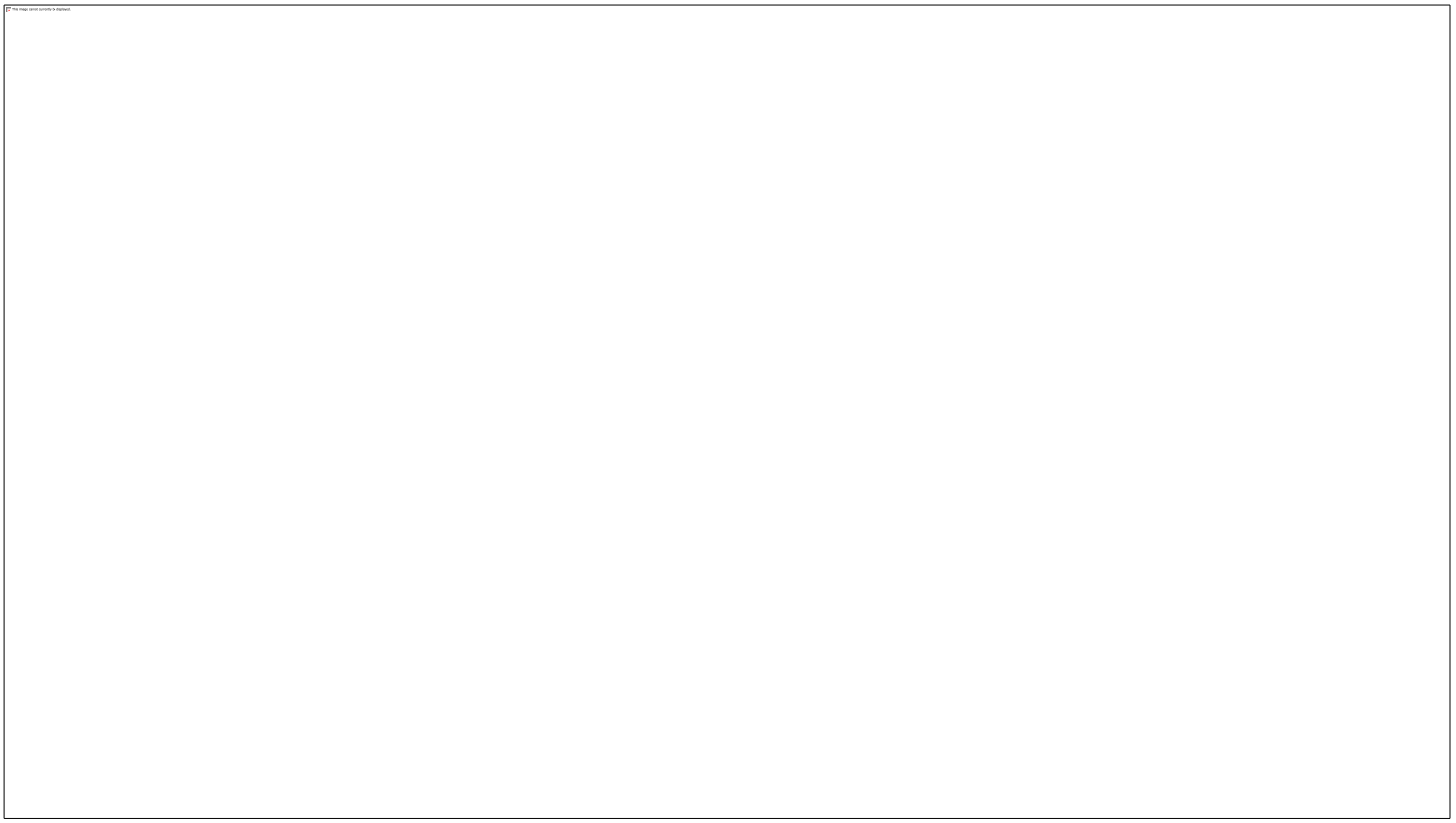
- Used for editing raster images.
- Allows manipulation of photographs and digital artwork.
- Can prepare high-contrast stencil images.

e) Adobe Photoshop

- Used for editing and manipulating images.
- Allows adjustment of contrast and colour.
- Supports preparation of digital artwork for printing.


Illustrator File Edit Object Type Select Effect View Window Help
Adobe Illustrator 2020
Essentials Classic
Illustrator Repeating Pattern.ai* @ 33.33% (RGB/GPU Preview)
Libraries
Swatches
Character
Paragraph
OpenType
Myriad Pro
Regular
Layers
Properties
Layer 1
Layer 2





5.5 Steps in Computer-Aided Motif Generation

Step 1: Identify the source of inspiration

- Observe natural forms, cultural patterns or geometric objects.
- Select a suitable subject.
- Gather visual references.

Step 2: Sketch initial ideas

- Draw rough designs on paper.
- Explore different shapes and arrangements.
- Select the most appropriate design.

Step 3: Open the design software

- Switch on the computer.
- Open the selected graphics application.
- Create a new document.

Step 4: Create the motif

- Use drawing tools to develop the design.
- Combine lines, shapes and curves.
- Maintain clear positive and negative spaces.

Step 5: Refine the motif

- Remove unnecessary details.
- Correct uneven shapes.

- Ensure the design is suitable for stencil printing.

Step 6: Create repeat patterns

- Duplicate the motif.
- Arrange copies at regular or alternating intervals.
- Rotate or reflect motifs where necessary.

Step 7: Check bridges and islands

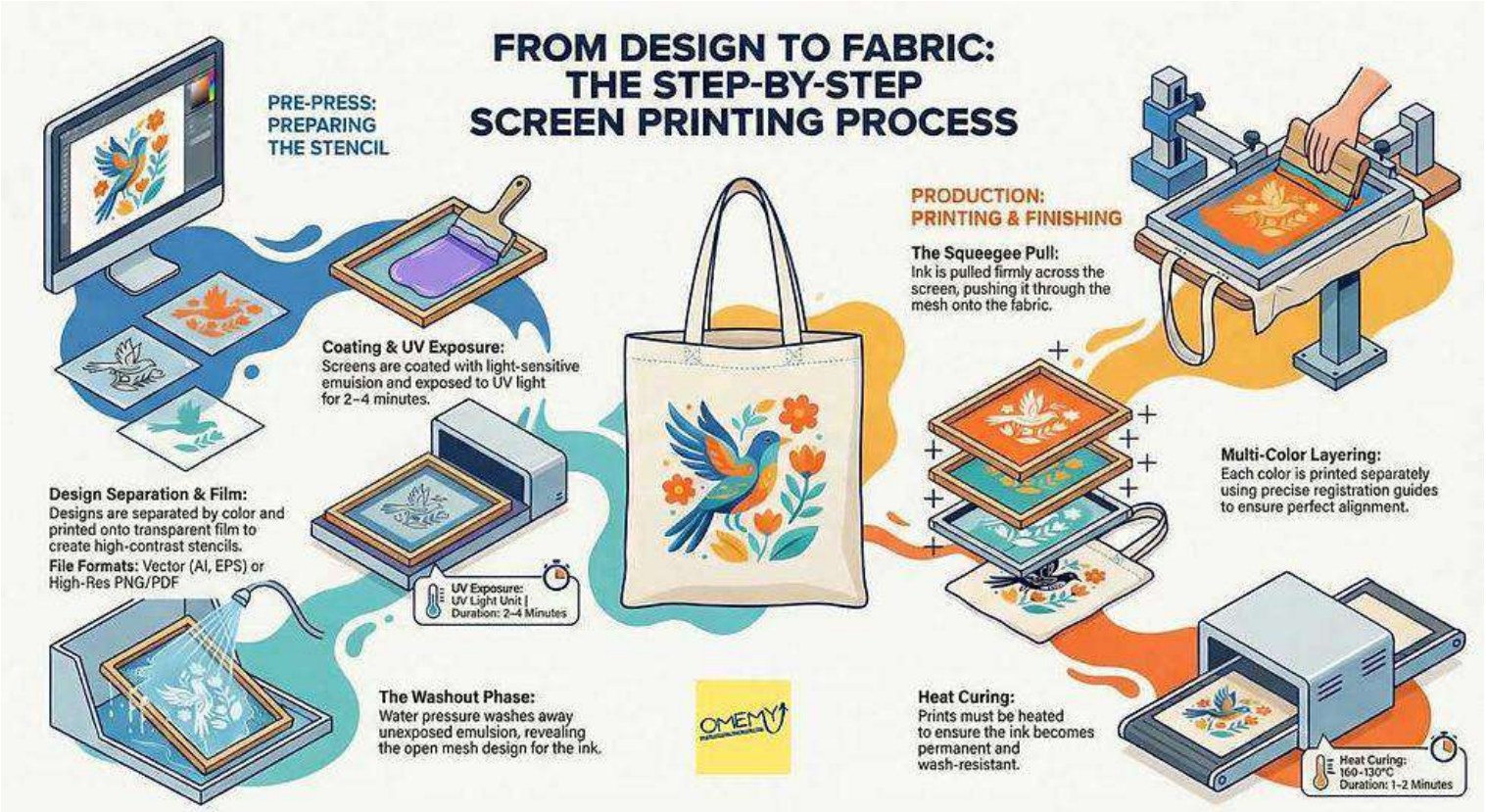
- Identify isolated areas.
- Add bridges where necessary.
- Ensure that stencil sections remain connected.

Step 8: Prepare the design for printing

- Convert the design to a suitable high-contrast format.
- Separate colours if producing a multicolour design.
- Ensure the artwork is appropriately sized.

Step 9: Save and print

- Save the digital design.
- Print it on suitable transparent film or paper as required.
- Use the printed design to prepare the stencil or screen.



5.6 Digital Motif Design Considerations

- Use clear outlines.
- Avoid unnecessary fine details.

- Maintain sufficient spacing.
- Ensure bridges are strong enough.
- Avoid unsupported islands.
- Use suitable dimensions.
- Consider the fabric size.
- Select appropriate colours.
- Check the design before printing.

6.0 PATTERN DEVELOPMENT AND REPEAT ARRANGEMENTS

6.1 Meaning of a Pattern

A pattern is an organised arrangement of repeated visual elements such as motifs, shapes, lines and colours.

Patterns are used to decorate fabrics and create visual interest.

Examples include:

- Floral patterns.
- Geometric patterns.
- Animal patterns.
- Abstract patterns.
- Cultural patterns.
- Striped patterns.
- Checked patterns.



6.2 Meaning of Repeat Pattern

A repeat pattern is a design created by repeating a motif or group of motifs in an organised arrangement.

It is commonly used in fabric decoration to cover large areas with consistent designs.

6.3 Types of Repeat Patterns

a) Straight repeat pattern

- Motifs are arranged in straight horizontal and vertical rows.
- Each motif is positioned directly below or beside another.
- It creates an orderly arrangement.

b) Half-drop repeat pattern

- Each alternate row is shifted vertically by half the height of a motif.
- It creates a staggered arrangement.
- It is commonly used in floral and decorative textile designs.

HALF DROP PATTERN REPEAT



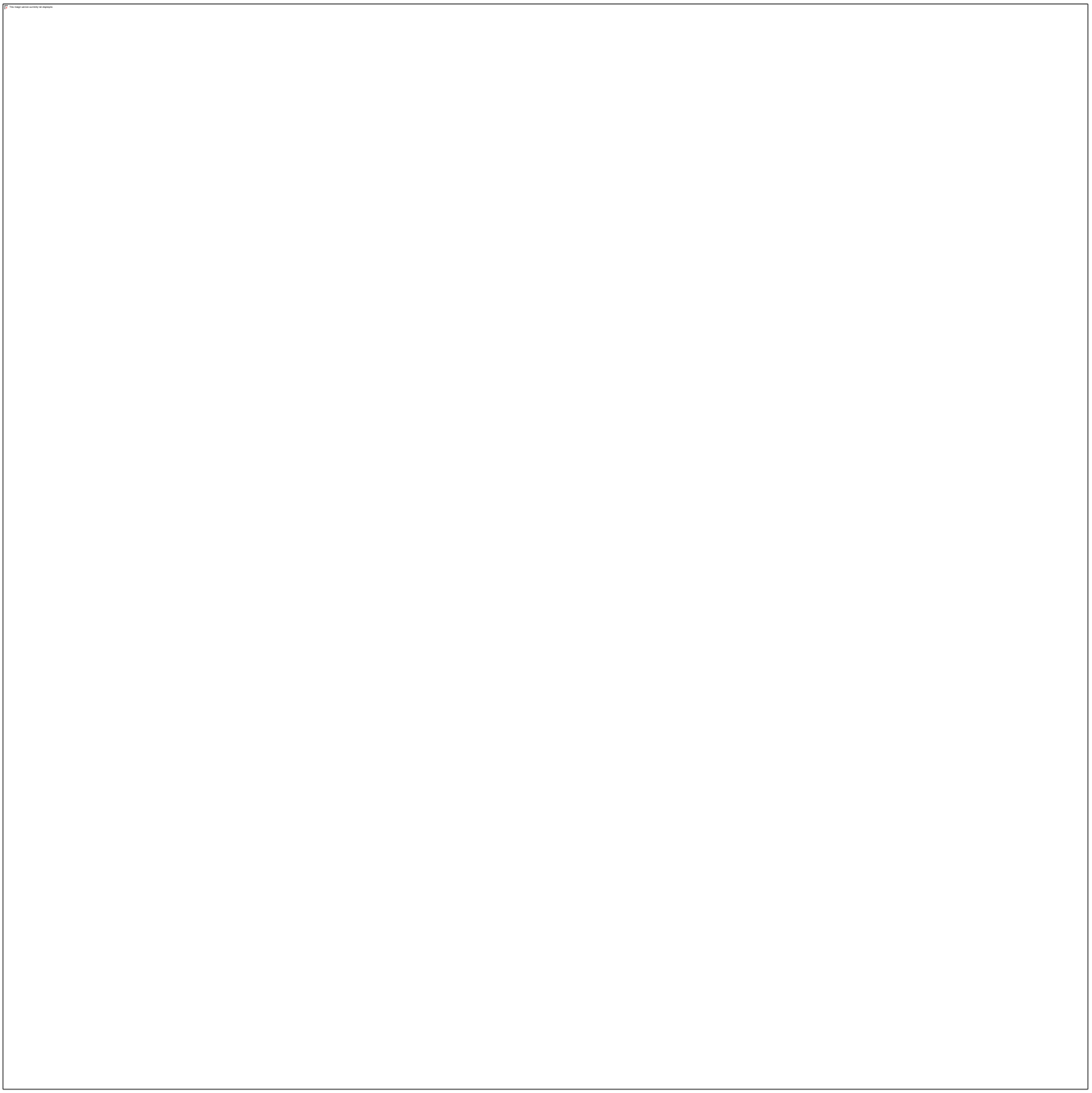
- Another very commonly used surface pattern repeat is the half drop. It consists of the repeat unit being stacked vertically in a column format which is then offset by half in the next vertical row. Because of this, half drop pattern repeats are a great way at quickly allowing the design to look less formal.

c) Brick repeat pattern

- Motifs are arranged like bricks in a wall.
- Alternate rows are shifted horizontally.
- It creates a balanced staggered arrangement.

d) Mirror repeat pattern

- A motif is reflected across an imaginary line.
- The reflected design creates a symmetrical arrangement.
- It is suitable for symmetrical floral and geometric designs.



e) Alternating repeat pattern

- Two or more different motifs are repeated in an alternating order.
- It introduces variety.
- It can combine different shapes, sizes or colours.



6.4 Meaning of Alternate Repeat Pattern

An alternate repeat pattern is a decorative arrangement in which two or more motifs or design elements are repeated in a changing or alternating sequence.

For example:

- Flower – leaf – flower – leaf.
- Circle – square – circle – square.
- Red motif – blue motif – red motif – blue motif.

Importance of alternate repeat patterns

1. Creates visual variety.
2. Prevents monotony.
3. Promotes visual rhythm.
4. Enhances the attractiveness of fabric.
5. Allows the use of different colours and motifs.
6. Helps designers develop original fabric patterns.

6.5 Designing an Alternate Repeat Pattern

Example: Flower and leaf pattern



Procedure:

1. Draw a simple flower motif.
2. Draw a separate leaf motif.
3. Ensure both motifs have suitable positive and negative spaces.
4. Arrange the flower and leaf in an alternating sequence.
5. Adjust the spacing between the motifs.
6. Check that the motifs create a balanced composition.
7. Convert the design into a stencil-ready format.
8. Print the design onto suitable stencil material.

7.0 SCREEN PRINTING USING A CUT STENCIL

7.1 Meaning of Stencil Printing

Stencil printing is a method of decorating fabric by applying printing ink through selected openings in a cut-out design.

The stencil acts as a barrier that controls where the ink reaches the fabric.

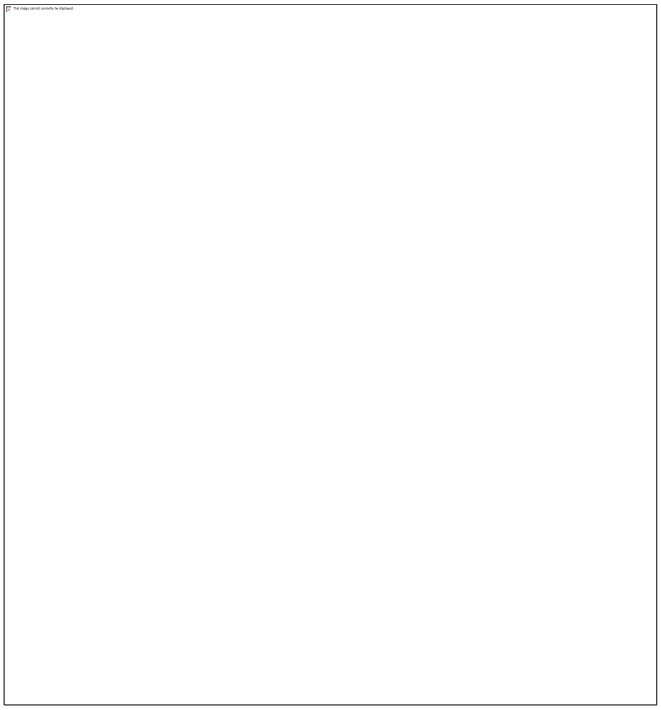
The open sections allow ink to pass through, while the covered sections prevent ink from reaching the fabric.

7.2 Meaning of a Stencil

A stencil is a sheet of material containing cut-out shapes, patterns or letters through which ink or paint can be applied onto a surface.

Stencils can be made from:

- Paper.
- Cardboard.
- Plastic sheets.
- Cellophane.
- Gum paper.
- Acetate sheets.
- Other suitable non-absorbent reusable materials.

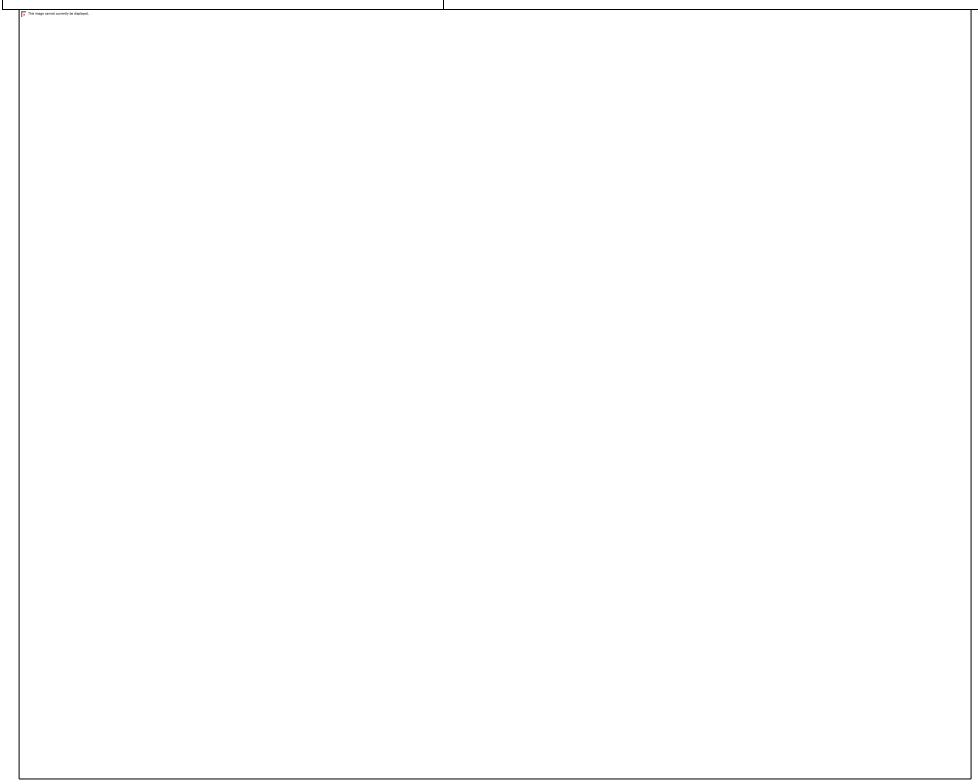


7.3 Characteristics of a Good Stencil

1. It should have clearly defined openings.
2. It should be strong enough to withstand handling.
3. It should not absorb excessive printing ink.
4. It should be easy to position on the screen.
5. It should maintain its shape during printing.
6. It should have suitable bridges supporting isolated sections.
7. It should be easy to clean and reuse where appropriate.
8. It should correspond accurately with the intended motif.

7.4 Materials Required for Stencil Screen Printing

Material	Function
Screen frame	Supports the mesh.
Fine mesh	Allows ink to pass through open areas.
Cellophane or plastic stencil	Controls ink passage.
Fabric	Provides the printing surface.
Textile ink	Produces the printed design.
Squeegee	Pushes ink through the mesh.
Masking tape	Secures stencil edges where appropriate.
Padded surface	Provides a firm and even working surface.
Transparent paper or film	Transfers the design.
Scissors or craft knife	Cuts stencil shapes.
Pencil and ruler	Measures and marks the design.
Cleaning materials	Remove excess ink and maintain equipment.



7.5 Preparing a Cut Stencil

Step 1: Develop the motif

- Select a suitable motif.
- Draw it manually or generate it digitally.
- Ensure that the design is clear and suitable for stencil cutting.

Step 2: Transfer the design

- Print the digital motif on paper or transparent film.
- Place the design over the selected stencil material.
- Trace the outlines accurately.

Step 3: Identify positive and negative spaces

- Identify the areas that should allow ink to pass through.
- Identify the areas that should remain blocked.
- Plan bridges to support isolated sections.

Step 4: Cut the stencil

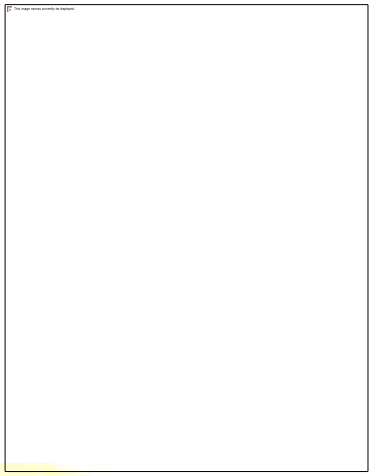
- Use suitable scissors or a craft knife.
- Cut out the required areas carefully.
- Avoid damaging the remaining stencil material.
- Work on a suitable cutting mat.

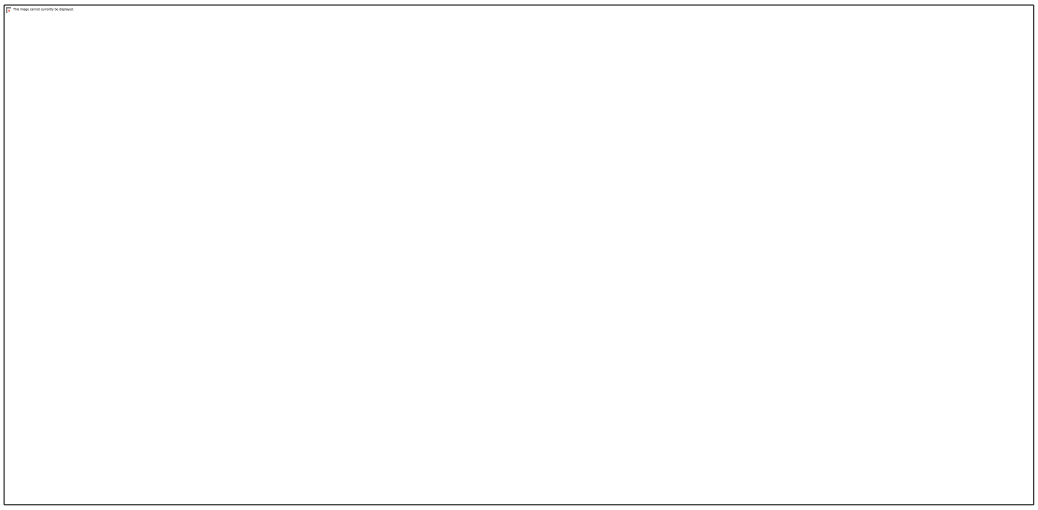
Step 5: Inspect the stencil

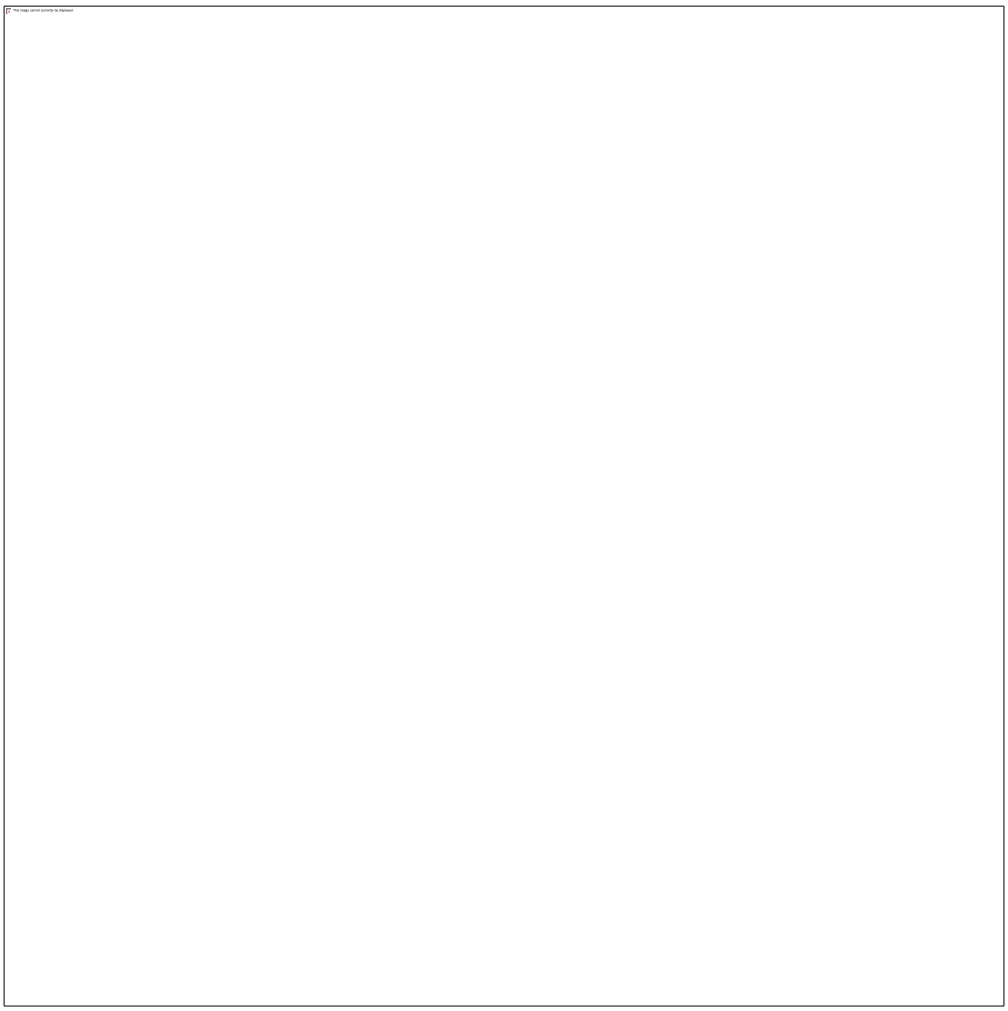
- Check the accuracy of the cut-outs.
- Check that all important sections remain connected.
- Correct unwanted tears or irregular edges.

Step 6: Prepare the screen

- Clean the screen.
- Ensure the mesh is dry.
- Position the stencil on the screen.
- Secure the stencil firmly.







7.6 Attaching a Stencil to a Screen

The stencil should be attached securely to prevent unwanted movement during printing.

Procedure:

1. Place the screen on a flat working surface.
2. Clean the mesh.
3. Position the stencil in the required area.
4. Align the motif correctly.
5. Secure the stencil using suitable adhesive or masking tape where appropriate.
6. Ensure that the edges are properly sealed.

7. Inspect the screen to confirm that no unwanted gaps remain.

7.7 Preparing Fabric for Printing

Fabric preparation is important because dust, creases and moisture may affect the final printed design.

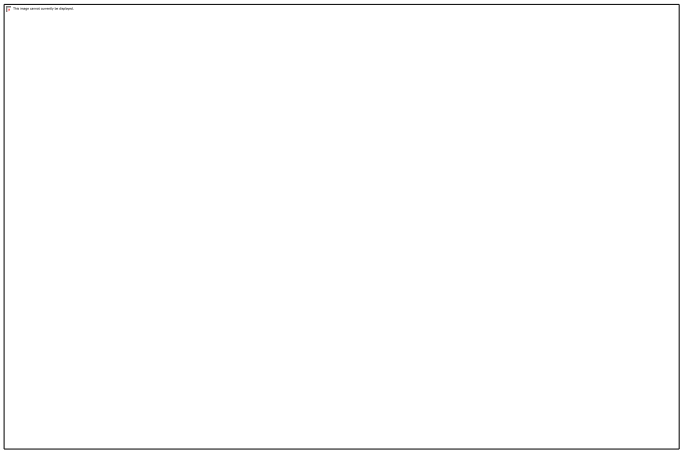
Procedure:

1. Select a suitable fabric, preferably a smooth, clean cotton fabric for the school exercise.
2. Wash the fabric if necessary to remove dirt, oils and manufacturing finishes.
3. Dry the fabric completely.
4. Iron it to remove wrinkles.
5. Place it on a flat padded working surface.
6. Secure it using suitable methods to prevent movement.
7. Mark the printing position where necessary.

Importance of preparing fabric

- Improves ink adhesion.
- Prevents uneven printing.
- Reduces unwanted stains.
- Improves the accuracy of pattern placement.
- Produces a cleaner finish.

7.8 Screen Printing Procedure Using a Cut Stencil



1. Prepare the motif.
2. Cut the stencil.
3. Prepare the mesh screen.
4. Attach the stencil to the screen.
5. Prepare the printing ink.
6. Spread the fabric on a padded surface.
7. Position the screen over the fabric.
8. Place a suitable amount of ink on the screen.
9. Hold the squeegee firmly.

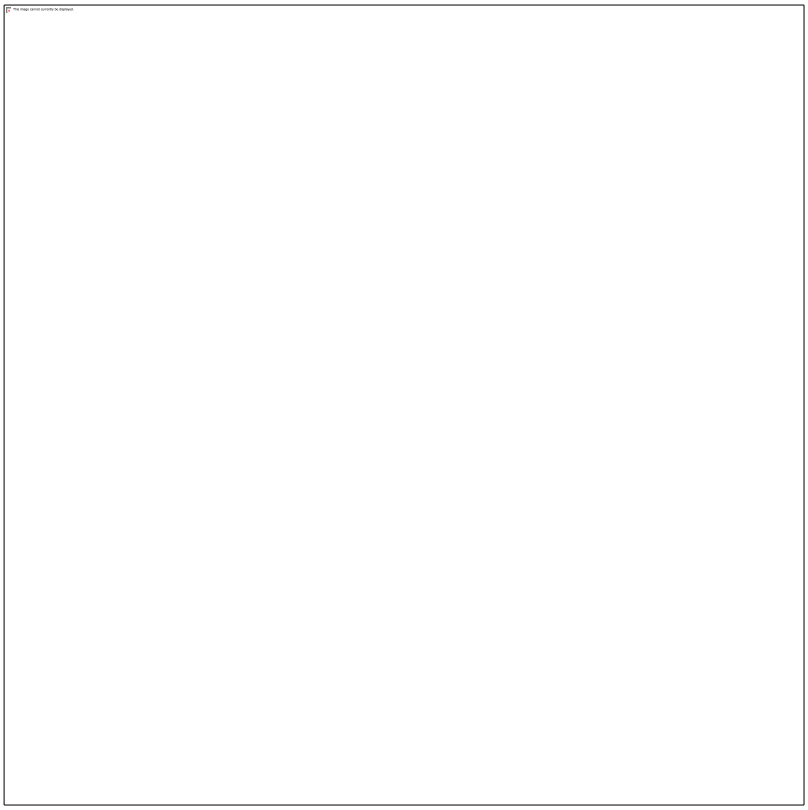
10. Pull the squeegee across the screen using even pressure.
11. Allow the ink to pass through the open areas.
12. Lift the screen carefully.
13. Inspect the printed motif.
14. Allow the fabric to dry according to the ink instructions.
15. Repeat the printing process to develop the required pattern.

7.9 Printing an Alternate Repeat Pattern Using a Stencil Screen

This process involves printing two or more motifs in an alternating arrangement.

Procedure

1. Develop two or more complementary motifs digitally.
2. Arrange them in an alternate repeat pattern.
3. Transfer the design onto suitable stencil material.
4. Cut the stencil carefully.
5. Attach the stencil to the prepared mesh screen.
6. Prepare the fabric.
7. Position the screen correctly.
8. Print the first motif.
9. Move or reposition the screen according to the planned repeat spacing.
10. Print the second motif.
11. Continue alternating the motifs.
12. Maintain equal spacing and alignment.
13. Allow the ink to dry.
14. Inspect the finished fabric.



7.10 Challenges in Stencil Screen Printing and Their Solutions

Challenge	Solution
Stencil tears during cutting	Use suitable material and sharp cutting tools.
Ink leaks beneath the stencil	Secure the stencil edges properly.
Uneven printing	Apply consistent squeegee pressure.
Motifs appear misaligned	Mark repeat positions before printing.
Fabric moves during printing	Secure it firmly to the padded surface.
Ink dries on the mesh	Clean the screen promptly according to ink instructions.
Stencil sections detach	Design suitable bridges.
Poor colour appearance	Select suitable ink and prepare the fabric properly.
Smudged patterns	Avoid moving the screen while printing.

8.0 SCREEN PRINTING USING A BLOCK-OUT SCREEN

8.1 Meaning of a Block-out Screen

A block-out screen is a prepared mesh screen in which selected areas have been covered with an impermeable substance to prevent printing ink from passing through those areas.

The uncovered mesh areas allow ink to pass through onto the fabric.

The blocked areas remain unprinted.

Block-out screens may be prepared using:

- Photo-sensitive emulsion.
- Screen-printing block-out fluid.
- Varnish or suitable screen-printing coating.
- Shellac, where appropriate and compatible with the screen and process.

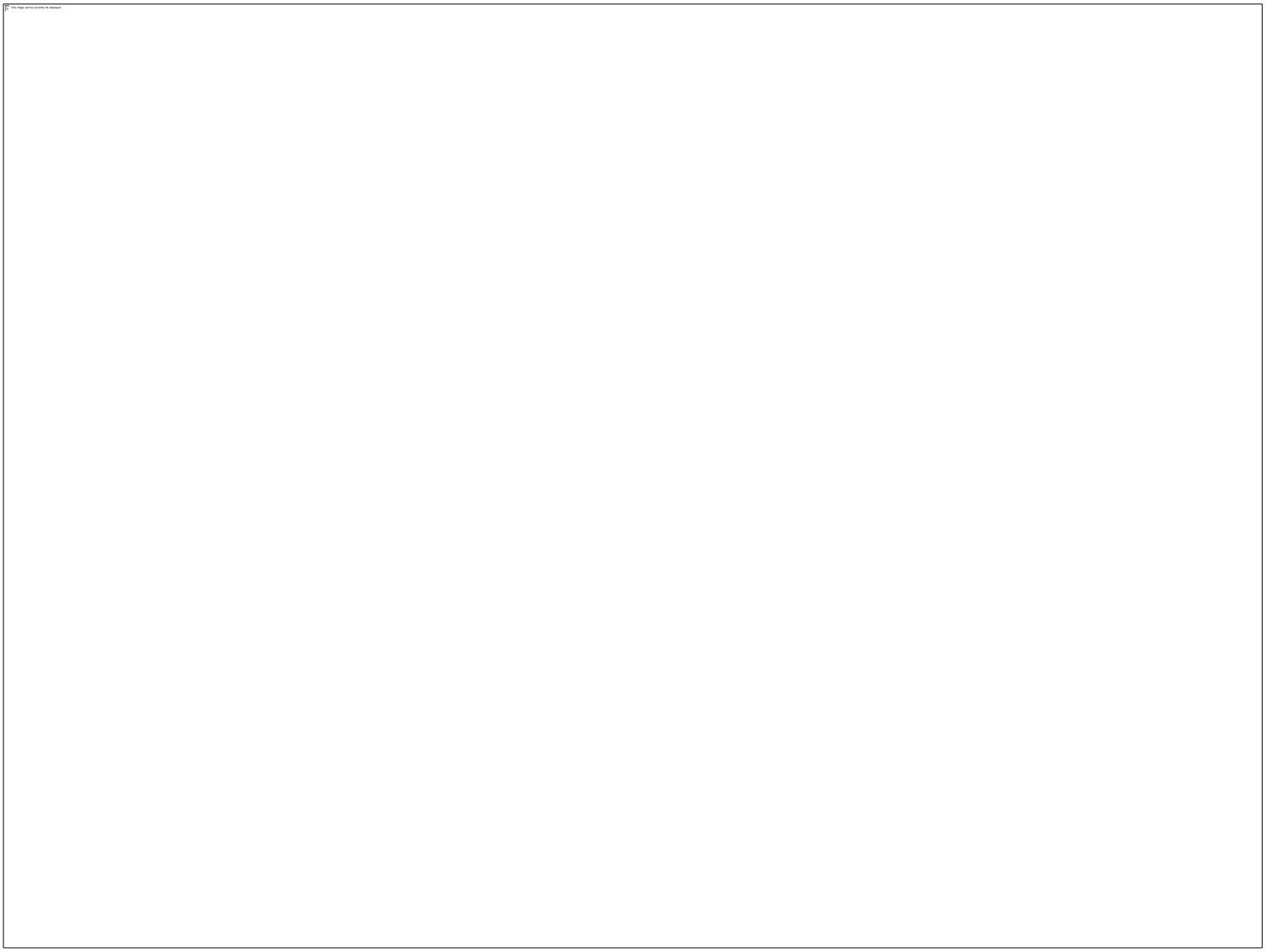
For this Grade 11 sub-strand, particular emphasis is placed on using the **photo-emulsion method**.

8.2 Meaning of Photo Emulsion

Photo emulsion is a light-sensitive chemical coating applied to a screen mesh to enable the transfer of a design onto the screen through photographic exposure.

When a positive image is placed over the coated screen and exposed to an appropriate light source, the emulsion hardens in the exposed areas.

The unexposed areas corresponding to the opaque parts of the design are washed out, leaving openings through which ink can pass.



8.3 How Photo-Emulsion Screen Printing Works

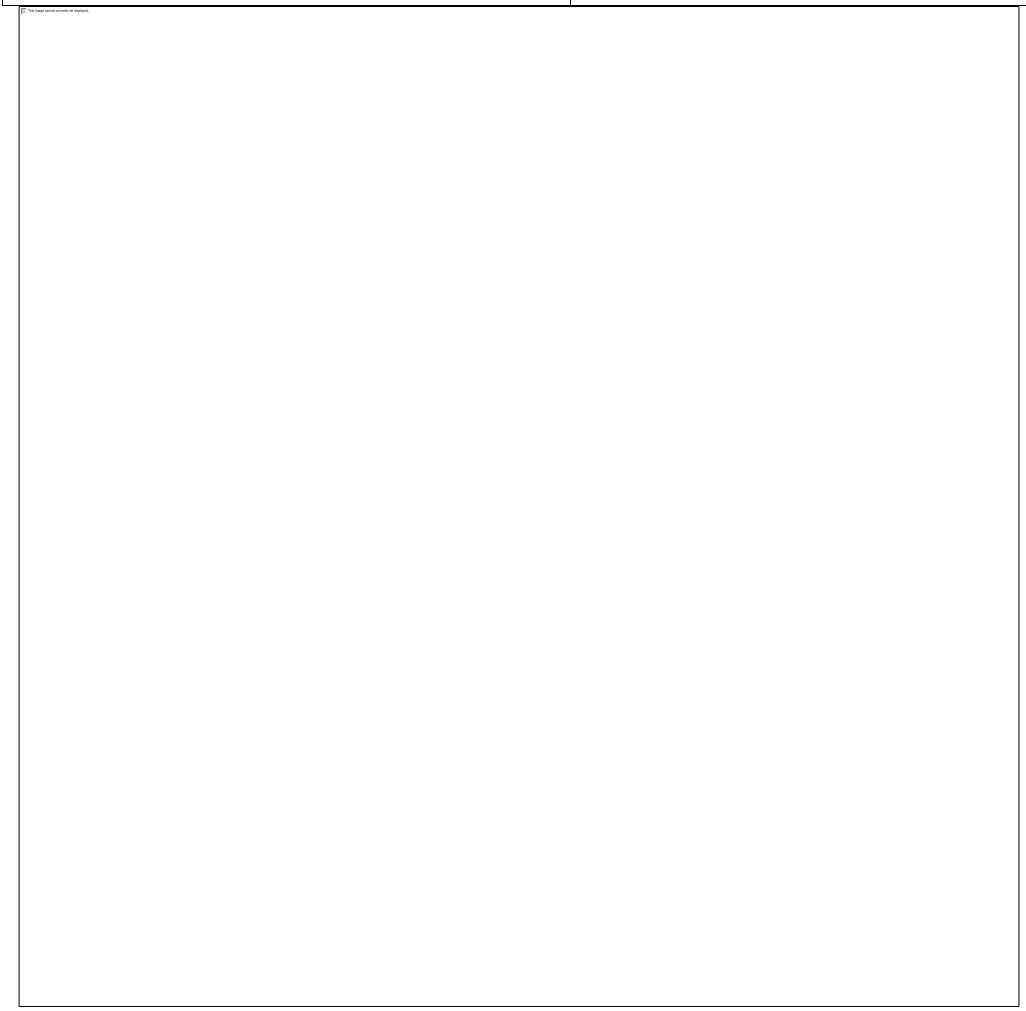
The photo-emulsion process involves the following stages:

1. Cleaning the mesh screen.
2. Drying the screen.
3. Coating the mesh with photo emulsion.
4. Drying the coated screen in a dark environment.
5. Preparing a positive image on transparent film.
6. Placing the positive image against the coated screen.
7. Exposing the screen to the appropriate light source.
8. Washing out the unexposed emulsion.
9. Drying the screen.
10. Inspecting the stencil image.
11. Blocking unwanted pinholes where necessary.
12. Using the prepared screen for fabric printing.

8.4 Materials and Equipment for Photo-Emulsion Screen Preparation

Material/equipment	**Function**
Mesh screen	Supports the printing image.
Screen frame	Holds the mesh in position.
Photo emulsion	Creates the light-sensitive coating.
Emulsion scoop coater	Applies an even layer of emulsion.
Transparent film	Carries the positive design.
Opaque artwork	Blocks light in selected design areas.
Exposure unit or suitable light source	Hardens exposed emulsion.
Washout spray	Removes unexposed emulsion.
Drying cabinet or dark drying area	Dries the coated screen.
Squeegee	Transfers printing ink.
Textile ink	Produces the image on fabric.
Padded surface	Supports the fabric during printing.
Protective gloves	Protect the hands during chemical handling.

Cleaning materials	Maintain the equipment.



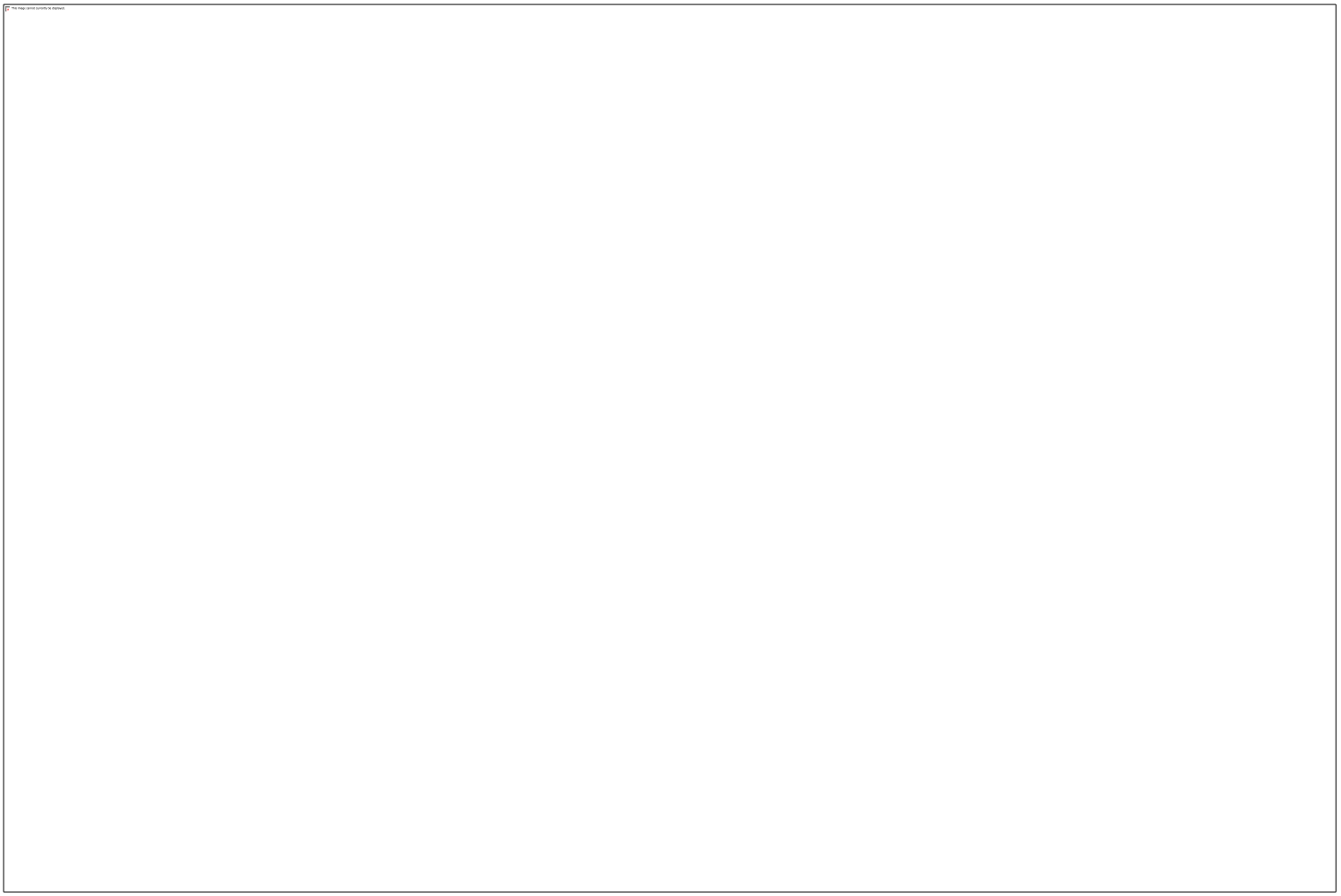
8.5 Preparing Artwork for Photo-Emulsion Screen Printing

The artwork must be prepared carefully to ensure that the correct parts of the screen remain open.

Procedure

1. Generate the motif digitally.
2. Remove unnecessary details.
3. Convert the design into a suitable high-contrast image.
4. Identify the areas that should print.
5. Ensure that the artwork is sufficiently opaque when printed on transparent film.
6. Print the artwork onto suitable transparent film.
7. Inspect the film for unwanted transparent gaps in the opaque design areas.
8. Confirm that the image is the correct size.

Important: In a conventional positive-film photo-emulsion process, the opaque parts of the film block light and correspond to areas that will wash out and become open mesh. The transparent parts allow light through and harden the emulsion, blocking ink.



8.6 Steps in Preparing a Photo-Emulsion Screen

Step 1: Clean the screen

- Remove dirt, grease and old ink.
- Use appropriate screen-cleaning materials.
- Rinse and dry the mesh completely.

Step 2: Prepare the emulsion

- Follow the manufacturer's instructions.
- Mix the sensitiser with the emulsion where required.
- Avoid unnecessary exposure to light.

Step 3: Coat the screen

- Use a scoop coater to apply an even coating.
- Coat the appropriate sides of the mesh.
- Avoid excessive emulsion build-up.

Step 4: Dry the screen

- Place the coated screen in a clean, dark drying environment.
- Allow it to dry completely.
- Protect it from premature exposure to light.

Step 5: Position the positive film

- Place the transparent film containing the design against the coated screen.
- Ensure proper alignment.
- Use suitable contact pressure to maintain close contact.

Step 6: Expose the screen

- Place the screen in an exposure unit.
- Expose it to the appropriate light source.
- Follow the emulsion manufacturer's exposure instructions.

Step 7: Wash out the image

- Wet the screen with water.
- Gently wash away the unexposed emulsion.
- Allow the intended printing areas to open.

Step 8: Dry and inspect the screen

- Dry the screen completely.
- Inspect the image for clarity.
- Check for blocked or unwanted open areas.

Step 9: Block unwanted pinholes

- Use suitable screen block-out material to seal unwanted openings.
- Allow the coating to dry.

Step 10: Prepare the screen for printing

- Position the screen above the fabric.
- Check alignment.
- Prepare the printing ink and squeegee.

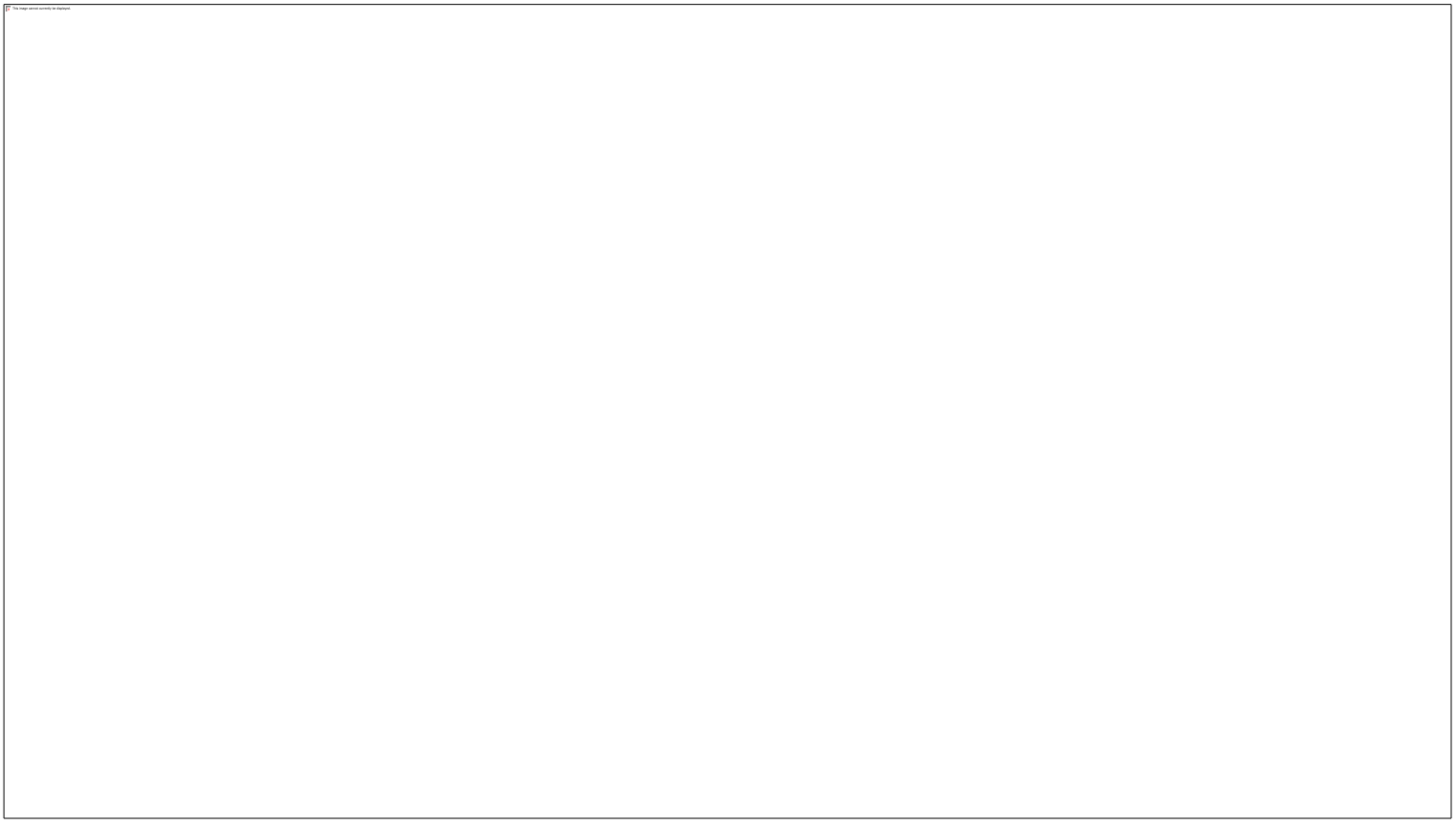




8.7 Printing Fabric Using a Block-out Screen

Procedure

1. Prepare the fabric by washing, drying and ironing it where necessary.
2. Place the fabric on a flat padded surface.
3. Position the prepared block-out screen over the fabric.
4. Align the design correctly.
5. Apply suitable textile printing ink to the screen.
6. Hold the squeegee at an appropriate angle.
7. Pull the squeegee evenly across the screen.
8. Allow the ink to pass through the open mesh areas.
9. Lift the screen carefully.
10. Inspect the printed image.
11. Allow the ink to dry or cure according to the manufacturer's instructions.
12. Repeat the process where necessary to complete the design.



8.8 Difference Between Cut-Stencil Printing and Photo-Emulsion Block-out Printing

Cut-stencil printing	**Photo-emulsion block-out printing**
Uses a physically cut stencil.	Uses a light-sensitive emulsion.
The stencil is prepared by cutting material.	The design is transferred through photographic exposure.
Suitable for relatively simple designs.	Suitable for more detailed designs.

Often requires fewer specialised materials.	Requires photo emulsion and exposure equipment.
Can be relatively easy for beginners.	Requires careful preparation and exposure control.
May be reused depending on stencil material and construction.	The screen can be reclaimed and reused using appropriate chemicals and procedures.
The stencil is attached to the screen.	The image is formed directly in the emulsion on the mesh.

8.9 Importance of Block-out Screen Printing

1. Produces clear and well-defined images.
2. Allows reproduction of detailed motifs.
3. Supports repeated printing.
4. Enables the production of consistent patterns.
5. Supports commercial fabric decoration.
6. Allows the use of digitally generated artwork.
7. Facilitates the production of branded textiles.
8. Reduces the need to cut complex stencil shapes manually.

8.10 Challenges in Photo-Emulsion Printing and Their Solutions

Challenge	**Solution**
Uneven emulsion coating	Use a suitable scoop coater.
Premature hardening	Keep coated screens in a dark environment.
Poor exposure	Follow the manufacturer's exposure instructions.
Image fails to wash out	Check film opacity and exposure conditions.
Image details are unclear	Improve artwork quality and film contact.
Pinholes appear	Apply suitable block-out material.
Screen mesh becomes damaged	Handle screens carefully.
Ink does not pass through	Check that printing areas are properly open.
Poor adhesion on fabric	Use suitable textile ink and follow curing instructions.

9.0 PRINTING MATERIALS AND THEIR PROPERTIES

9.1 Printing Inks

Printing ink is a colouring substance used to transfer designs onto a printing surface.

Different inks are selected according to the type of fabric, printing technique and desired finish.

a) Water-based textile ink

- Uses water as its main carrier.
- Suitable for many textile printing applications.
- Can produce a soft feel on fabric.
- Requires suitable drying or curing according to the product instructions.

b) Plastisol ink

- A PVC-based screen-printing ink.
- Commonly used for garment printing.
- Produces vibrant and opaque prints.
- Requires the specified curing temperature.

c) Discharge ink

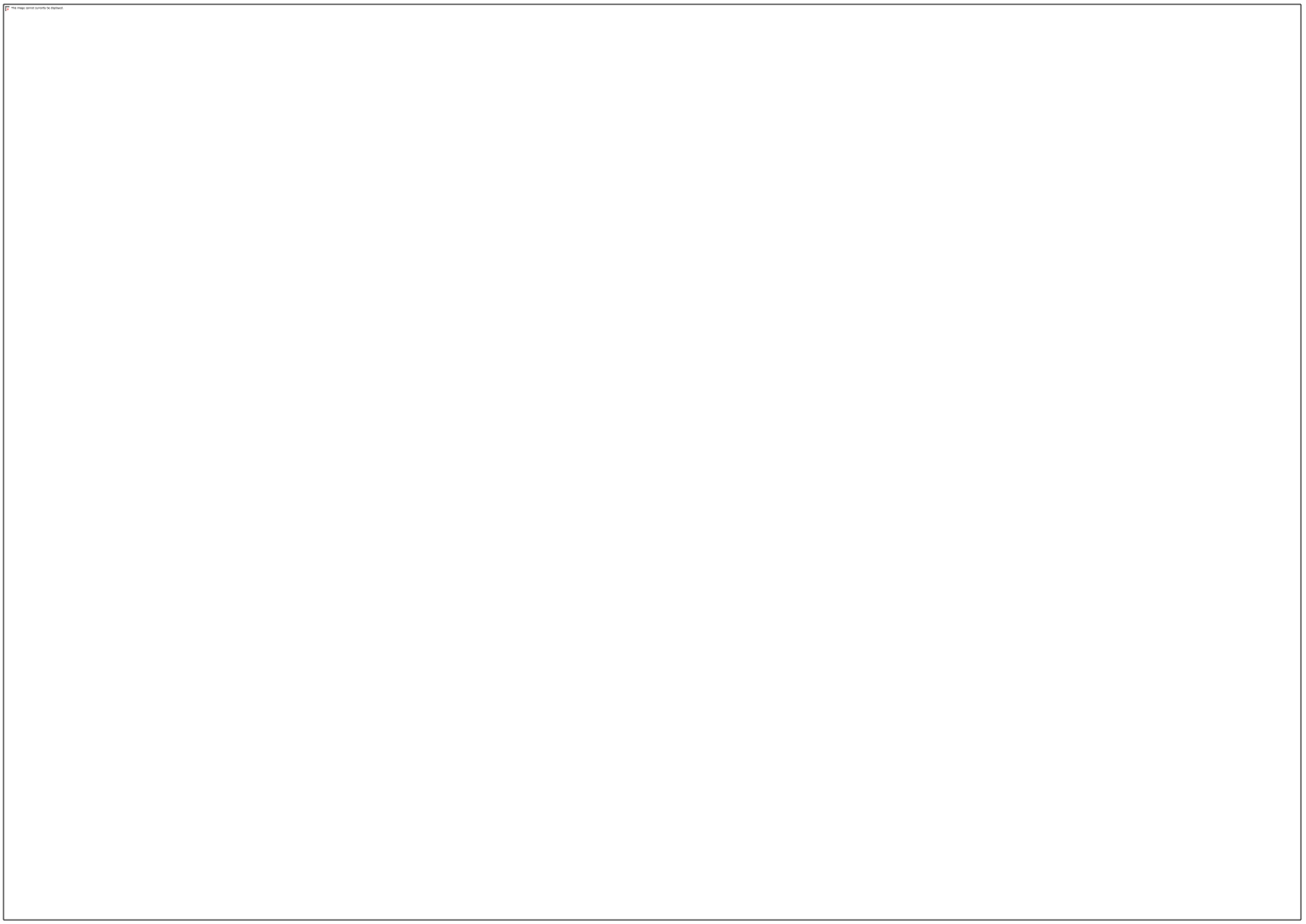
- Used to remove or replace colour from suitable dyed fabrics.
- Can produce soft-feel prints.
- Requires careful selection of fabric and correct handling.

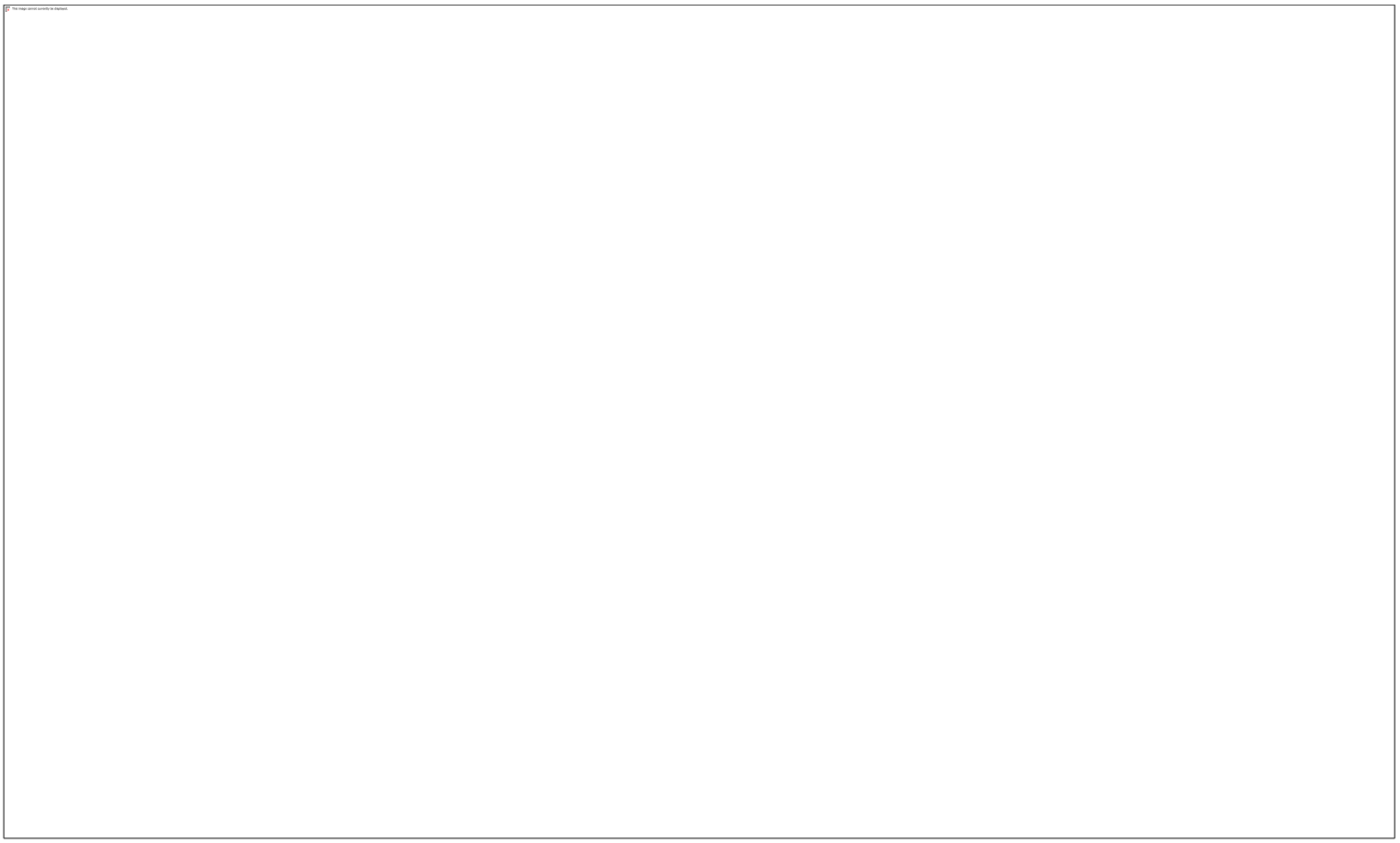
d) Specialty inks

These include inks designed to produce special effects such as:

- Metallic finishes.
- Glitter effects.
- Puff printing.
- Reflective finishes.







9.2 Factors to Consider When Selecting Printing Ink

1. Type of fabric.
2. Colour of the fabric.
3. Intended design.
4. Durability requirements.
5. Desired texture.
6. Availability of printing equipment.
7. Drying and curing requirements.
8. Safety instructions.
9. Environmental considerations.
10. Cost of production.

9.3 Printing Fabric

Fabric is the material onto which the design is transferred.

Examples include:

- Cotton.
- Polyester.
- Cotton-polyester blends.
- Linen.
- Canvas.
- Suitable woven fabrics.

Qualities of suitable fabric

1. Clean and free from excessive dirt.
2. Smooth enough to support printing.
3. Compatible with the selected ink.
4. Properly prepared.
5. Able to withstand the required curing process.

9.4 The Role of Transparent Paper and Film

Transparent film is used to carry the positive artwork during the preparation of a photo-emulsion screen.

Its importance includes:

- Transfers the digital design to the screen.
- Allows light to pass through transparent areas.
- Blocks light through opaque design areas.
- Helps produce accurate screen images.
- Supports the reproduction of detailed motifs.

10.0 FABRIC PATTERN COMPOSITION AND DESIGN PRINCIPLES

Successful fabric decoration requires the application of artistic principles to organise motifs and colours into attractive compositions.

10.1 Balance

Balance refers to the distribution of visual weight in a design.

Types of balance:

a) Symmetrical balance

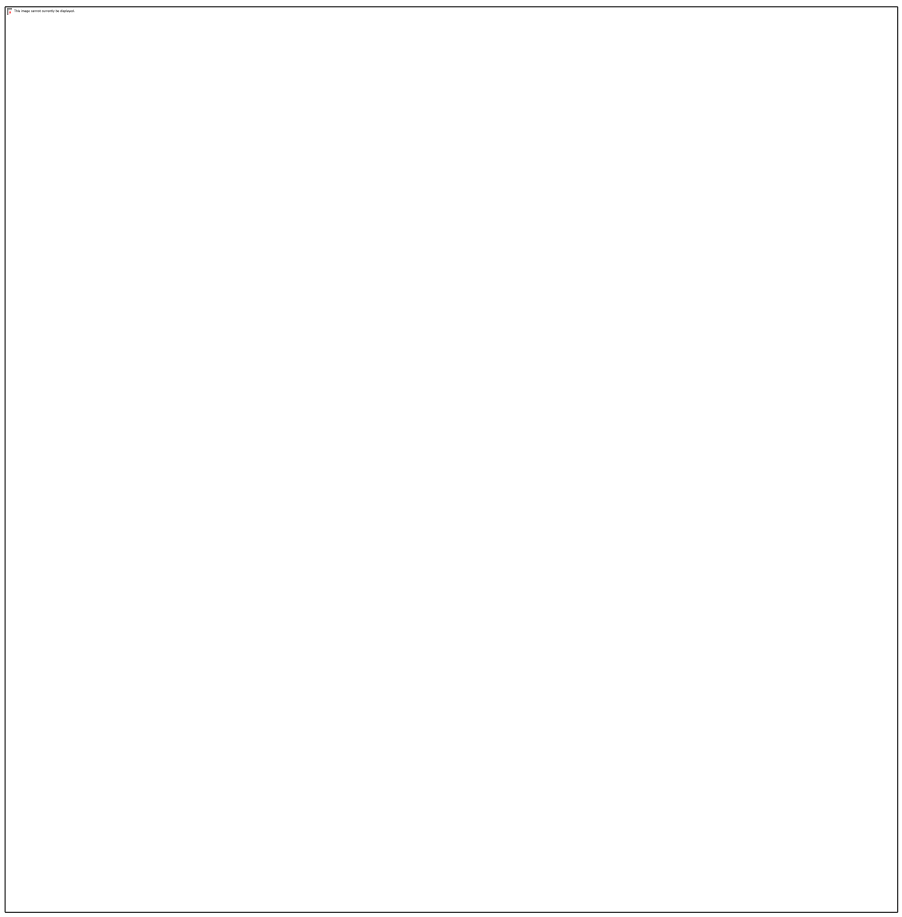
- Both sides of a design have similar or identical arrangements.
- It creates order and stability.
- It is suitable for formal and traditional textile designs.

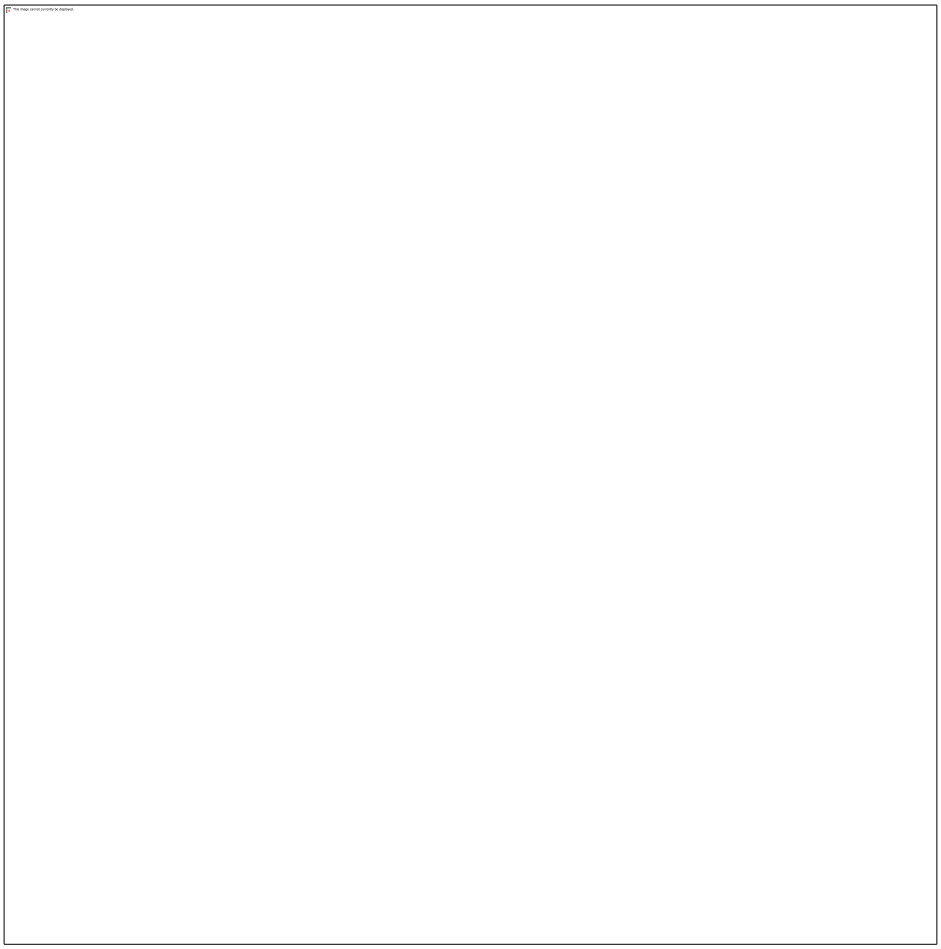
b) Asymmetrical balance

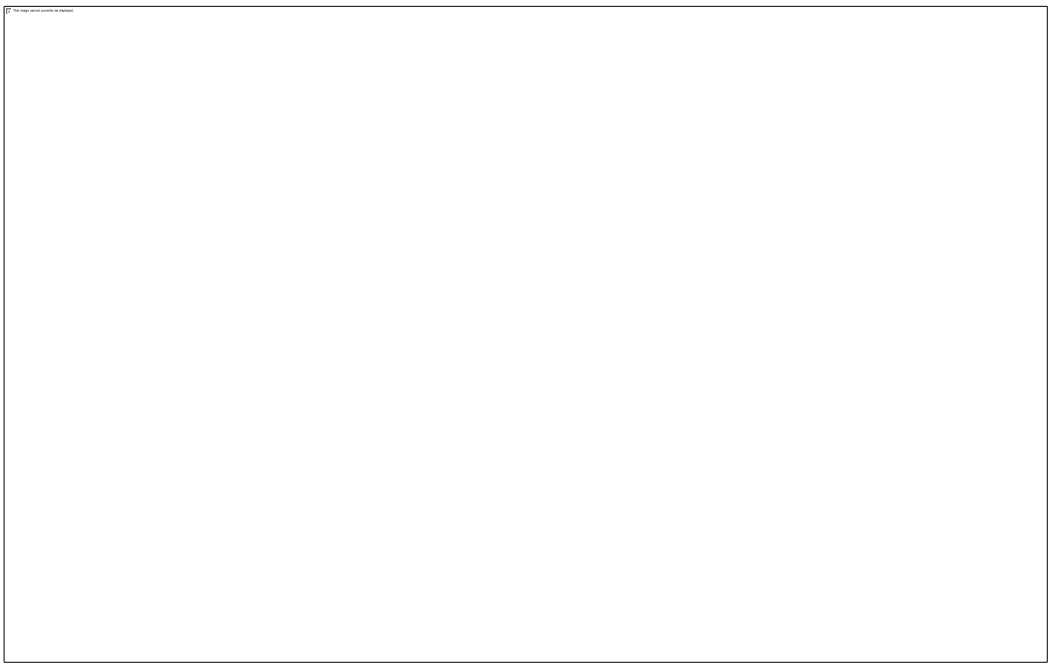
- Different elements are arranged to create visual balance without being identical.
- It creates variety and interest.

c) Radial balance

- Motifs are arranged around a central point.
- It creates a circular arrangement.







10.2 Unity

Unity refers to the way different design elements work together to create a complete and harmonious design.

Unity can be achieved through:

- Repeating similar motifs.
- Using related colours.
- Maintaining consistent shapes.

- Using similar line qualities.
- Maintaining a common theme.

10.3 Contrast

Contrast is the difference between visual elements in a design.

It can be achieved through:

- Light and dark colours.
- Large and small shapes.
- Thick and thin lines.
- Positive and negative spaces.
- Different geometric forms.

Importance of contrast

1. Makes motifs more visible.
2. Creates visual interest.
3. Emphasises important design elements.
4. Improves readability of printed images.

10.4 Proportion

Proportion refers to the relationship between the sizes of different elements in a design.

For example, a large flower motif may be accompanied by smaller leaf motifs to create a balanced composition.

10.5 Repetition

Repetition involves using the same design element more than once.

It helps create:

- Rhythm.
- Unity.
- Continuity.
- Consistency.
- Decorative patterns.

10.6 Harmony

Harmony refers to the pleasing relationship between the different elements of a design.

It can be achieved through suitable colour combinations, consistent motifs and balanced arrangements.

11.0 MULTICOLOUR SCREEN PRINTING

11.1 Meaning of Multicolour Screen Printing

Multicolour screen printing is a printing technique in which two or more different colours are applied to a fabric using separate screens or carefully planned printing stages.

Each colour may require its own screen and corresponding design separation.

11.2 Steps in Multicolour Screen Printing

1. Develop the complete motif digitally.
2. Select the colours.
3. Separate the design according to the colours required.
4. Prepare a positive film for each colour.
5. Prepare separate photo-emulsion screens.
6. Expose and wash out each screen.
7. Prepare the fabric.
8. Position the first screen.
9. Print the first colour.
10. Allow the first layer to reach the required drying stage.
11. Align the second screen accurately.
12. Print the second colour.
13. Repeat for additional colours.
14. Dry or cure the printed fabric as specified.
15. Inspect the final design.

11.3 Importance of Registration in Multicolour Printing

Registration refers to the accurate alignment of different colours or design layers during printing.

Importance

- Prevents overlapping errors.
- Ensures accurate positioning of colours.
- Maintains design clarity.
- Produces professional-looking patterns.
- Prevents unwanted gaps between colours.

11.4 Common Problems in Multicolour Printing

- Misaligned colours.
- Unwanted ink overlap.
- Uneven ink application.
- Different drying rates.
- Inconsistent colour appearance.

Solutions

- Use registration marks.
- Secure the fabric.
- Maintain fixed screen positions.
- Follow suitable drying instructions.
- Apply consistent printing pressure.

12.0 QUALITY CONTROL IN SCREEN PRINTING

12.1 Meaning of Quality Control

Quality control is the process of checking and maintaining the standard of a printed fabric to ensure that it meets the required design and production specifications.

12.2 Qualities of a Well-Printed Fabric

1. Clear and recognisable motifs.
2. Consistent colours.
3. Even ink application.
4. Correct pattern spacing.
5. Proper alignment.
6. No unwanted ink stains.
7. No damaged fabric.
8. Appropriate ink adhesion.
9. Neat edges.
10. Correct repeat arrangement.

12.3 Factors Affecting the Quality of Screen Printing

a) Screen quality

A properly prepared mesh allows controlled ink transfer.

b) Stencil quality

A well-cut or properly exposed stencil produces clear designs.

c) Ink quality

Suitable printing ink produces better colour and adhesion.

d) Squeegee pressure

Consistent pressure helps distribute ink evenly.

e) Fabric preparation

Clean and smooth fabric improves printing results.

f) Registration

Accurate positioning prevents design misalignment.

g) Drying and curing

Correct drying or curing improves the durability of the print.

12.4 Testing the Printed Fabric

After printing, the learner should:

1. Inspect the design visually.
2. Check the pattern alignment.
3. Examine colour consistency.
4. Check for smudges and unwanted marks.
5. Confirm that the print has dried or cured properly.
6. Carry out an appropriate ink adhesion test where suitable.
7. Compare the final work with the original design.

13.0 APPLICATIONS OF SCREEN PRINTING IN KENYA

Screen printing has several applications in the Kenyan creative economy.

13.1 Fashion and Clothing Industry

Screen printing is used to decorate:

- T-shirts.
- Shirts.
- Dresses.
- Hoodies.
- Sportswear.
- Casual wear.
- Traditional-inspired garments.

13.2 School and Institutional Branding

Screen printing is used to produce:

- School logos.
- Branded T-shirts.
- Sports uniforms.
- Club uniforms.
- Event shirts.
- Graduation merchandise.

13.3 Advertising and Promotion

Businesses use screen printing to produce:

- Promotional T-shirts.
- Branded shopping bags.
- Corporate uniforms.
- Event merchandise.
- Promotional fabric products.

13.4 Home Decoration

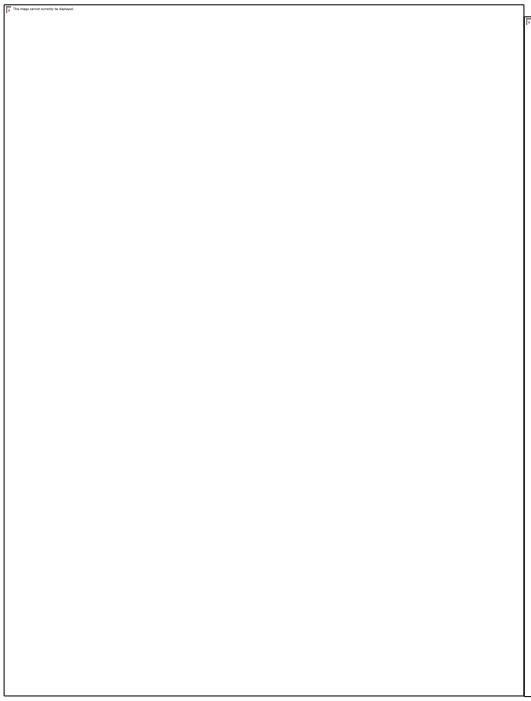
Screen printing is used to decorate:

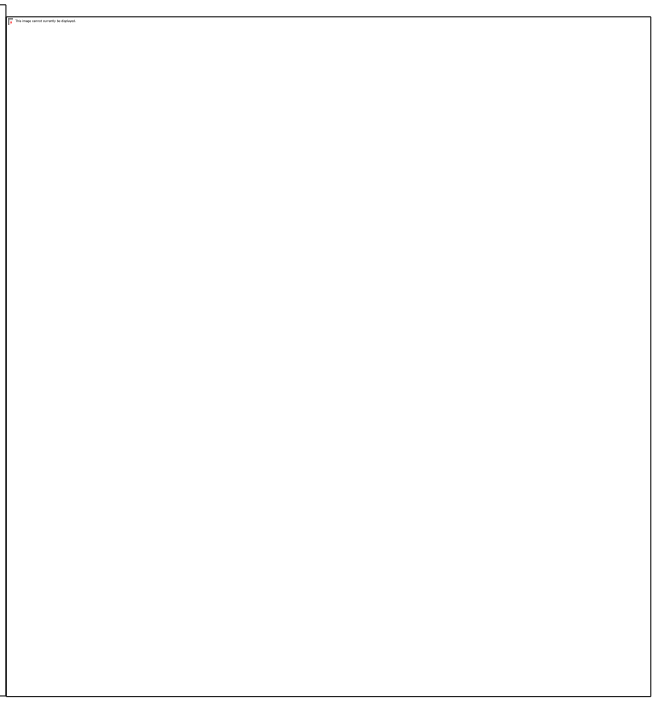
- Curtains.
- Cushion covers.
- Tablecloths.
- Bed covers.
- Decorative wall fabrics.

13.5 Cultural and Artistic Expression

Artists use screen printing to:

- Interpret traditional motifs.
- Communicate cultural identity.
- Promote African designs.
- Create contemporary textile artwork.
- Produce decorative fabrics inspired by Kenyan heritage.





14.0 ENTREPRENEURSHIP AND CAREER OPPORTUNITIES IN SCREEN PRINTING

Screen printing offers opportunities for self-employment and business development.

14.1 Business Opportunities

1. Printing customised T-shirts.
2. Producing branded school uniforms.
3. Printing promotional shopping bags.
4. Decorating curtains and cushion covers.
5. Producing custom-designed kitenge fabrics.
6. Printing corporate merchandise.

7. Making decorative fabric products for sale.
8. Offering motif design services.
9. Providing screen preparation services.
10. Producing printed accessories.

14.2 Career Opportunities

Learners who develop screen printing skills may pursue careers as:

- Textile designers.
- Fabric decorators.
- Fashion designers.
- Screen printing technicians.
- Graphic designers.
- Surface pattern designers.
- Textile production assistants.
- Printing entrepreneurs.
- Creative arts instructors.
- Advertising merchandise designers.

14.3 Entrepreneurial Skills Developed

1. Creativity.
2. Innovation.
3. Financial management.
4. Customer relations.
5. Time management.
6. Product development.
7. Marketing.
8. Problem-solving.
9. Quality control.
10. Business planning.

14.4 Environmental Sustainability in Screen Printing

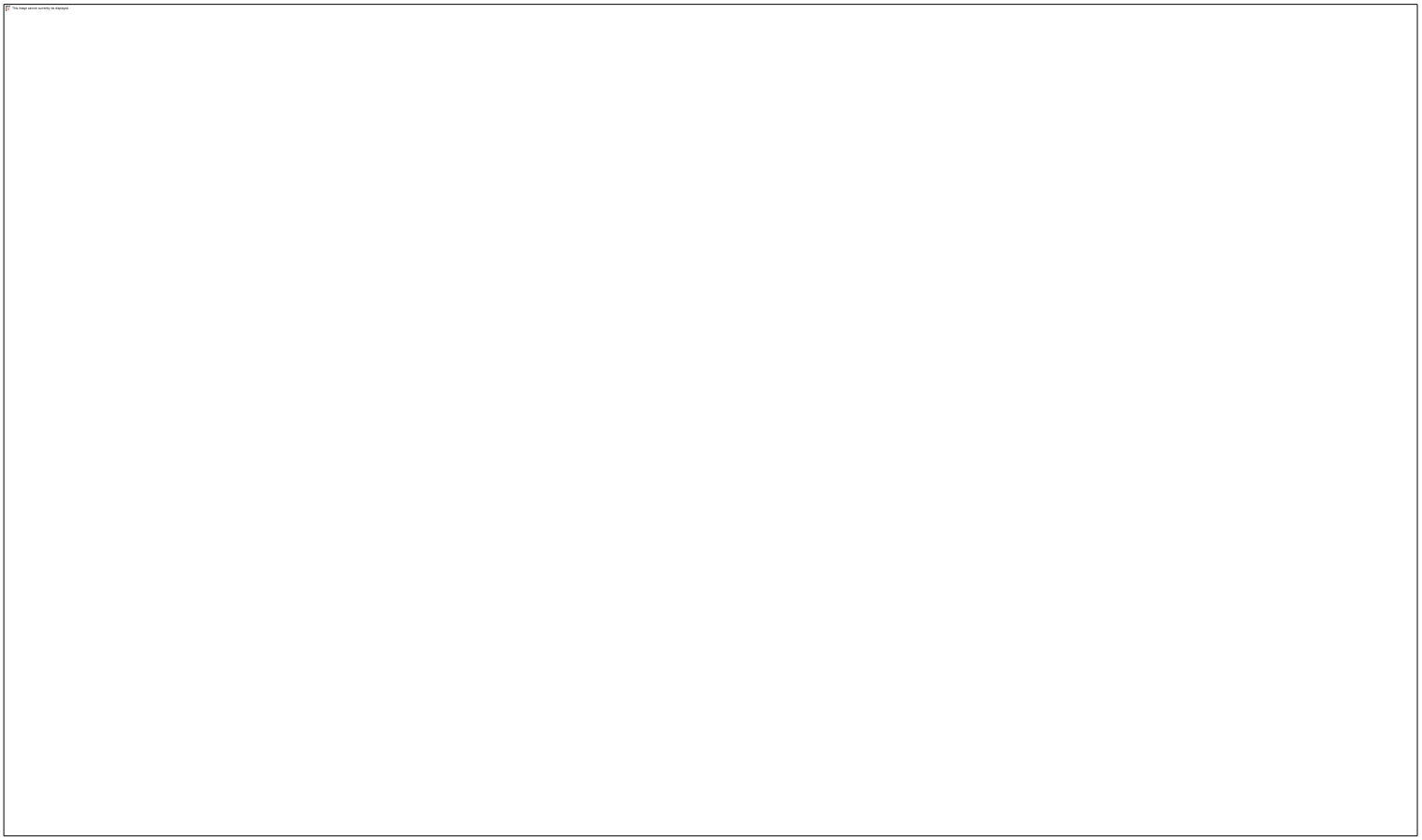
Screen printing should be conducted in ways that reduce environmental pollution and waste.

Sustainable practices

- Reuse suitable stencil materials.
- Use reusable screen frames.
- Minimise unnecessary ink wastage.
- Select environmentally appropriate inks where possible.
- Use water responsibly during screen cleaning.

- Avoid releasing printing chemicals into drains or water sources.
- Recycle suitable paper and packaging materials.
- Store chemicals safely.
- Dispose of chemical waste according to local requirements.
- Use leftover fabric for smaller products.

Kenyan context: Learners can use offcuts of cotton fabric to create reusable shopping bags, cushion covers and other decorative products instead of discarding the materials.



15.0 SAFETY PRECAUTIONS IN SCREEN PRINTING

Screen printing involves sharp tools, inks, chemicals, light exposure and electrical equipment. Safety measures must therefore be observed.

15.1 Safety During Motif Preparation

1. Use scissors carefully.
2. Cut stencil material on a suitable cutting mat.
3. Handle craft knives with care.
4. Store sharp tools safely.
5. Avoid cutting towards the body.
6. Keep the working surface organised.

15.2 Safety During Screen Preparation

1. Wear suitable protective gloves when handling photo emulsion and other chemicals.
2. Follow the manufacturer's instructions.

3. Avoid direct contact with chemicals.
4. Work in a well-ventilated area.
5. Avoid eating or drinking in the printing area.
6. Keep chemical containers properly labelled.
7. Store chemicals away from learners who are not authorised to handle them.
8. Protect photo emulsion from unintended light exposure.

15.3 Safety During Exposure

1. Use appropriate exposure equipment.
2. Avoid looking directly at intense ultraviolet light.
3. Do not expose skin unnecessarily to UV sources.
4. Follow equipment safety instructions.
5. Switch off equipment after use.

15.4 Safety During Printing

1. Wear suitable protective clothing.
2. Keep ink containers closed when not in use.
3. Avoid contact with eyes and mouth.
4. Use suitable cleaning materials.
5. Keep electrical equipment away from water.
6. Clean ink spills immediately using appropriate procedures.
7. Maintain a clean and organised working area.

15.5 Safety During Drying and Curing

1. Follow the specified curing temperature.
2. Use suitable heat-resistant gloves where necessary.
3. Avoid touching hot equipment.
4. Maintain proper ventilation.
5. Allow printed fabric to cool before handling.

16.0 APPRAISAL AND APPRECIATION OF DECORATED FABRICS

16.1 Meaning of Appraisal

Appraisal is the process of examining and evaluating a piece of artwork to determine its quality, effectiveness, strengths and areas that require improvement.

In fabric decoration, appraisal involves examining the design and the quality of the printed fabric.

16.2 Aspects to Consider When Appraising Printed Fabrics

a) Motif design

- Is the motif original?
- Is it clear and recognisable?

- Is it suitable for the fabric?

b) Pattern arrangement

- Are motifs repeated correctly?
- Is the spacing consistent?
- Does the pattern create visual rhythm?

c) Colour application

- Are the colours attractive?
- Is the colour distribution even?
- Is there sufficient contrast?

d) Printing quality

- Is the ink evenly applied?
- Are the printed shapes clear?
- Are there any unwanted stains?

e) Technical execution

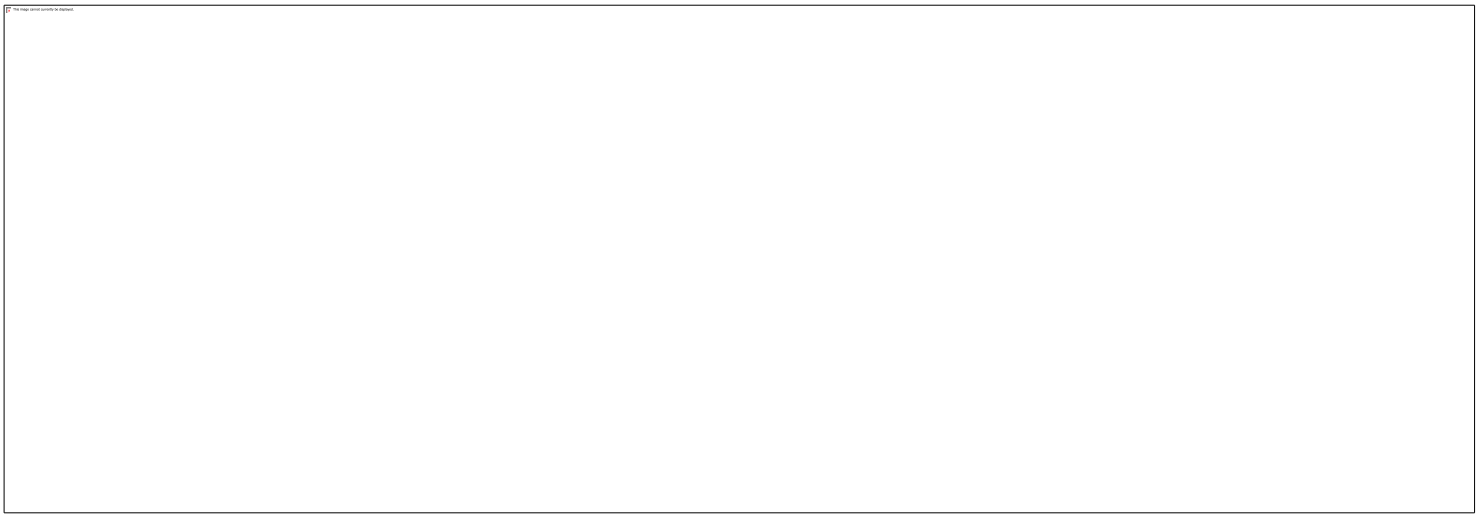
- Was the screen prepared properly?
- Are the stencil openings accurate?
- Is the pattern correctly registered?

f) Creativity

- Does the work demonstrate originality?
- Does it show imaginative use of motifs?
- Does it demonstrate experimentation?

g) Cultural relevance

- Does the design communicate an appropriate cultural idea?
- Has cultural inspiration been used respectfully?





16.3 Ways of Appreciating Own and Others' Decorated Fabrics

1. Examine the finished fabric carefully.
2. Recognise the effort involved in developing the motif.
3. Appreciate the choice of colours.
4. Identify effective pattern arrangements.
5. Respect different design approaches.
6. Give positive and constructive comments.
7. Suggest improvements politely.
8. Acknowledge individual and group contributions.
9. Avoid unfair comparisons.
10. Appreciate originality and cultural inspiration.

16.4 Sample Fabric Appraisal

Title: African Floral Fabric Design

- **Motif:** Flowers and leaves.
- **Inspiration:** Nature and African textile decoration.
- **Technique:** Screen printing using a cut stencil.
- **Colours:** Green, yellow and black.
- **Pattern:** Alternate repeat.
- **Strengths:** Attractive colour combination, clear motifs and balanced spacing.
- **Areas for improvement:** Some motifs require more accurate alignment.

Overall appraisal: The fabric demonstrates creativity and effective use of alternate repetition. The design could be improved through more consistent screen positioning.

PRACTICAL PROJECT: PRODUCING A DECORATED FABRIC USING A CUT STENCIL

Grade 11 CBE Practical Activity

Project title

Designing and Printing an Alternate Repeat Pattern on Cotton Fabric

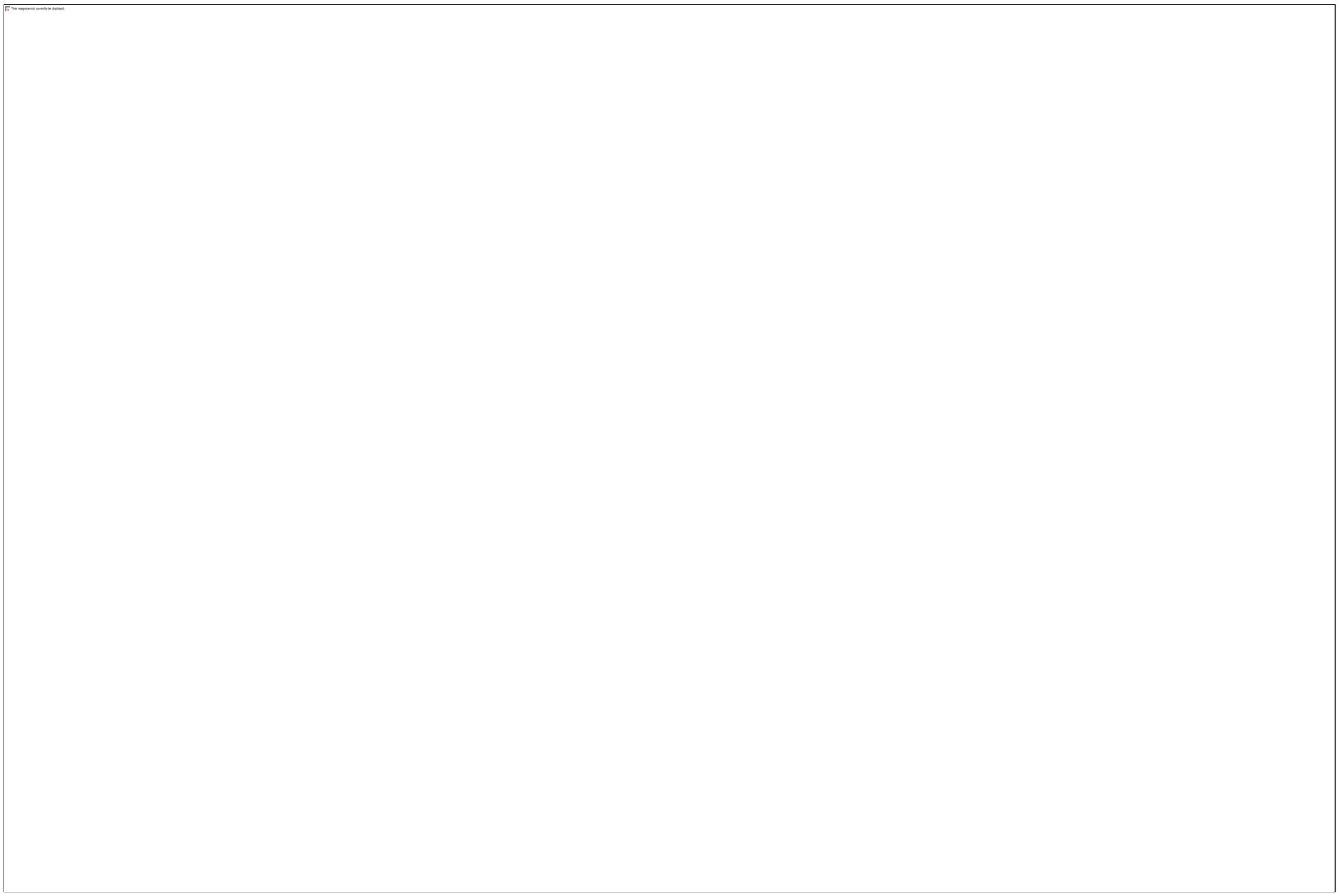
Learning objective

The learner should be able to generate a digital motif and use a stencil screen to print an alternate repeat pattern on fabric.

Materials and equipment

- Computer or smartphone.
- Digital motif design software.
- Printer.
- Transparent paper or film.
- Cellophane or reusable plastic sheet.

- Screen frame.
- Fine mesh.
- Fabric.
- Textile printing ink.
- Squeegee.
- Scissors or craft knife.
- Cutting mat.
- Masking tape.
- Padded printing surface.
- Protective clothing.



Procedure

Stage 1: Research and inspiration

1. Research fabric decoration techniques.
2. Observe Kenyan and African textile patterns.
3. Identify a suitable motif.
4. Record the sources of inspiration.
5. Sketch different design ideas.

Stage 2: Digital motif development

1. Open a suitable graphics application.
2. Create a new document.
3. Draw two related motifs.
4. Apply suitable shapes and lines.
5. Consider positive and negative spaces.
6. Identify bridges and islands.
7. Arrange the motifs into an alternate repeat.
8. Refine the pattern.
9. Save the digital design.

Stage 3: Stencil preparation

1. Print the motif onto suitable transparent paper or film.
2. Transfer the image onto stencil material.
3. Identify areas to be cut.
4. Cut the stencil carefully.
5. Inspect the design.
6. Attach the stencil to the mesh screen.

Stage 4: Fabric preparation

1. Select suitable fabric.
2. Wash and dry where necessary.
3. Iron the fabric.
4. Position it on the padded surface.
5. Secure it properly.

Stage 5: Printing

1. Position the screen.
2. Align the first motif.
3. Apply printing ink.
4. Pull the squeegee evenly.
5. Lift the screen carefully.
6. Reposition the screen for the alternate motif.
7. Continue printing.
8. Maintain consistent spacing.
9. Allow the fabric to dry.

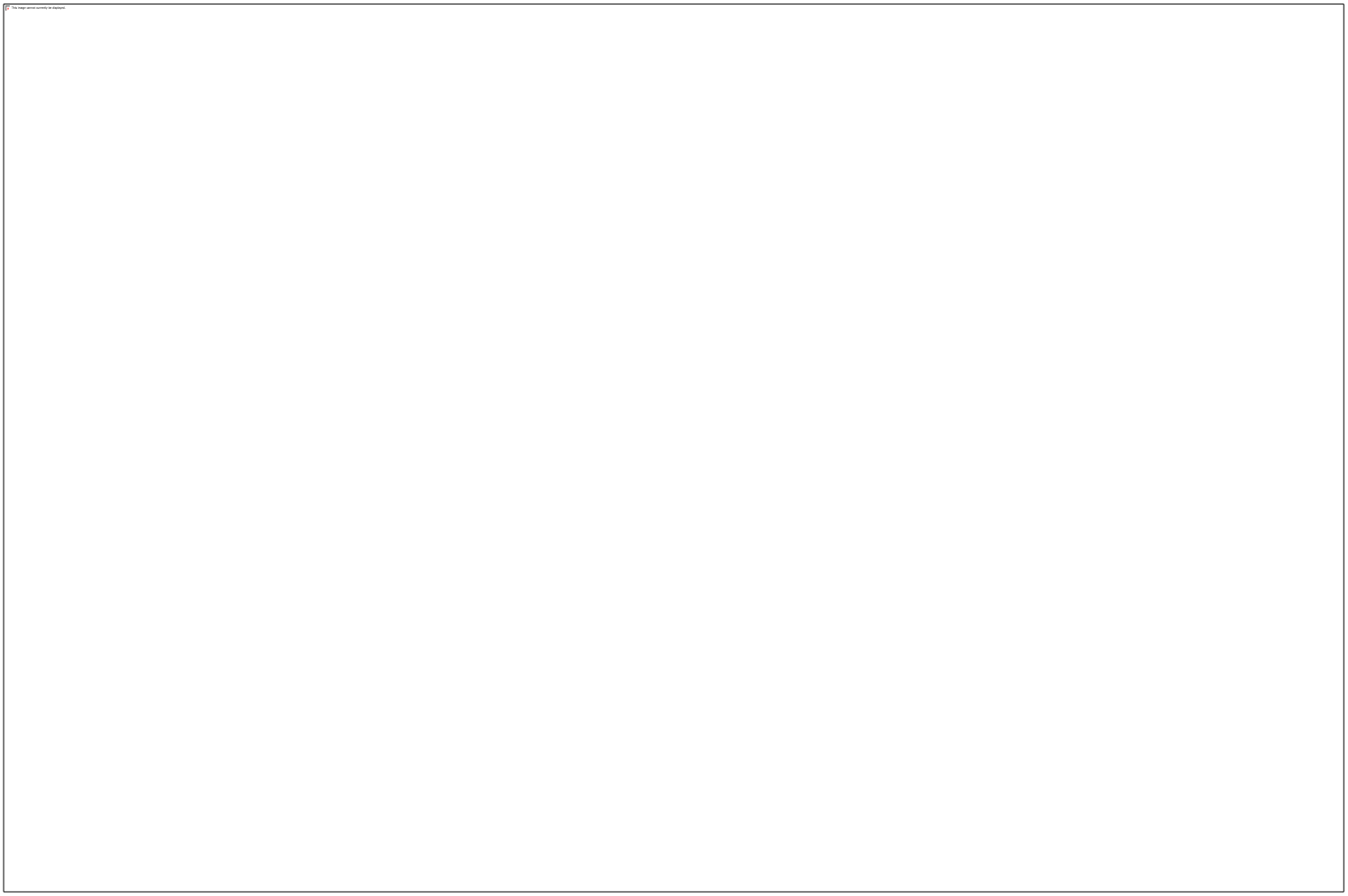
Stage 6: Finishing

1. Inspect the fabric.

2. Correct minor defects where possible.
3. Cure the print according to the ink manufacturer's instructions.
4. Clean the equipment.
5. Store reusable materials appropriately.

Stage 7: Presentation and appraisal

1. Display the finished fabric.
2. Explain the source of inspiration.
3. Describe the motif design.
4. Explain the printing procedure.
5. Discuss challenges encountered.
6. Receive feedback from classmates.
7. Reflect on improvements.



18.0 PRACTICAL PROJECT: PRODUCING A FABRIC DESIGN USING PHOTO-EMULSION BLOCK-OUT SCREEN

Project title

Producing a Detailed Floral Motif on Fabric Using Photo-Emulsion Screen Printing

Learning objective

The learner should be able to prepare a block-out screen using photo emulsion and print a motif on fabric.

Procedure

Stage 1: Digital artwork

1. Identify an appropriate source of inspiration.
2. Develop a floral or geometric motif digitally.
3. Refine the positive and negative spaces.
4. Prepare a high-contrast design.
5. Print the artwork onto suitable transparent film.

Stage 2: Screen preparation

1. Clean the screen mesh.
2. Dry the screen.
3. Prepare the photo emulsion according to the manufacturer's instructions.
4. Coat the mesh evenly.
5. Dry the screen in a dark environment.

Stage 3: Exposure

1. Place the positive film against the coated screen.
2. Position the screen in the exposure unit.
3. Expose it using the specified settings.
4. Remove the positive film.
5. Wash the screen gently.
6. Remove the unexposed emulsion.
7. Dry the screen.
8. Block unwanted pinholes.

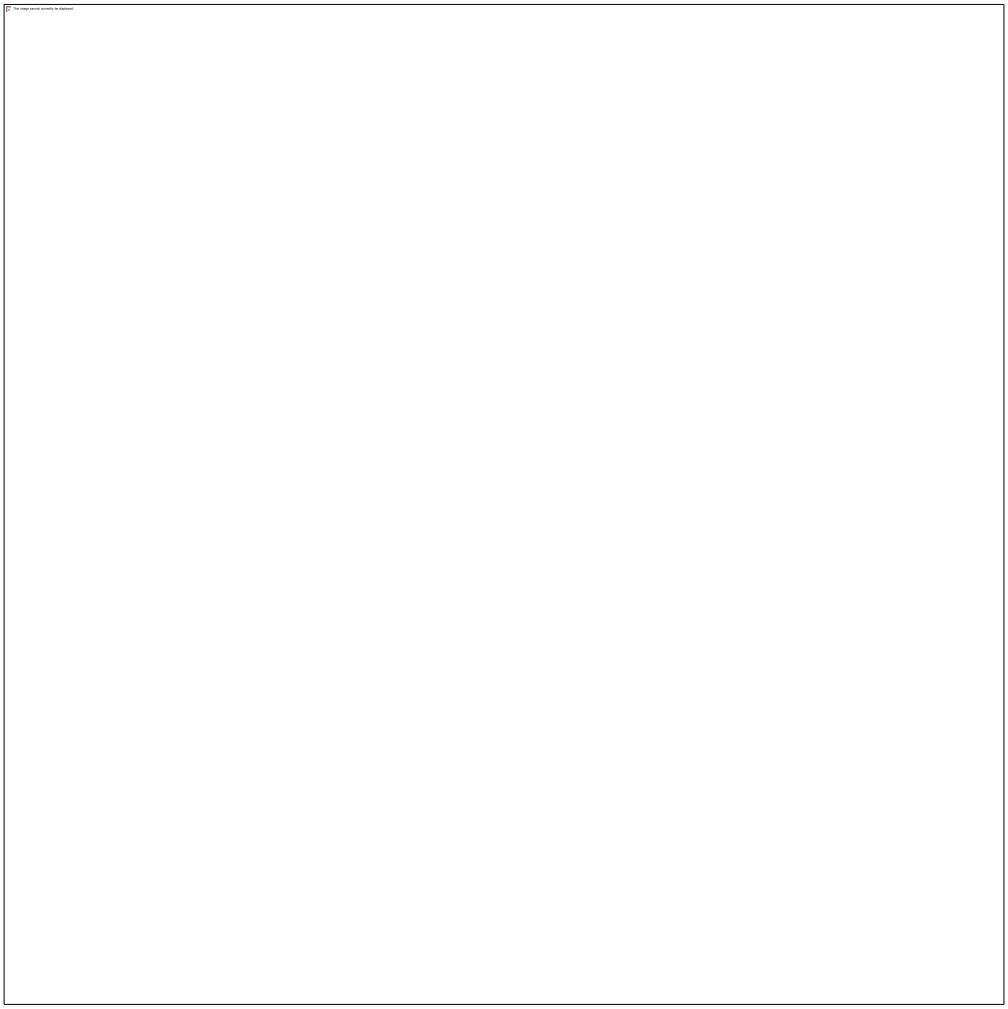
Stage 4: Printing

1. Prepare the fabric.
2. Position the screen.
3. Apply the selected textile ink.
4. Use the squeegee to transfer ink.
5. Lift the screen carefully.
6. Inspect the print.
7. Dry or cure the printed fabric as required.

Stage 5: Evaluation

1. Assess the clarity of the motif.
2. Examine the colour application.

3. Check the printing accuracy.
4. Identify production challenges.
5. Present the completed fabric.



REVISION QUESTIONS

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer all questions. Choose the correct answer from the alternatives A, B, C and D.

1. What is screen printing?

A. A technique of weaving threads to produce patterns.
B. A technique of transferring ink onto a surface through selected open areas of a mesh screen.
C. A method of carving patterns into wood.
D. A process of dyeing fabric by tying knots.

2. The alternative name for screen printing as an artistic printing technique is:

A. Engraving
B. Serigraphy
C. Lithography
D. Etching

3. Which of the following is the main function of a squeegee in screen printing?

A. Cutting stencil material.
B. Stretching the fabric.
C. Forcing printing ink through the open mesh.
D. Drying the printed fabric.

4. Which material is commonly used to make a reusable cut stencil?

A. Concrete
B. Cellophane
C. Stone
D. Cotton wool

5. A motif is best described as:

A. A single decorative unit used to develop a pattern.
B. A tool used to apply ink.
C. A type of printing machine.
D. A material used for washing screens.

6. Which of the following is a natural source of inspiration for motif development?

A. A computer keyboard
B. A plastic chair
C. A butterfly
D. A television

7. Positive space in motif design refers to:

A. The empty area surrounding the design.
B. The area occupied by the main shapes or forms.
C. The colour used to wash a screen.
D. The space outside the fabric.

8. Negative space refers to:

A. The unoccupied areas surrounding or between design elements.
B. The printed colour of the motif.
C. The ink stored in a container.
D. The material used to construct a screen frame.

9. What is the main purpose of bridges in stencil design?

A. To increase the size of the screen.
B. To connect stencil sections and prevent isolated parts from falling out.
C. To increase the brightness of colours.
D. To dry the printing ink.

10. An island in stencil design refers to:

A. A separate piece of fabric.
B. An isolated area of stencil material surrounded by cut-out sections.
C. A printing tool.
D. A type of printing ink.

11. Which design principle is created through the repetition of motifs?

A. Rhythm
B. Texture
C. Exposure
D. Perspective

12. Which of the following best describes an alternate repeat pattern?

A. A pattern in which motifs are arranged randomly.
B. A pattern in which two or more motifs are repeated in an alternating sequence.
C. A pattern in which only one motif appears once.
D. A pattern with no repetition.

13. Which software application can be used to create vector motifs?

A. Calculator
B. Inkscape
C. Media player
D. File manager

14. What is computer-aided motif generation?

A. Using digital devices and software to develop and prepare decorative motifs.
B. Using a sewing machine to join fabrics.
C. Washing a printed fabric.
D. Cutting a wooden block.

15. Which of the following is the main function of a screen frame?

A. To hold the mesh in position.
B. To dry the printing ink.
C. To cut the fabric.
D. To store the finished product.

16. Which material is commonly used as the mesh in modern screen printing?

A. Polyester
B. Leather
C. Glass
D. Cardboard

17. What is photo emulsion?

A. A type of fabric dye.
B. A light-sensitive coating used to create a printing image on a screen.
C. A type of squeegee.
D. A fabric cleaning agent.

18. What is the main function of transparent film in photo-emulsion screen printing?

A. To provide a padded printing surface.
B. To carry the positive artwork during screen exposure.
C. To dry the printed fabric.
D. To clean the screen mesh.

19. During photo-emulsion exposure, which areas of the positive film block light?

A. Transparent areas
B. Opaque areas
C. Wet areas
D. Coloured fabric areas

20. What happens to unexposed emulsion during the normal photo-emulsion washout process?

A. It hardens permanently.
B. It is washed away to create open printing areas.
C. It becomes printing ink.
D. It changes into fabric.

21. What is the main function of a block-out substance?

A. To allow ink to pass through all sections.
B. To prevent ink from passing through selected areas of the screen.
C. To increase the size of the motif.
D. To remove the fabric colour.

22. Which of the following is important when preparing fabric for screen printing?

A. Making it wet and creased.
B. Keeping it dirty.
C. Cleaning, drying and removing unwanted wrinkles.
D. Cutting it into small pieces.

23. Which printing tool is used to apply pressure when transferring ink through the screen?

A. Compass
B. Squeegee
C. Ruler
D. Palette knife

24. What is registration in multicolour screen printing?

A. Cleaning the screen after printing.
B. Accurate alignment of different colours or design layers.
C. Drying the printed fabric.
D. Cutting stencil material.

25. Which of the following is an example of a water-based textile printing medium?

A. Water-based textile ink
B. Cement
C. Engine oil
D. Charcoal

26. Which of the following helps to improve printing accuracy?

A. Moving the fabric during printing.
B. Applying irregular squeegee pressure.
C. Securing the fabric and aligning the screen correctly.
D. Using a damaged stencil.

27. What is the importance of quality control in screen printing?

A. To increase the number of defects.
B. To ensure the finished fabric meets the required standards.
C. To make the fabric dirty.
D. To reduce the clarity of motifs.

28. Which of the following is an appropriate environmental practice in screen printing?

A. Pouring chemicals into rivers.
B. Discarding all reusable stencil materials.
C. Reusing suitable materials and minimising ink wastage.
D. Washing all printing chemicals into drains.

29. A learner wants to print a flower motif with a clear central opening. Which design consideration is particularly important?

A. Positive and negative space.
B. Fabric weight only.
C. Screen frame colour.
D. Squeegee length only.

30. Which of the following is an appropriate way of appraising another learner's decorated fabric?

A. Ignoring the design.
B. Criticising the learner personally.
C. Identifying strengths and suggesting improvements respectfully.
D. Copying the design without acknowledgement.

SECTION B: STRUCTURED QUESTIONS (50 MARKS)

Instructions: Answer all questions. The marks allocated to each question are indicated in brackets.

1. Introduction to Screen Printing (8 marks)

a) Define the term screen printing. (2 marks)

b) State four applications of screen printing in the Kenyan textile and fashion industry. (4 marks)

c) Identify two materials used in constructing a screen printing frame and mesh. (2 marks)

2. Motif Generation and Design Principles (8 marks)

a) Define the term motif as used in fabric decoration. (2 marks)

b) Explain three sources of inspiration for developing fabric motifs. (3 marks)

c) Differentiate between positive space and negative space in motif design. (2 marks)

d) State one importance of rhythm in fabric pattern design. (1 mark)

3. Computer-Aided Motif Generation (8 marks)

a) Explain the meaning of computer-aided motif generation. (2 marks)

b) Identify three software applications that can be used to generate digital motifs. (3 marks)

c) Explain three advantages of using digital technology in motif development. (3 marks)

4. Cut-Stencil Screen Printing (8 marks)

a) Define the term stencil. (2 marks)

b) Explain three steps involved in preparing a cut stencil for fabric printing. (3 marks)

c) State three factors to consider when printing an alternate repeat pattern on fabric. (3 marks)

5. Photo-Emulsion Block-out Screen Printing (9 marks)

a) Define the term photo emulsion. (2 marks)

b) Explain four stages involved in preparing a photo-emulsion screen for printing. (4 marks)

c) State three functions of transparent film in photo-emulsion screen printing. (3 marks)

6. Fabric Printing, Appraisal and Safety (9 marks)

a) Explain three factors that determine the quality of a screen-printed fabric. (3 marks)

b) State three aspects to consider when appraising a decorated fabric. (3 marks)

c) Explain three safety precautions to observe when carrying out screen printing. (3 marks)

Total: 50 marks

ANSWER GUIDE AND MARKING SCHEME

SECTION A: MULTIPLE-CHOICE ANSWERS

No.	Answer	No.	Answer
1	B	16	A
2	B	17	B
3	C	18	B
4	B	19	B
5	A	20	B
6	C	21	B
7	B	22	C
8	A	23	B
9	B	24	B
10	B	25	A
11	A	26	C
12	B	27	B
13	B	28	C
14	A	29	A
15	A	30	C

SECTION B: SUGGESTED MARKING SCHEME

1. Introduction to Screen Printing (8 marks)

a) Screen printing is a fabric decoration technique in which ink is transferred onto fabric through selected open areas of a mesh screen using a squeegee. (2)

b)

- Printing T-shirts.
- Decorating dresses and shirts.

- Printing school uniforms.
- Producing branded shopping bags.
- Printing curtains and tablecloths.
- Producing promotional merchandise.
- Decorating kitenge fabrics.
- Printing sportswear.

(Any 4 × 1 = 4)

c)

- Frame: wood or aluminium.
- Mesh: polyester or other suitable fine mesh material.

(2 × 1 = 2)

2. Motif Generation and Design Principles (8 marks)

a) A motif is a single decorative unit or visual element used as the basis of a larger pattern or design. (2)

b)

- Nature: inspiration from flowers, leaves, animals and other natural forms.
- Culture: inspiration from beadwork, basketry, pottery and traditional ornaments.
- Geometry: inspiration from circles, squares, triangles and other geometric shapes.
- Human-made objects: inspiration from vehicles, tools and buildings.
- Imagination: creative ideas developed without direct observation.

(Any 3 × 1 = 3)

c)

- Positive space is the area occupied by the main shapes or forms in a design.
- Negative space is the empty area surrounding or between the main shapes.

(2)

d)

- Creates visual movement and interest.
- Promotes unity.
- Prevents monotony.

(Any 1 × 1 = 1)

3. Computer-Aided Motif Generation (8 marks)

a) The use of digital devices and graphic design software to create, modify and prepare decorative motifs for printing. (2)

b)

- CorelDRAW.
- Adobe Illustrator.

- Inkscape.
- GIMP.
- Adobe Photoshop.

(Any 3 × 1 = 3)

c)

- Enables accurate drawing.
- Makes editing easier.
- Allows duplication of motifs.
- Facilitates repeat pattern creation.
- Allows colour experimentation.
- Makes resizing and rotation easier.
- Enables storage and retrieval of designs.
- Improves consistency.

(Any 3 × 1 = 3)

4. Cut-Stencil Screen Printing (8 marks)

a) A stencil is a sheet of material containing cut-out shapes or designs through which ink or paint can be applied onto a surface. (2)

b)

- Develop the motif digitally or manually.
- Transfer the motif onto stencil material.
- Identify positive and negative spaces.
- Cut the required sections carefully.
- Inspect the stencil.
- Ensure bridges support isolated sections.
- Attach the stencil to the mesh screen.

(Any 3 × 1 = 3)

c)

- Correct spacing between motifs.
- Accurate screen positioning.
- Consistent squeegee pressure.
- Suitable ink selection.
- Proper fabric preparation.
- Correct arrangement of alternating motifs.
- Proper drying.

(Any 3 × 1 = 3)

5. Photo-Emulsion Block-out Screen Printing (9 marks)

a) Photo emulsion is a light-sensitive coating applied to a screen mesh to enable the transfer of a design through photographic exposure. (2)

b)

- Clean the screen to remove dirt and grease.
- Apply an even coating of photo emulsion.
- Dry the coated screen in a dark environment.
- Position the positive film against the screen.
- Expose the screen to an appropriate light source.
- Wash out the unexposed emulsion.
- Dry and inspect the screen.
- Block unwanted pinholes.

(Any 4 × 1 = 4)

c)

- Carries the positive artwork.
- Blocks light through opaque design areas.
- Allows light through transparent areas.
- Helps transfer the design accurately.
- Supports reproduction of detailed motifs.

(Any 3 × 1 = 3)

6. Fabric Printing, Appraisal and Safety (9 marks)

a)

- Screen quality – a properly prepared mesh allows controlled ink transfer.
- Stencil quality – clear stencil openings produce accurate designs.
- Ink quality – suitable ink produces good colour and adhesion.
- Squeegee pressure – even pressure produces uniform printing.
- Fabric preparation – clean and smooth fabric improves printing.
- Registration – correct alignment prevents design errors.
- Drying and curing – correct processing improves durability.

(Any 3 × 1 = 3)

b)

- Motif clarity and originality.
- Pattern arrangement and spacing.
- Colour harmony.
- Printing accuracy.

- Ink application.
- Technical execution.
- Creativity and cultural relevance.

(Any 3 × 1 = 3)

c)

- Wear protective gloves when handling chemicals.
- Work in a well-ventilated area.
- Handle sharp cutting tools carefully.
- Avoid direct exposure to intense UV light.
- Keep electrical equipment away from water.
- Follow the manufacturer's chemical safety instructions.
- Wear appropriate protective clothing.

(Any 3 × 1 = 3)

24.0 SUMMARY OF THE SUB-STRAND

The Grade 11 learner should understand and demonstrate the following:

Area	**Expected knowledge and skills**
Screen printing	Explain the meaning and importance of serigraphy.
Motif design	Identify sources of inspiration and develop original motifs.
Design principles	Apply positive and negative space, rhythm and movement.
Computer-aided design	Generate and edit digital motifs.
Stencil preparation	Transfer and cut stencil designs safely.
Alternate repeat	Produce repeated patterns using stencil screens.
Block-out screens	Prepare screens using photo emulsion.
Printing process	Apply ink using a squeegee.
Quality control	Inspect and improve decorated fabrics.
Appreciation	Appraise own and others' printed fabrics.

25.0 FINAL CBE PRACTICAL ASSESSMENT EXPECTATION

By the end of Sub-Strand 2.3, every learner should produce evidence of the following practical competencies:

1. Research screen printing practices locally and globally.
2. Identify appropriate sources of inspiration for motif development.
3. Generate an original digital motif.
4. Demonstrate positive and negative space.
5. Apply rhythm and movement in pattern arrangement.
6. Demonstrate bridges and islands in stencil preparation.
7. Print an alternate repeat pattern using a cut-stencil screen.
8. Prepare a block-out screen using photo emulsion.
9. Print a decorative motif on fabric using the prepared screen.
10. Present and appraise the finished fabric.

Expected learner products:

- Digital motif artwork.
- Printed stencil design.
- Prepared cut-stencil screen.
- Alternate repeat printed fabric.
- Photo-emulsion block-out screen.
- Photo-emulsion printed fabric.
- Documentation of the production process.
- Self-assessment and peer-appraisal records.

STRAND 2.0: MULTIMEDIA

SUB-STRAND 2.4: FABRIC ARTS – DECORATION

1.0 Introduction to Fabric Arts and Decoration

1.1 Meaning of fabric arts

Fabric arts refer to creative activities that involve designing, decorating, manipulating or constructing textiles to produce useful and attractive products.

A fabric is a flexible material made by weaving, knitting, bonding or other processes using natural or synthetic fibres.

Examples of fabrics include:

- Cotton fabric.
- Linen.
- Silk.
- Wool.
- Polyester.
- Denim.
- Calico.
- Canvas.
- Kitenge and other printed cotton fabrics.

1.2 Meaning of fabric decoration

Fabric decoration is the process of improving the appearance of a fabric by applying patterns, images, colours, textures and other decorative features.

Fabric decoration can be done before or after a fabric is made into a finished product.

Examples of fabric decoration techniques:

1. Block printing.
2. Screen printing.
3. Tie-dyeing.
4. Batik.
5. Embroidery.
6. Appliqué.
7. Fabric painting.
8. Stencilling.
9. Digital textile printing.
10. Resist dyeing.





1.3 Importance of fabric decoration

Fabric decoration is important because it:

1. **Improves appearance:** It makes plain fabrics attractive through the use of colours, motifs and patterns.
2. **Expresses cultural identity:** Patterns may communicate cultural beliefs, traditions, ceremonies and community identity.
3. **Creates employment:** Fabric decorators can earn income by producing decorated fabrics for sale.
4. **Promotes fashion:** Decorated fabrics are used to make fashionable clothes, bags, scarves and accessories.

5. **Supports the creative industry:** It provides opportunities for artists, designers, tailors and textile manufacturers.
6. **Preserves cultural heritage:** Traditional motifs and decorative styles can be passed from one generation to another.
7. **Encourages innovation:** Artists experiment with different materials, tools, colours and printing techniques.
8. **Promotes entrepreneurship:** Learners can establish small businesses producing printed fabrics and textile products.

Kenyan examples of applications:

- Printing kitenge-inspired fabrics for clothing.
- Decorating cotton material for school bags.
- Producing printed tablecloths and curtains.
- Making branded T-shirts and uniforms.
- Producing decorative fabrics for cultural festivals.
- Printing fabric for cushion covers and household decorations.

2.0 Understanding Relief Block Printing

2.1 Meaning of block printing

Block printing is a fabric decoration technique in which a carved or prepared block is coated with printing ink or dye and pressed onto a fabric to transfer a design.

The block carries a raised design that transfers colour onto the surface of the fabric.

Block printing can be done by hand or with the assistance of mechanical equipment.

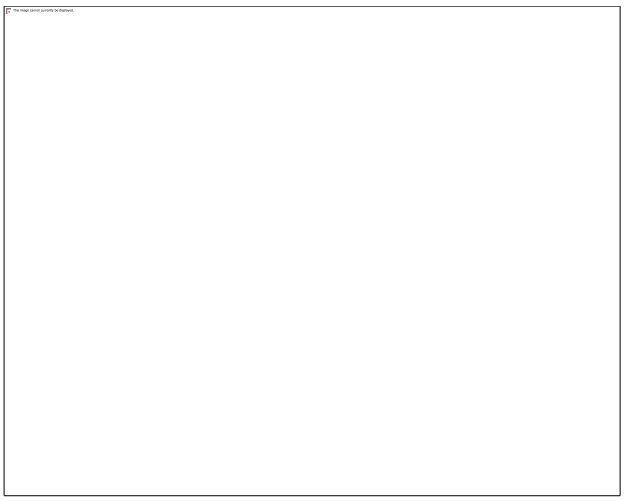
2.2 Meaning of relief block printing

Relief block printing is a printing technique in which the raised areas of a carved block receive and transfer ink onto a surface, while the recessed or cut-away areas do not print.

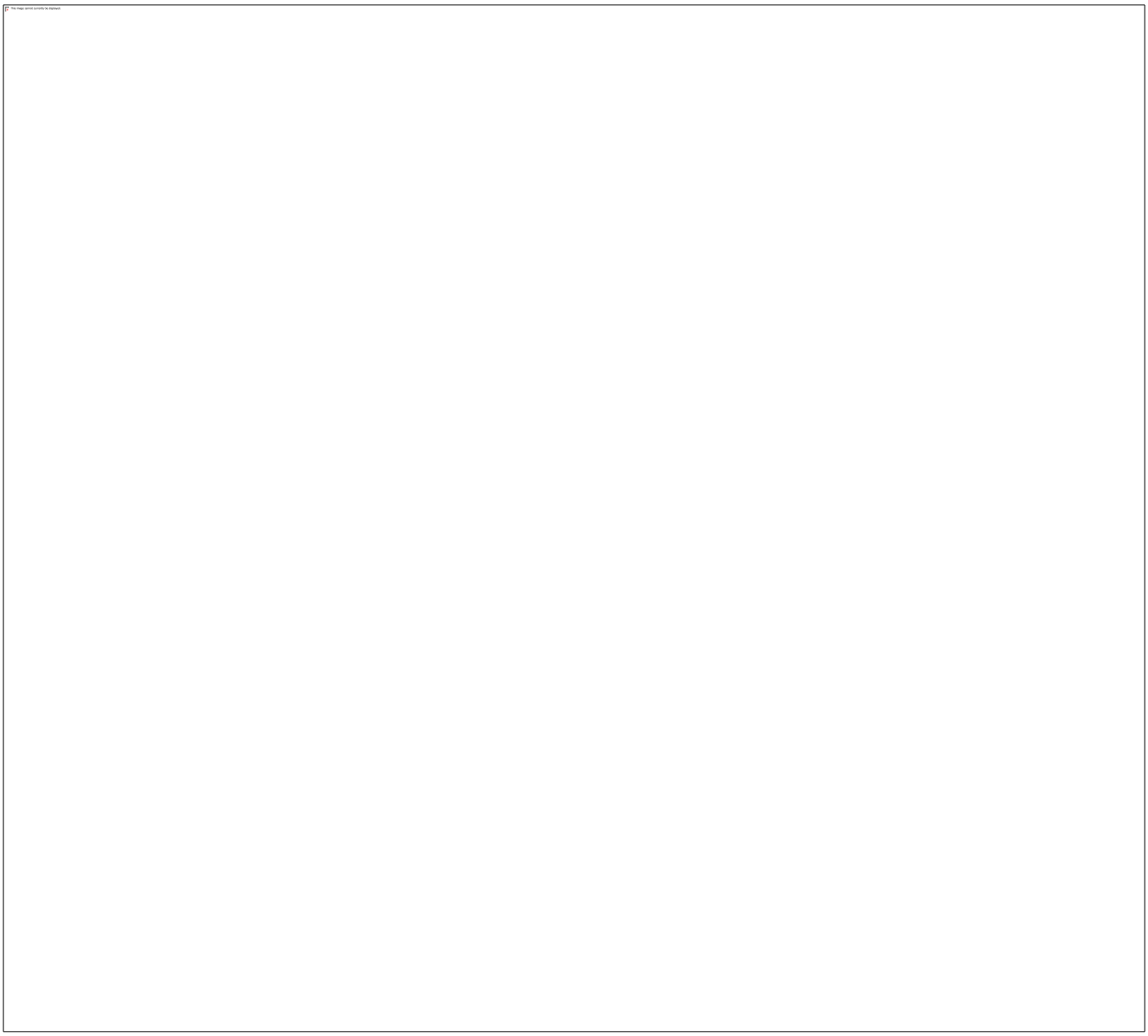
The design is created by removing unwanted areas from the surface of a block, leaving the required image raised.

Key principle: The raised surfaces print; the carved-out surfaces remain unprinted.

For example, when carving a flower design on a linoleum block, the artist removes the background around the flower. The raised flower receives ink and transfers its image onto the fabric.







2.3 Other names for relief block printing

Relief block printing may also be referred to as:

- Relief printing.
- Block printing.
- Hand block printing.
- Linocut printing when a linoleum block is used.
- Woodblock printing when a wooden block is used.

2.4 Characteristics of relief block printing

1. It uses a raised printing surface.
2. The unwanted areas are cut or carved away.
3. The raised areas receive ink.
4. The design is transferred by pressing the block onto a surface.
5. The same block can be used to produce repeated impressions.
6. It can be used to print patterns on fabrics, paper and other suitable surfaces.
7. It can produce simple or complex decorative designs.
8. It can be used to create single-colour or multi-colour compositions.
9. It requires careful control of pressure and ink application.
10. It can be done using handmade or commercially prepared blocks.

2.5 How relief block printing works

The process involves the following stages:

1. **Designing:** The artist creates a motif or composition to be printed.
2. **Transferring:** The design is transferred onto the block.
3. **Carving:** Unwanted areas are removed using appropriate cutting tools.
4. **Inking:** Ink is applied to the raised areas using a roller.
5. **Positioning:** The block is carefully placed on the fabric.
6. **Printing:** Pressure is applied to transfer the ink.
7. **Lifting:** The block is lifted carefully to reveal the printed image.
8. **Repeating:** The process is repeated to create a pattern or composition.
9. **Drying:** The printed fabric is allowed to dry and, where necessary, cured according to the ink manufacturer's instructions.

3.0 Materials, Tools and Equipment Used in Relief Block Printing

Relief block printing requires materials and equipment for designing, carving, inking, printing and finishing the fabric.

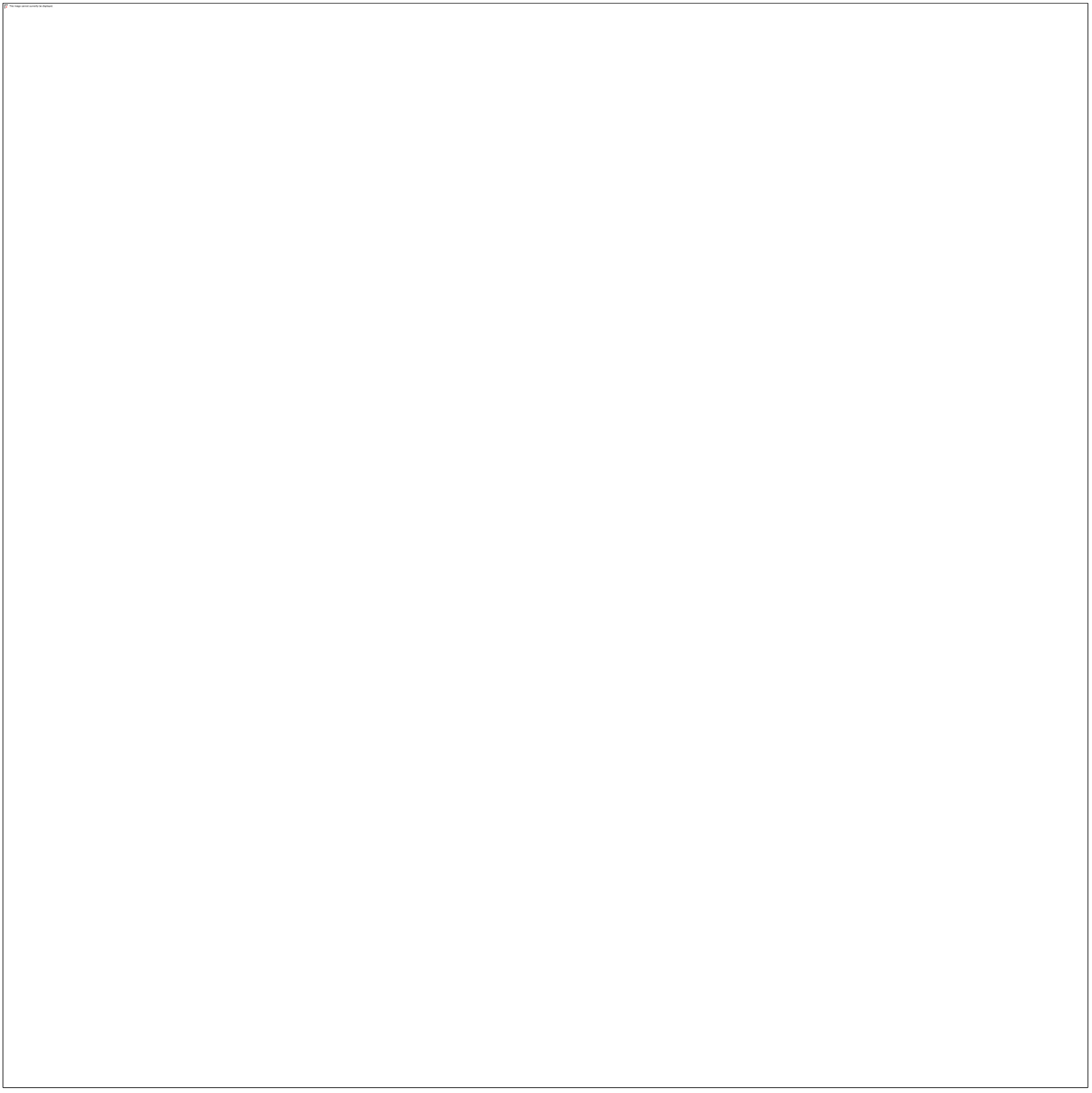
3.1 Printing blocks

A printing block is a material on which a design is drawn and carved to create raised printing surfaces.

The raised parts transfer ink onto the fabric.

Materials used to make printing blocks

a) Wood



Wood is a traditional material used for making printing blocks.

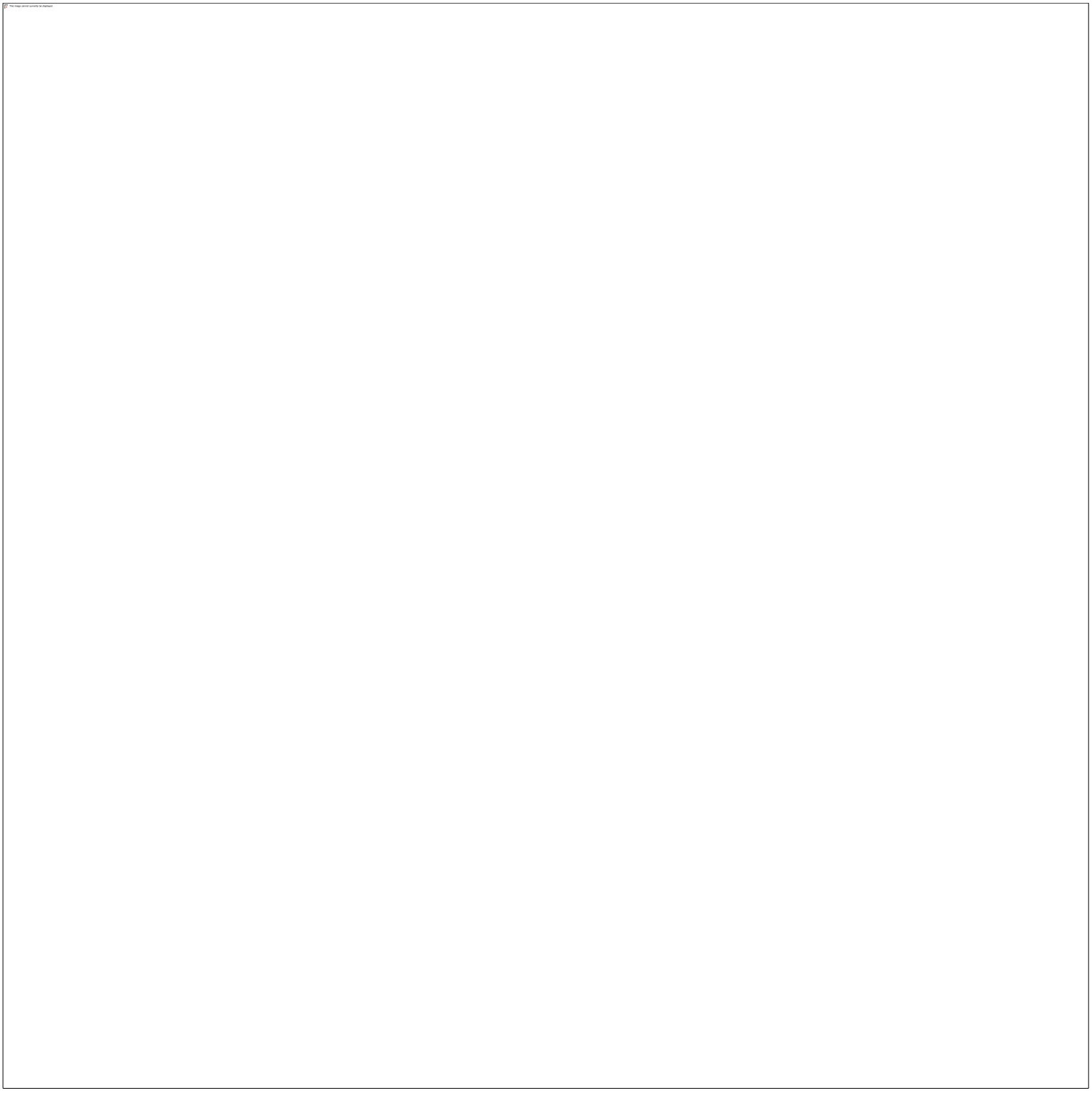
Characteristics:

- It is firm and durable.
- It can hold detailed carved designs.
- It can be reused many times.
- It is suitable for repeated printing.
- It requires appropriate cutting tools.

- Hard, close-grained wood is generally preferred because it holds detail better than soft, splintering wood.

Examples include suitable hardwoods such as maple and other close-grained timber.

b) Linoleum



Linoleum is a firm, relatively smooth material commonly used for relief printing.

Characteristics:

- It is easier to carve than many types of wood.
- It provides a relatively even printing surface.
- It can hold clear lines and shapes.

- It is suitable for detailed motifs.
- It is available in sheets of different thicknesses.

c) Soft carving blocks

These are specially manufactured materials designed for carving and printing.

Characteristics:

- They are easy to cut.
- They are suitable for beginners.
- They allow learners to experiment with different shapes.
- They may wear out more quickly than hard wood or lino.

d) Recycled materials

Some firm and suitable recycled materials may be used to create simple relief printing stamps.

Examples:

- Firm packaging foam.
- Thick card used for experimental textured stamps.
- Suitable recycled rubber.
- Corrugated cardboard edges for simple texture printing.

Note: Recycled materials should be selected carefully. They must be strong enough to withstand printing pressure and should not release harmful substances into the ink or fabric.

3.2 Tools used for carving blocks

a) Lino cutters

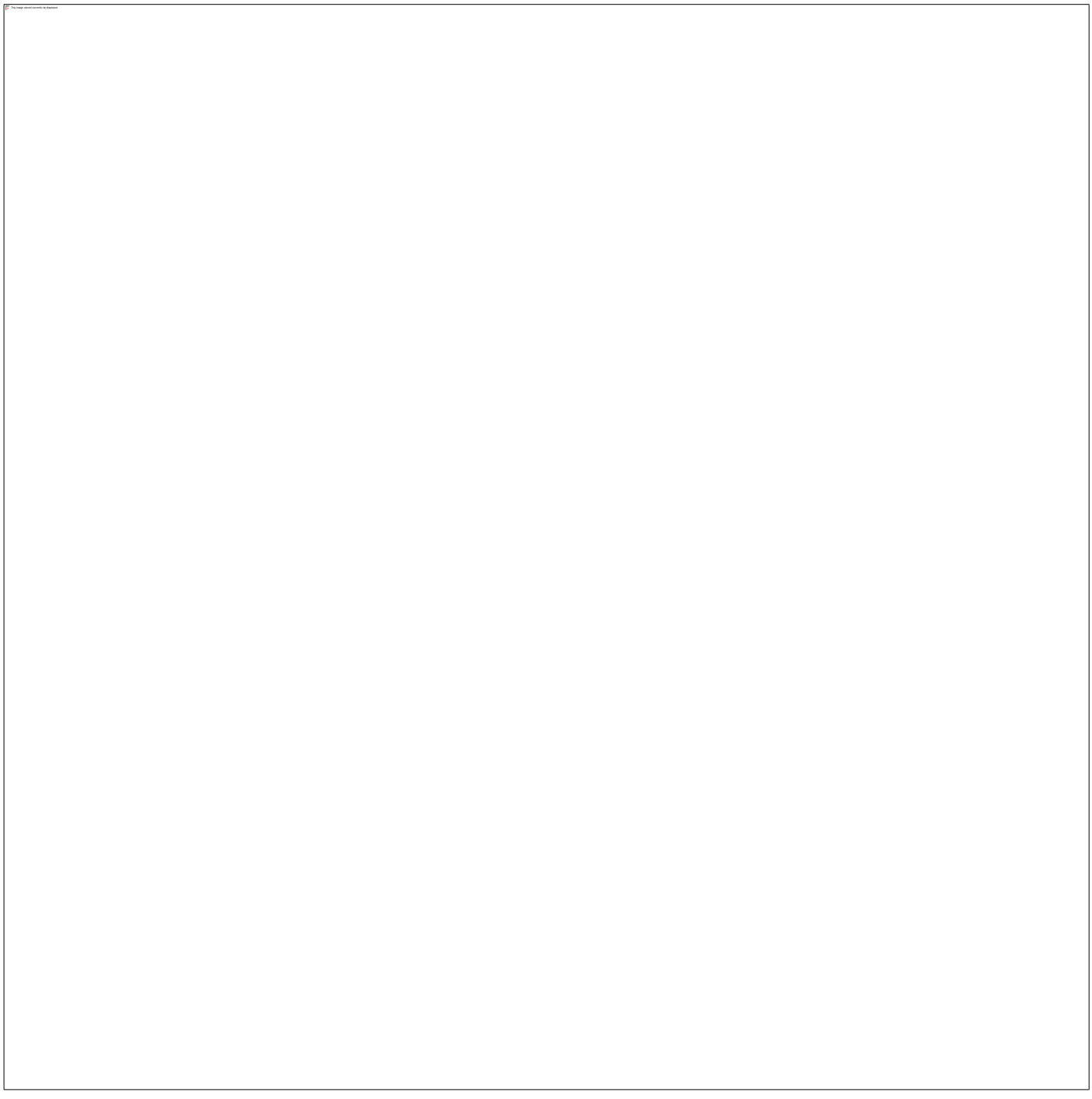


Lino cutters are specialised tools used to remove unwanted areas from linoleum and other suitable carving materials.

Types of lino cutter blades include:

1. V-shaped cutter – produces narrow lines and sharp grooves.
2. U-shaped cutter – removes wider areas and creates curved grooves.
3. Small gouge – removes narrow sections of material.
4. Large gouge – removes wider sections of material.
5. Straight-edged cutter – helps remove material in controlled straight cuts, where the tool design allows.

b) Wood carving tools



These tools are used to carve designs on wooden blocks.

Examples:

- Chisels.
- Gouges.
- V-tools.
- U-tools.
- Small carving knives.

c) Craft knife

A craft knife may be used for cutting suitable soft block materials and preparing certain design elements.

d) Pencil and eraser

Used to draw and correct the design before carving.

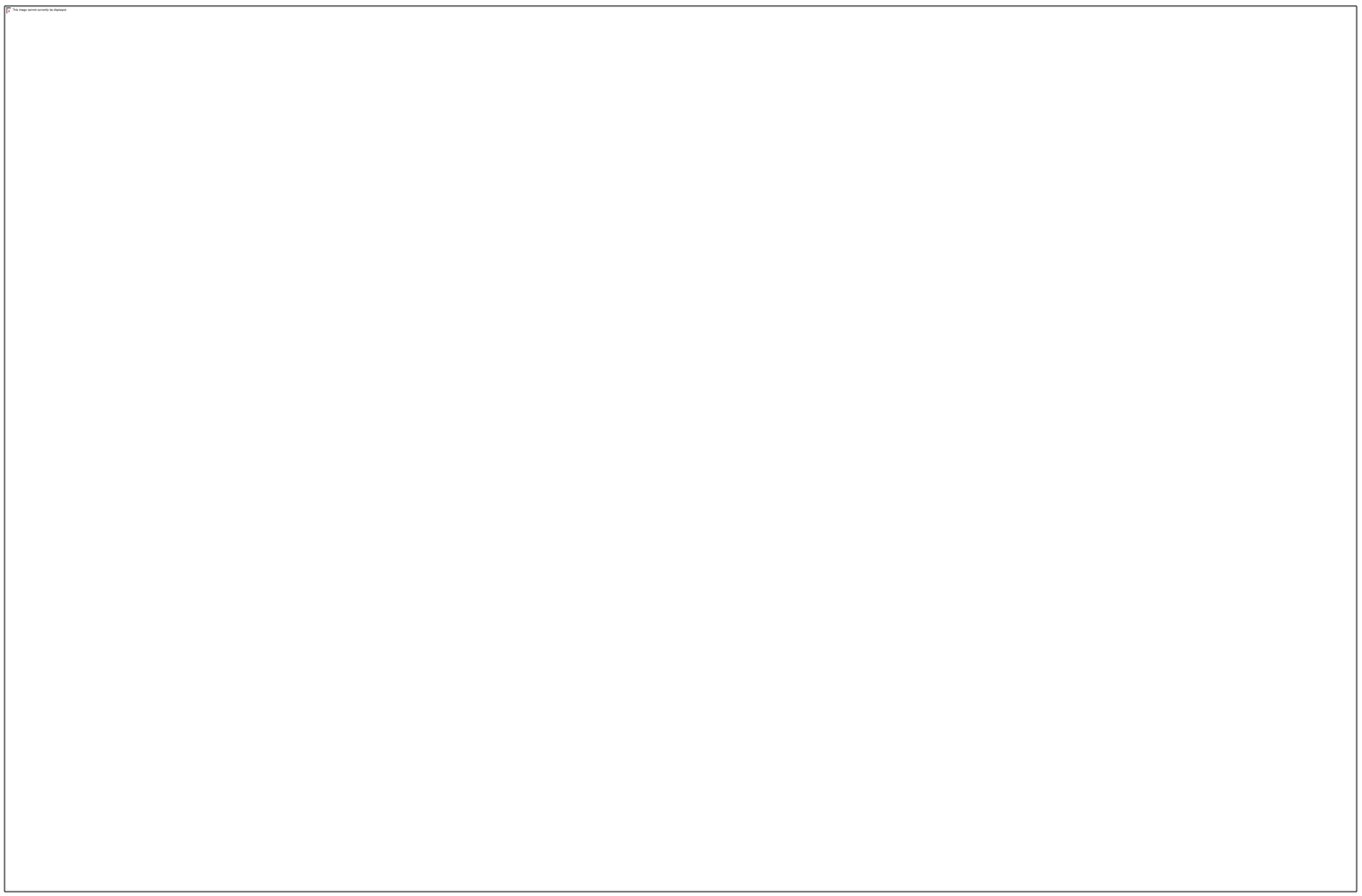
e) Ruler and set square

Used to measure and create accurate shapes, borders and repeat patterns.

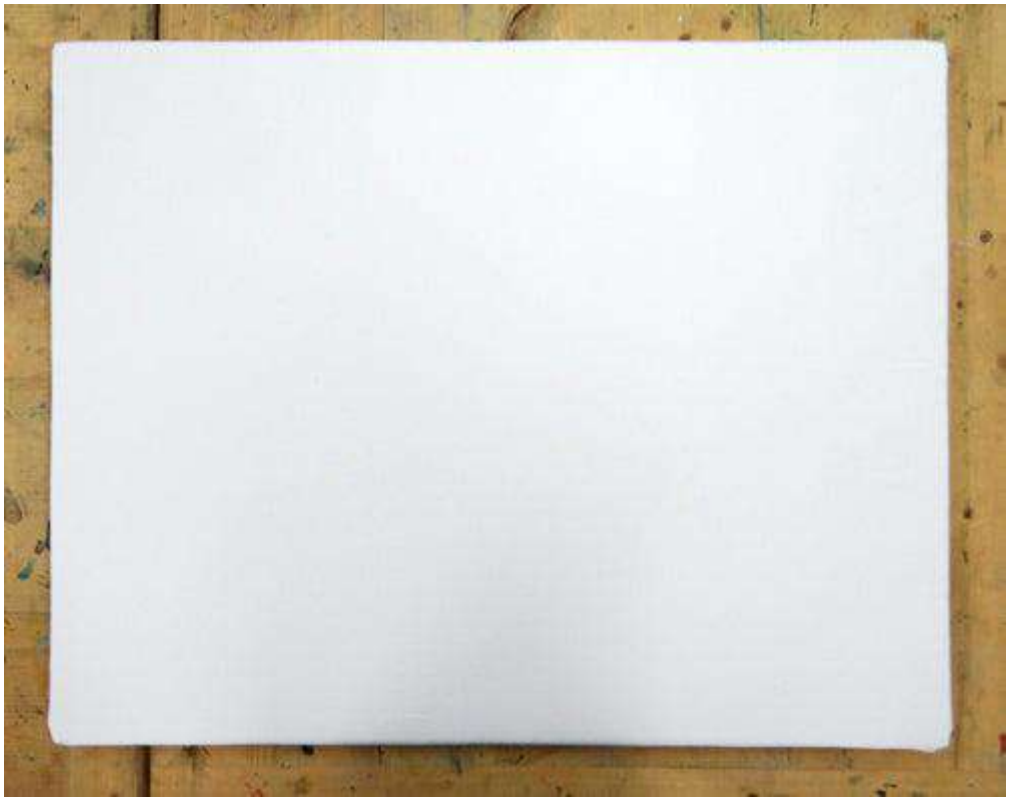
f) Cutting mat

Provides a protective surface during carving and cutting activities.

3.3 Other materials and equipment




ESSDEE
R5S
INK ROLLER BRAYER
SOFT RUBBER 150MM • 6"
FARBWALZE
ROULEAU ENCREUR
RODILLO DE TINTA
MACHINE-GROUND EPDM RUBBER ROLLER
PERFECT FOR PRINTMAKING, SCRAPBOOKING, STAMPING, LAMINATING AND GLUING.
Perfekt für: Druckgrafik, Scrapbooking, Stempeln, Laminieren und Kleben
Idéal pour: l'estampage, le scrapbooking, la tampographie, le laminage et le collage.
Perfecta para: grabados, libros de recortes, estampados, laminados, encolados.



Material or equipment	Function
Printing ink	Transfers colour onto the fabric
Fabric dye or textile printing colour	Provides colour suitable for textile decoration
Roller or brayer	Spreads ink evenly on the raised block surface
Fabric	Receives the printed design
Padded printing surface	Supports the fabric and helps produce even impressions
Printing tray or slab	Holds and distributes ink during inking
Palette knife	Helps mix and spread printing ink
Masking tape	Holds fabric or registration guides in position
Pencil	Used for drawing motifs
Tracing paper	Used to transfer designs
Carbon paper	Transfers designs onto suitable blocks
Sponge	May be used for controlled application of colour
Apron	Protects clothing
Cleaning cloth	Removes excess ink and cleans equipment
Drying rack or line	Holds printed fabric while drying

3.4 Importance of the padded printing surface

A padded printing surface is a firm but slightly cushioned surface placed beneath the fabric during printing.

It is important because:

1. It provides support to the fabric.
2. It allows the block to make better contact with the fabric.
3. It helps distribute pressure more evenly.
4. It reduces uneven printing.
5. It helps produce clear impressions.
6. It prevents excessive movement of the fabric during printing.

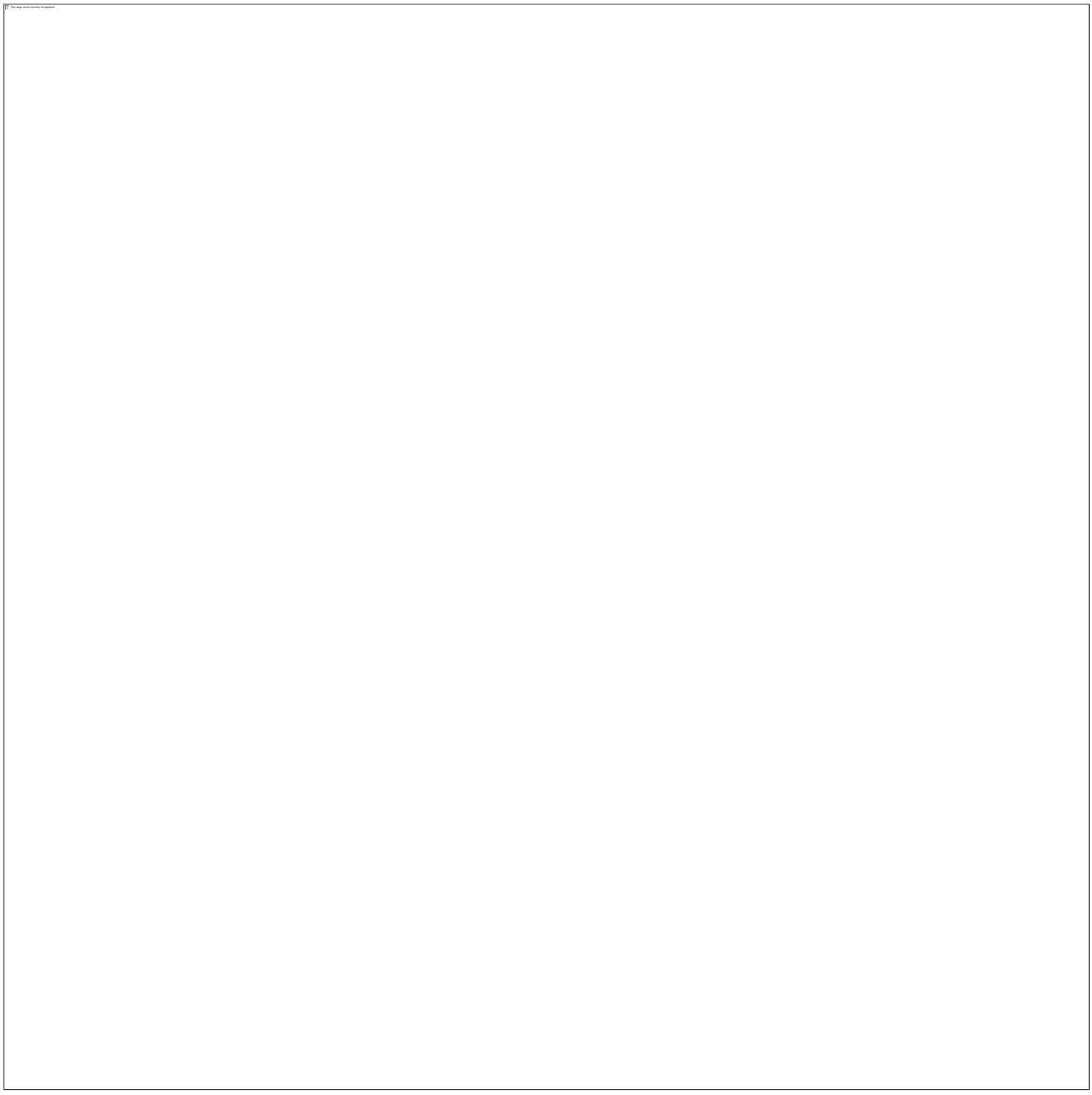
4.0 Designing Motifs for Relief Block Printing

4.1 Meaning of a motif

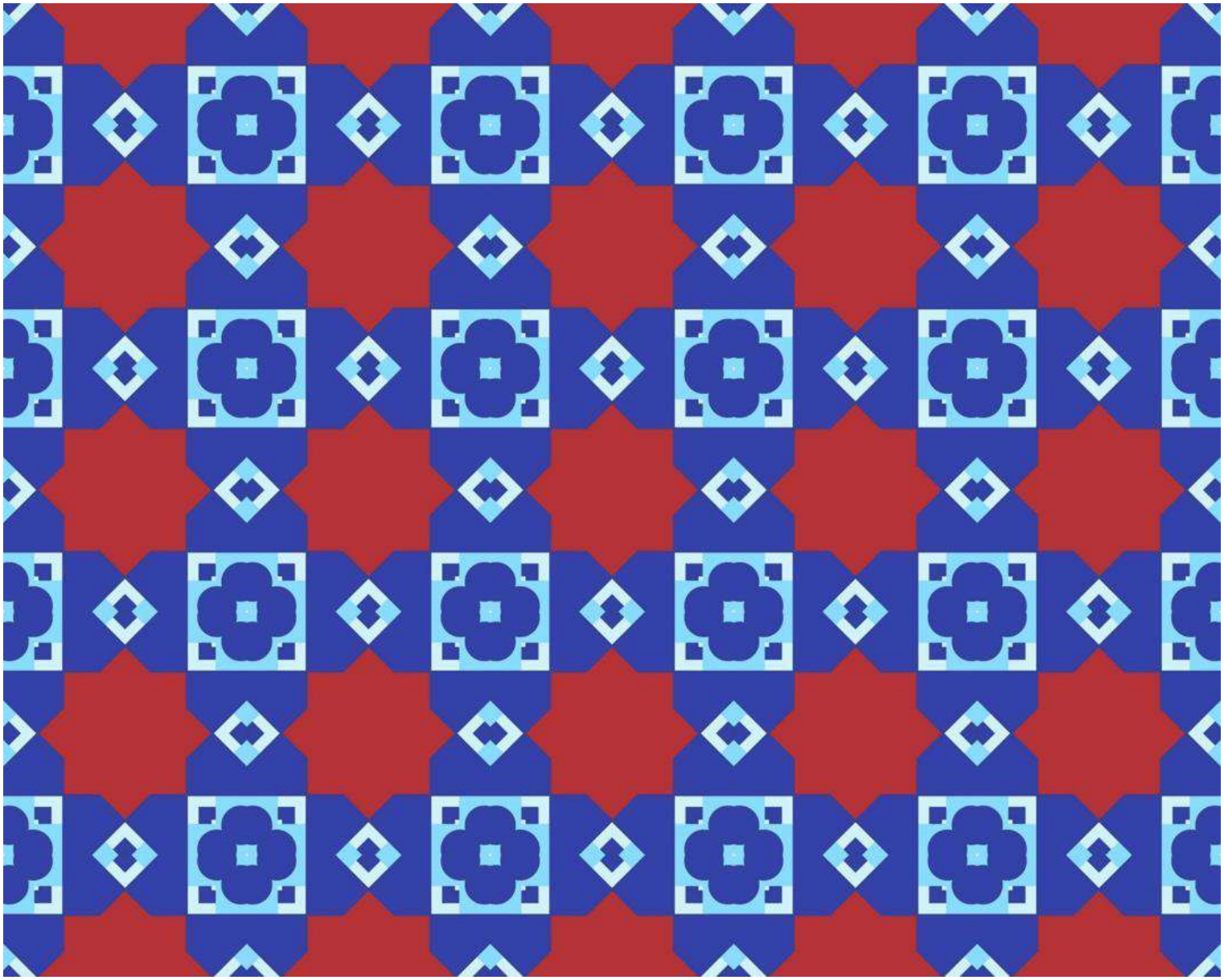
A motif is a decorative unit or visual element that is repeated or used as part of a larger design or composition.

A motif may be a flower, leaf, animal, geometric shape, human figure or symbolic form.

In fabric decoration, motifs are used to create attractive patterns and communicate ideas.




1 2 3 4 5 6 7 8 9 10 11 12
inches 1/8



4.2 Sources of inspiration for motif design

An artist can obtain ideas for motifs from different sources.

a) Nature

Nature provides a wide range of forms, shapes, textures and patterns.

Examples:

- Flowers.
- Leaves.
- Trees.
- Birds.
- Butterflies.
- Fish.
- Insects.
- Clouds.
- Mountains.

- Sun and moon.

Kenyan examples:

- Acacia tree leaves.
- Maasai-inspired beadwork shapes, interpreted respectfully and originally.
- Zebras.
- Giraffes.
- Elephants.
- Birds found in local environments.
- Indigenous flowers and plants.

b) Cultural heritage

Artists may draw inspiration from traditional patterns, artefacts, crafts and cultural objects.

Examples:

- Traditional baskets.
- Beadwork patterns.
- Pottery decoration.
- Traditional house designs.
- Woven mats.
- Cultural clothing.
- Musical instruments.

Artists should research cultural meanings and avoid copying sacred or restricted symbols without permission or understanding.

c) Geometric forms

Geometric motifs are based on mathematical shapes.

Examples:

- Circles.
- Triangles.
- Squares.
- Rectangles.
- Diamonds.
- Zigzags.
- Spirals.
- Lines and dots.

d) Human-made objects

Everyday objects can provide ideas for motif creation.

Examples:

- Buildings.
- Bicycles.
- Tools.
- Household utensils.
- Vehicles.
- Furniture.
- Machines.

e) Imagination and personal experiences

Artists may develop original motifs from:

- Dreams.
- Memories.
- Personal experiences.
- Emotions.
- Stories.
- Social events.
- Community activities.

4.3 Qualities of a good motif for relief block printing

A suitable motif should:

1. Have a clear and recognisable shape.
2. Be suitable for carving.
3. Have a good balance of positive and negative spaces.
4. Avoid excessively thin details that may break during carving.
5. Have enough space between carved sections.
6. Be appropriate for the intended fabric.
7. Have a clear visual focus.
8. Be suitable for the planned printing size.
9. Be capable of producing a clear impression.
10. Communicate the intended idea or message.

4.4 Freehand motifs

A freehand motif is a design drawn directly by hand without relying entirely on mechanical drawing instruments or computer-generated shapes.

Freehand drawing allows an artist to express personal creativity and develop unique designs.

Advantages of freehand motif design

1. It encourages creativity and imagination.
2. It allows personal expression.
3. It develops drawing skills.
4. It produces unique and original designs.
5. It allows quick experimentation.
6. It can capture natural forms more freely.
7. It does not require specialised digital equipment.

Limitations of freehand motif design

1. Some designs may lack accurate symmetry.
2. Repeating the same motif consistently may be difficult.
3. Complex geometric designs may require measuring tools.
4. Corrections may be difficult on certain surfaces.
5. The size and proportion of the motif may vary.

Steps in developing a freehand motif

1. Identify the theme or source of inspiration.
2. Observe the selected object or subject.
3. Make simple sketches.
4. Select the most suitable sketch.
5. Simplify the design into clear shapes.
6. Remove unnecessary details.
7. Identify the areas to remain raised.
8. Identify the areas to be carved away.
9. Refine the design to make it suitable for carving.
10. Transfer the final design onto the block.

Example: A learner may observe a flower in the school garden, sketch it, simplify its petals and leaves, and develop it into a relief printing motif.

5.0 Principles and Elements of Art in Relief Block Printing

A successful relief-printed fabric uses the elements and principles of art and design to create visual interest.

5.1 Elements of art

a) Line

A line is a mark that moves between two points.

Lines can be:

- Straight.
- Curved.
- Horizontal.
- Vertical.
- Diagonal.
- Zigzag.
- Wavy.
- Broken.
- Thick or thin.

Application: Lines may be used to create leaf veins, animal markings, borders and geometric patterns.

b) Shape

A shape is a two-dimensional enclosed area.

Examples:

- Circular shapes.
- Triangular shapes.
- Square shapes.
- Organic shapes.
- Irregular shapes.

Application: Shapes form the main structure of a motif.

c) Form

Form refers to the three-dimensional quality of an object.

Although fabric printing is mainly two-dimensional, shading and overlapping shapes may create an illusion of form.

d) Colour

Colour is the visual effect produced when light is reflected from a surface.

In relief block printing, colour is used to:

- Create contrast.
- Establish harmony.
- Emphasise motifs.
- Communicate mood.
- Separate design areas.
- Create visual interest.

e) Texture

Texture refers to the surface quality of an object.

It may be:

- Actual texture, which can be felt.
- Visual texture, which is suggested through appearance.

Relief blocks can produce textured effects through carved lines, dots and rough surfaces.

f) Space

Space refers to the area occupied by shapes and the area around them.

In relief printing, space is important because the artist must distinguish between the raised printing areas and the recessed non-printing areas.

5.2 Principles of design

a) Balance

Balance refers to the arrangement of visual elements to create a sense of stability.

Types include:

- Symmetrical balance.

- Asymmetrical balance.
- Radial balance.

b) Rhythm

Rhythm is created when visual elements are repeated in an organised manner.

It guides the viewer's eye across the fabric.

c) Repetition

Repetition is the reuse of similar shapes, lines, colours or motifs in a design.

d) Contrast

Contrast is the difference between visual elements.

Examples:

- Light and dark colours.
- Large and small shapes.
- Thick and thin lines.
- Positive and negative spaces.

e) Unity

Unity is the quality that makes all parts of a design appear related and organised.

f) Harmony

Harmony is achieved when the colours, shapes and patterns work together pleasantly.

g) Movement

Movement refers to the visual path followed by the viewer's eye as they look at a design.

It can be created through:

- Diagonal lines.
- Curved lines.
- Repeated motifs.
- Alternating shapes.
- Directional patterns.

6.0 Creating a Relief Printing Block

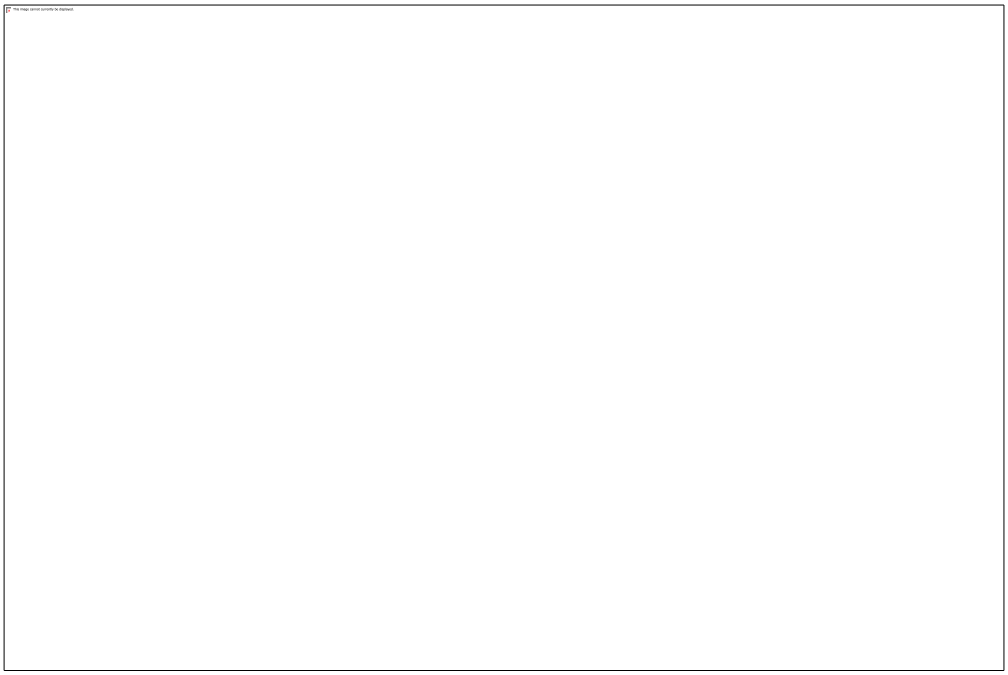
6.1 Meaning of block carving

Block carving is the process of cutting or removing unwanted areas from a block to create a raised design that can receive and transfer printing ink.

The quality of carving directly affects the quality of the final print.







6.2 Steps in making a relief printing block

Step 1: Select the design

- Choose a simple motif suitable for relief printing.
- Consider the size of the fabric.
- Ensure that the motif has clear shapes.
- Avoid very fine details that may be difficult to carve.

Step 2: Select the block material

Choose a suitable material such as:

- Linoleum.
- Wood.
- Soft carving block.

The material should be firm, stable and suitable for the cutting tools available.

Step 3: Prepare the block

- Clean the block surface.
- Ensure it is dry.
- Smooth rough areas where necessary.
- Mark the required printing area.

Step 4: Transfer the design

The design may be transferred using:

- Tracing paper.
- Carbon paper.
- Pencil drawing.
- Direct freehand drawing.

Important: If text or directional imagery is included, the design may need to be reversed before carving so that it prints in the correct orientation.

Step 5: Identify raised and recessed areas

Before carving, decide which parts will print and which parts will not.

- Raised areas receive ink and print.
- Recessed areas do not receive ink when the roller is used correctly.

Step 6: Carve the block

- Hold the carving tool firmly.
- Remove unwanted material carefully.
- Use suitable gouges for different areas.
- Carve away from the body and supporting hand.
- Keep the raised design intact.
- Avoid cutting too deeply or damaging the printing surface.

Step 7: Clean the block

- Remove loose particles.
- Brush away debris.
- Check the edges of the raised design.
- Ensure that unwanted material will not pick up ink.

Step 8: Test the block

- Apply a small amount of ink using a roller.
- Make a test impression on paper or scrap fabric.
- Observe the printed image.
- Identify areas that need further carving.
- Make adjustments carefully.

Step 9: Prepare the block for final printing

Once the test impression is satisfactory, clean and prepare the block for printing on fabric.

6.3 Qualities of a good printing block

A good printing block should:

1. Be firm and stable.
2. Have a smooth and level printing surface.
3. Contain a clear raised design.
4. Have cleanly carved recessed areas.
5. Be free from loose particles.
6. Have no unwanted raised marks.
7. Be comfortable to hold and use.

8. Be durable enough for repeated printing.
9. Produce clear and consistent impressions.
10. Be appropriate for the type of ink and fabric being used.

7.0 Printing Patterns on Fabric Using Relief Block Printing

7.1 Preparation of fabric

Fabric preparation is important because dust, wrinkles, moisture and surface treatments may interfere with printing.

Steps in preparing fabric

1. Select a suitable fabric.
2. Wash the fabric where necessary to remove dirt, starch or manufacturing finishes.
3. Dry the fabric completely.
4. Iron the fabric to remove wrinkles.
5. Cut the fabric to the required size.
6. Spread it on a clean, padded printing surface.
7. Secure it to prevent unnecessary movement.
8. Mark the printing area and any required guides.

Suitable fabrics for relief block printing

- Cotton.
- Calico.
- Linen.
- Canvas.
- Some suitable cotton blends.

Cotton is commonly used because it is absorbent and generally accepts many textile printing inks well.

The selected ink must be compatible with the fabric fibre and should be fixed or cured according to the manufacturer's instructions.

7.2 Preparing printing ink

Printing ink should have the correct consistency for producing clear impressions.

Steps

1. Select ink suitable for fabric printing.
2. Place a small quantity on a clean slab or tray.
3. Mix or prepare it according to the manufacturer's directions.
4. Spread it evenly using a roller.
5. Avoid excessive ink.
6. Test the ink on a scrap piece of fabric.

Why should excessive ink be avoided?

Excessive ink may:

- Fill the carved spaces.
- Cause blurred edges.
- Produce unwanted marks.
- Make the printed design lose detail.
- Cause ink to spread beyond the intended motif.

7.3 The relief block printing process





Step 1: Arrange the materials

Prepare:

- Carved block.

- Printing ink.
- Roller.
- Fabric.
- Padded printing surface.
- Registration guides.
- Cleaning cloth.
- Drying area.

Step 2: Position the fabric

- Spread the fabric on the padded surface.
- Smooth out wrinkles.
- Secure it appropriately.
- Ensure the printing area is accessible.

Step 3: Apply ink to the block

- Spread ink on the slab.
- Roll the roller through the ink.
- Roll the ink evenly onto the raised areas of the block.
- Avoid allowing ink to accumulate in recessed areas.

Step 4: Position the block

- Identify the exact area to be printed.
- Align the block with the planned position.
- Ensure the block is not tilted.

Step 5: Make the impression

- Lower the block carefully onto the fabric.
- Apply even pressure.
- Press all areas of the block gently and firmly.
- Avoid unnecessary movement.

Step 6: Lift the block

- Lift the block vertically.
- Avoid sliding it across the fabric.
- Observe the printed impression.

Step 7: Repeat the process

- Re-ink the block.
- Position it according to the planned pattern.
- Continue printing until the required design is complete.

Step 8: Dry and finish

- Allow the printed fabric to dry.
- Fix or cure the print where required.
- Follow the manufacturer's instructions.
- Clean the tools and work area.

8.0 All-Over Repeat Patterns

8.1 Meaning of a pattern

A pattern is an organised arrangement of visual elements such as shapes, lines, colours and motifs.

Patterns may be created by repeating one motif or combining several motifs.

8.2 Meaning of an all-over repeat pattern

An all-over repeat pattern is a design in which a motif or group of motifs is repeated across the entire surface of a fabric to create a continuous decorative effect.

The design covers most or all of the intended fabric area.





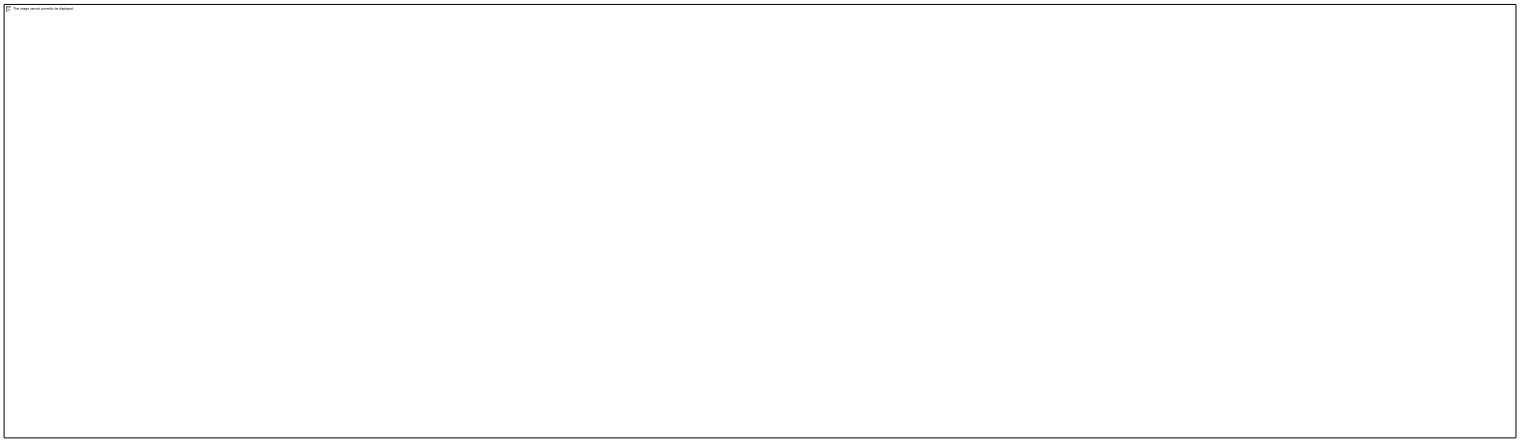
Characteristics of an all-over repeat pattern

1. It covers the entire intended printing area.
2. It uses repeated motifs.
3. It creates visual rhythm.
4. It may use one or more colours.
5. It may be arranged in regular or irregular formations.
6. It can be printed in linear or random arrangements.
7. It requires careful spacing and positioning.
8. It may create a sense of movement and flow.

8.3 Types of all-over repeat patterns

A. Linear repeat pattern

A linear repeat pattern is created by arranging repeated motifs in straight rows or columns.



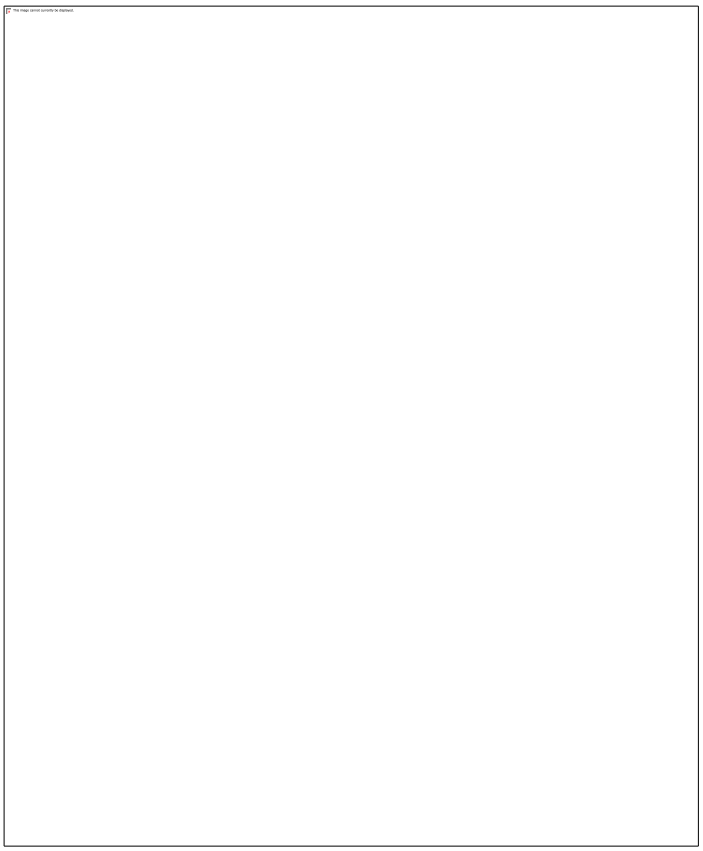
Characteristics:

- Motifs are arranged in straight lines.
- Spacing is generally regular.
- The pattern may move horizontally or vertically.
- It creates order and stability.
- It is relatively easy to register.

Example: A row of repeated leaf motifs printed horizontally across a cotton fabric.

B. Random repeat pattern

A random repeat pattern is created by arranging motifs in an apparently irregular manner across the fabric.



Characteristics:

- Motifs appear in different positions.
- The arrangement is less predictable.
- It may create a lively and informal appearance.
- It requires attention to visual balance.
- Empty spaces should be considered carefully.

Example: Scattered flowers and leaves printed across a fabric without following strict rows.

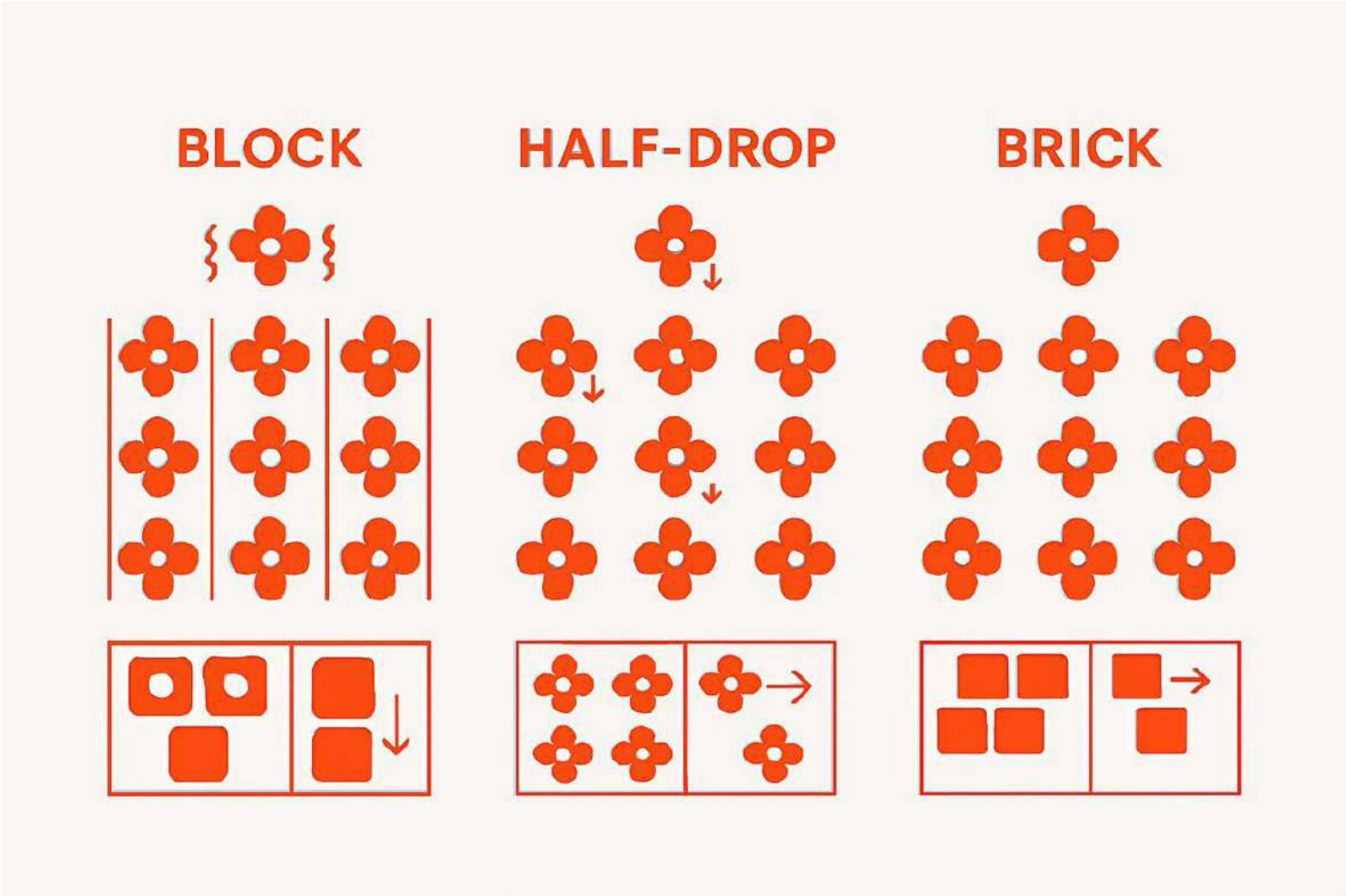
C. Straight repeat

A straight repeat is an arrangement in which motifs are positioned directly below or beside one another in aligned rows.

D. Half-drop repeat

A half-drop repeat is formed by shifting every alternate row by approximately half the width of the motif.

This arrangement creates a staggered pattern.



E. Mirror repeat

A mirror repeat is created by reflecting a motif or design across an imaginary line.

It creates a symmetrical appearance.

F. Brick repeat

A brick repeat resembles the arrangement of bricks in a wall. Alternate rows are shifted sideways, often by half the width of the motif.

8.4 Steps in printing an all-over repeat pattern

1. Select a suitable motif.
2. Determine the size of the motif.
3. Choose a repeat arrangement.
4. Decide the spacing between motifs.
5. Prepare the fabric.
6. Establish registration guides.
7. Ink the block evenly.
8. Print the first motif.
9. Position the next motif according to the repeat plan.
10. Continue printing across the fabric.
11. Maintain consistent spacing and orientation.
12. Check the pattern for gaps and unwanted overlaps.
13. Allow the fabric to dry.
14. Finish the fabric appropriately.

8.5 Registration in block printing

Registration is the process of accurately positioning a printing block or subsequent printing layer so that the design appears in the intended location.

It is especially important when creating repeat patterns and multi-colour prints.

Importance of registration

1. Ensures that motifs are evenly spaced.
2. Prevents accidental overlapping.
3. Maintains alignment.
4. Creates a professional appearance.
5. Helps maintain consistency across the fabric.
6. Reduces wastage of fabric and ink.
7. Ensures that different colours align correctly.

Methods of achieving registration

- Use pencil guidelines.
- Use a ruler and measuring tape.
- Use a registration template.
- Mark the corners of the printing block.
- Use masking tape to indicate positions.
- Use a fixed starting point.

- Maintain consistent spacing.
- Use registration marks for multi-colour printing.

Common registration problems and solutions

Problem	Possible solution
Motifs are unevenly spaced	Use measured guidelines
Prints overlap unintentionally	Mark the exact block position
Rows are not straight	Use a ruler or straight guide
Pattern drifts across fabric	Recheck alignment regularly
Second colour is misplaced	Use accurate registration marks
Fabric moves during printing	Secure the fabric firmly

8.6 Movement and flow in repeat patterns

Movement and flow refer to the way repeated motifs guide the viewer's eye across a fabric design.

Movement may be created through:

- Diagonal arrangements.
- Curved arrangements.
- Alternating motifs.
- Repeated directional shapes.
- Gradual changes in size.
- Repeated lines and shapes.
- Overlapping visual elements.

Example: Repeated leaf motifs arranged diagonally may create the impression of leaves growing or flowing across the fabric.

9.0 Relief Block Printing Using the Reduction Method

9.1 Meaning of the reduction method

The reduction method is a relief printing technique in which the same printing block is carved progressively after each colour has been printed.

The artist prints the first colour, removes selected raised areas from the block, and then prints the next colour using the reduced block.

The process continues with further carving and printing until the planned multi-colour composition is complete.

It is sometimes called *reduction printing* or *the lost-block method* because areas carved away during the process cannot be restored.

Lino Cut Reduction Prints





9.2 Main characteristics of reduction block printing

1. It uses one main printing block for successive printing stages.
2. The block is carved progressively.
3. Different colours are printed at different stages.
4. The first colour is usually printed before further carving.
5. Selected raised areas are removed after each printing stage.
6. The same block is used to print subsequent colour layers.
7. The process requires careful planning.
8. Registration is essential.
9. The block is gradually reduced as the design develops.
10. It produces a layered, multi-colour image.

9.3 Difference between ordinary relief printing and reduction relief printing

Ordinary relief block printing	Reduction relief block printing
May use one block for a single-colour design	Uses the same block progressively for several colour stages
The block may remain unchanged during printing	The block is carved further after each printing stage
A single colour may be sufficient	Usually uses two or more colours
Repeated impressions are made from the same carved design	Each stage changes the printing surface
The design can be printed repeatedly as long as the block remains intact	Earlier carved areas cannot be restored
Multiple blocks may be used for different colours in other methods	The same block is used for successive colour layers

9.4 How the reduction method works

The method involves a planned sequence of printing and carving.

Stage 1: Design preparation

The artist develops a composition that can be divided into colour layers.

Stage 2: First printing

The initial version of the block is inked and printed onto the fabric or other printing surface.

Stage 3: First reduction

After printing the first colour, selected raised areas are carved away.

Stage 4: Second printing

The reduced block is inked with the second colour and printed in accurate registration over the first impression.

Stage 5: Further reduction

Additional areas are carved away where necessary.

Stage 6: Final printing

The block is inked with the final colour and printed to complete the composition.

Important: Reduction printing is a planned, irreversible process. Once an area has been carved away, it cannot be used to print a later colour. Therefore, the artist must carefully plan the colour sequence before beginning.

10.0 Planning a Composition for the Reduction Method

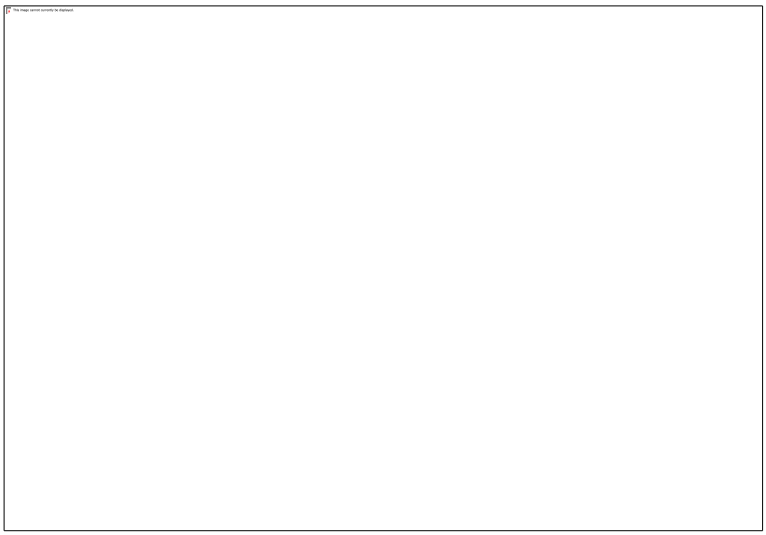
10.1 Meaning of a composition

A composition is the organised arrangement of visual elements in an artwork to create a complete and meaningful design.

In reduction relief printing, the composition determines how motifs, shapes, lines, colours and spaces will appear in the final printed image.

Examples of compositions include:

- A group of flowers in a vase.
- Birds resting on tree branches.
- A landscape showing hills, trees and the sun.
- A traditional homestead.
- A collection of fruits.
- A decorative arrangement of leaves and flowers.



10.2 Factors to consider when designing a reduction-printing composition

1. **Subject matter:** Select a subject that can be represented clearly using raised and recessed shapes.
2. **Number of colours:** Decide how many colours will be used.
3. **Colour sequence:** Plan which colour will be printed first and which will be printed last.
4. **Colour contrast:** Ensure that the colours can be distinguished from one another.
5. **Colour harmony:** Select colours that work well together.
6. **Shape clarity:** Ensure that the main forms are recognisable.
7. **Positive and negative space:** Plan the areas that will print and those that will remain unprinted.
8. **Registration:** Allow for accurate alignment of all colour layers.

9. **Carving difficulty:** Avoid unnecessary details that may be difficult to carve.
10. **Final appearance:** Imagine how the complete image will look after all printing stages.

10.3 Colour separation

Colour separation is the process of dividing a design into different colour areas or layers before printing.

In reduction printing, colour separation helps the artist determine which raised areas should remain at each stage and which should be carved away.

Importance of colour separation

1. It helps plan the printing sequence.
2. It prevents confusion during carving.
3. It ensures that each colour is assigned to the correct area.
4. It makes the printing process easier to manage.
5. It helps maintain colour contrast.
6. It reduces the possibility of printing errors.
7. It supports accurate registration.

Example of colour separation

Consider a simple composition of a flower with leaves and a background.

The artist may plan the following layers:

Printing stage	Colour	Purpose
First stage	Yellow	Establishes the lightest areas, such as flower centres or highlights
Second stage	Red	Adds the main flower petals
Third stage	Green	Adds leaf and stem details
Final stage	Dark blue or black	Adds selected outlines and darker details

The exact sequence depends on the design, ink opacity, fabric colour and intended appearance. A darker colour is often printed later, but this is not an absolute rule.

10.4 Colour contrast

Colour contrast is the difference between colours that makes them appear distinct when placed next to one another.

Examples:

- Yellow and purple.
- Red and green.
- Blue and orange.
- Light blue and dark blue.
- White and black.

Importance of colour contrast in reduction printing

1. It makes motifs easier to identify.
2. It creates visual interest.
3. It helps separate different parts of the composition.
4. It emphasises important areas.
5. It improves the readability of the printed image.
6. It helps prevent the design from appearing flat or confusing.

10.5 Colour harmony

Colour harmony refers to the pleasing relationship between colours used in an artwork.

A harmonious colour scheme makes the composition appear organised and visually attractive.

Examples of colour harmony

a) Monochromatic harmony

This uses different tints, tones and shades of one colour.

Example: Light blue, medium blue and dark blue.

b) Analogous harmony

This uses colours that are next to one another on the colour wheel.

Example: Yellow, yellow-orange and orange.

c) Complementary harmony

This uses colours opposite one another on the colour wheel.

Example: Blue and orange.

d) Warm colour harmony

This uses colours associated with warmth.

Examples:

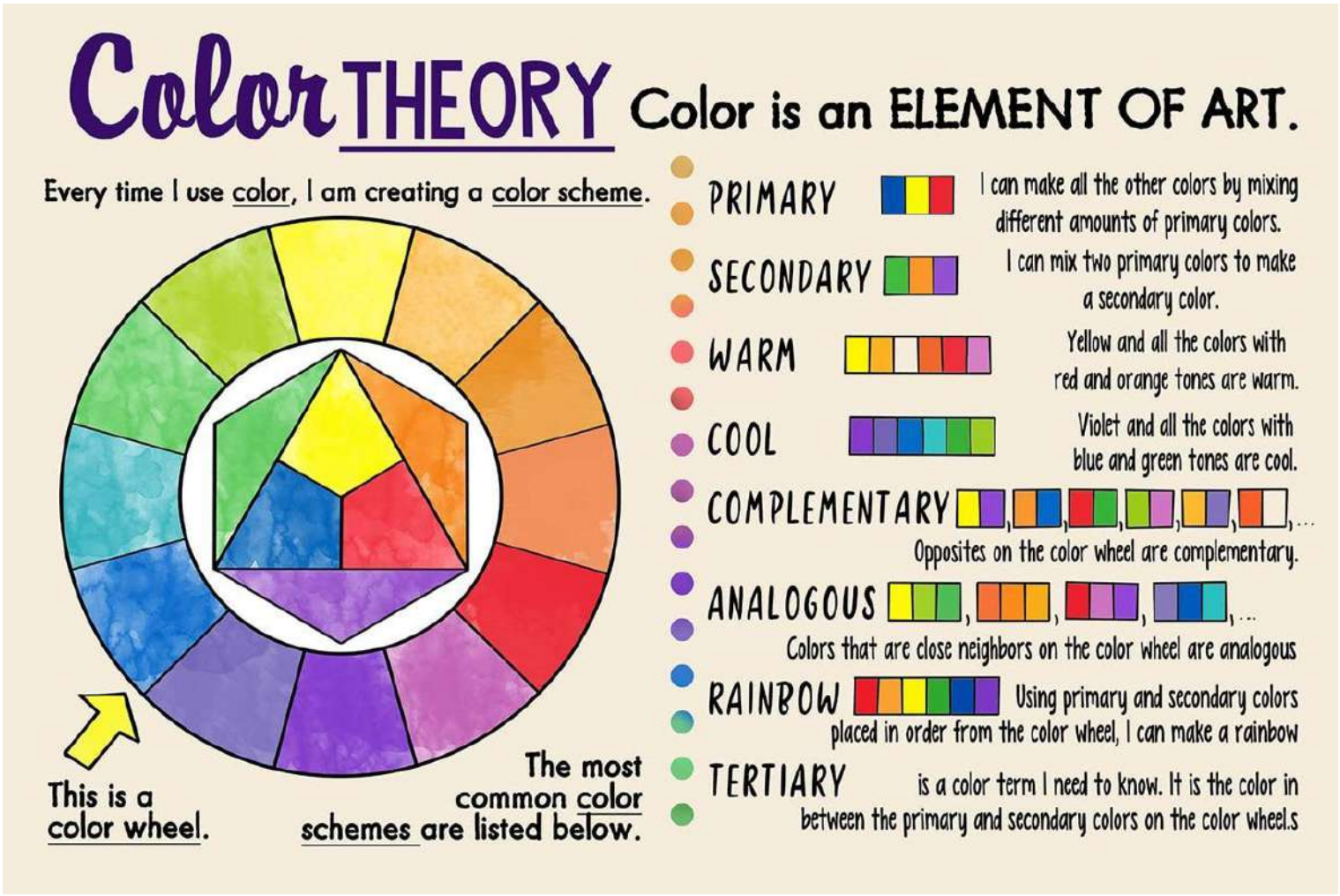
- Red.
- Orange.
- Yellow.

e) Cool colour harmony

This uses colours associated with coolness.

Examples:

- Blue.
- Green.
- Violet.



10.6 Positive and negative spaces in reduction printing

- **Positive space:** The area occupied by the main forms or shapes in a design.
- **Negative space:** The empty or surrounding area around and between the main forms.

In relief printing, the raised areas of the block transfer ink. However, the artist must plan the positive and negative spaces carefully to ensure that the intended image is clear.

Importance of positive and negative space

1. It helps define the main subject.
2. It prevents the design from appearing overcrowded.
3. It creates visual balance.
4. It improves the readability of the motif.
5. It supports effective colour separation.
6. It helps the artist decide which parts of the block should be carved away.

11.0 Step-by-Step Procedure for Reduction Relief Block Printing

This section explains the practical process of producing a multi-colour composition using the reduction method.



11.1 Materials, tools and equipment

The following are required:

Designing materials

- Drawing paper.
- Pencils.
- Eraser.
- Ruler.
- Colour pencils or markers.
- Tracing paper.

Block-making materials

- Linoleum or suitable carving block.
- Lino cutters.
- Wood carving tools where appropriate.
- Cutting mat.
- Soft brush for removing debris.

Printing materials

- Fabric.
- Fabric printing ink.
- Roller or brayer.
- Printing slab or tray.
- Padded printing surface.
- Registration guides.
- Masking tape.
- Cleaning cloth.
- Drying rack.

Safety materials

- Apron.
- Protective gloves where required by the product instructions.
- First-aid supplies.
- Suitable cleaning materials.

11.2 Practical procedure

Step 1: Choose a theme

Select a suitable theme for the composition.

Examples:

- Kenyan wildlife.
- Flowers and plants.
- Traditional homesteads.
- Birds and trees.
- Fruits and vegetables.
- Rural and urban life.
- Cultural celebrations.

Example: A learner chooses the theme *Kenyan Wildlife* and designs a composition showing a giraffe, acacia tree and sun.

Step 2: Develop preliminary sketches

- Make several sketches based on the chosen theme.
- Select the most appropriate composition.
- Simplify complicated shapes.
- Consider how the image will appear in different colours.
- Ensure that the design can be carved successfully.

Step 3: Plan the colour layers

- Decide on the number of colours.
- Assign a colour to each part of the composition.
- Identify the areas that must remain raised at each stage.
- Determine which areas will be removed after each printing stage.
- Make a colour separation plan.

Step 4: Prepare the final design

- Draw the final composition clearly.
- Ensure that the design fits the block.
- Consider reversal where required.
- Transfer the design onto the block.

Step 5: Prepare the block

- Clean the block.
- Check that its surface is suitable.
- Transfer the first-stage design.
- Identify areas to be carved away.
- Make sure that the parts needed for the first colour remain raised.

Step 6: Carve the first-stage block

- Use appropriate carving tools.
- Remove only the areas that should not print in the first stage.
- Protect the raised areas.
- Clean away loose particles.
- Check the block before printing.

Step 7: Prepare the fabric

- Wash where necessary.
- Dry completely.
- Iron to remove wrinkles.
- Place on a padded printing surface.
- Mark the position of the composition.
- Secure the fabric to prevent movement.

Step 8: Print the first colour

- Prepare the first colour of fabric ink.
- Spread the ink evenly on the printing slab.
- Apply ink to the raised areas using a roller.
- Align the block with the registration guides.

- Press the block evenly onto the fabric.
- Lift the block carefully.
- Allow the first colour to dry sufficiently before the next stage.

Step 9: Reduce the block

After the first colour has been printed:

- Examine the printed image.
- Identify areas that should not print in the second colour.
- Carve away those selected raised areas.
- Preserve the raised areas required for the next colour.
- Clean the block thoroughly.

Important: Do not remove areas that are needed for later printing stages.

Step 10: Print the second colour

- Prepare the second colour.
- Apply ink to the remaining raised areas.
- Align the block accurately with the first print.
- Press evenly.
- Lift the block carefully.
- Allow the print to dry as required.

Step 11: Continue reducing and printing

If the design requires more than two colours:

- Carve away additional areas.
- Preserve the raised surfaces needed for the next colour.
- Apply the next colour.
- Print in accurate registration.
- Repeat the process until the planned composition is complete.

Step 12: Inspect the final print

Check for:

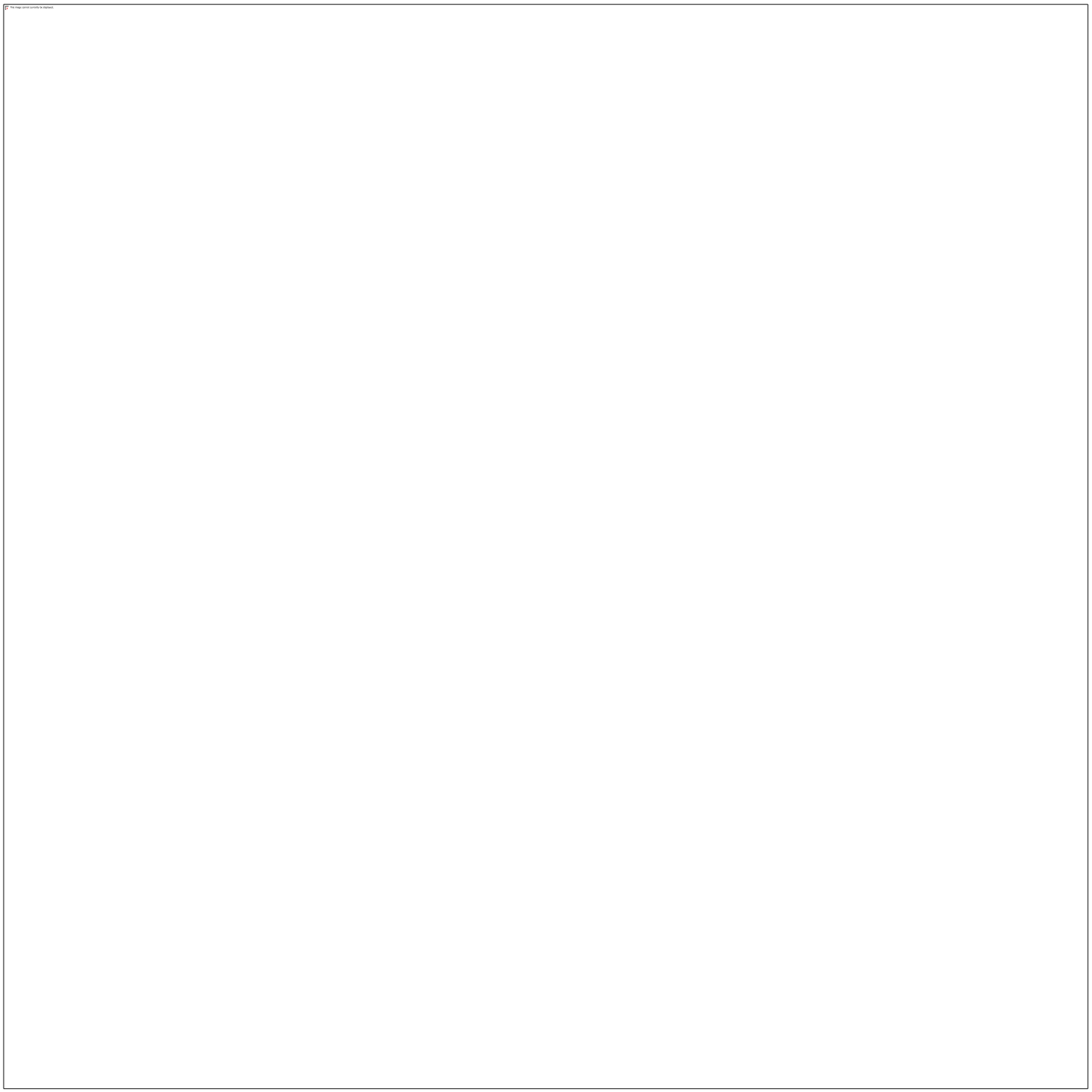
- Clear shapes.
- Correct colour placement.
- Accurate registration.
- Even ink coverage.
- Appropriate contrast.
- Good colour harmony.
- Clean edges.
- Absence of unwanted marks.

Step 13: Dry and finish

- Allow the fabric to dry.
- Fix or cure the ink as directed by the manufacturer.
- Clean the printing block and tools.
- Store reusable equipment safely.
- Present the completed fabric for appraisal.

11.3 Example of a two-colour reduction print

Imagine a learner designing a simple tree motif.



First printing stage:

- The learner carves the first version of the block.
- The first colour is applied.
- The main background or selected large shapes are printed.

Second printing stage:

- Selected raised areas are carved away.
- The remaining raised shapes represent the parts intended for the second colour.
- The block is aligned with the first impression.
- The second colour is printed.

Final result:

The two printed colours combine to produce a layered tree image with clearly defined shapes.

11.4 Advantages of the reduction method

1. It allows the production of multi-colour prints using one main block.
2. It encourages careful planning.
3. It develops carving skills.
4. It promotes creativity and experimentation.
5. It produces distinctive layered effects.
6. It can create complex images from relatively simple materials.
7. It encourages an understanding of colour relationships.
8. It develops precision and patience.
9. It is suitable for artistic fabric decoration.
10. It can support small-scale textile enterprises.

11.5 Limitations of the reduction method

1. The process is irreversible because carved areas cannot be restored.
2. Errors made during carving may damage the entire design.
3. It requires careful planning of colour layers.
4. Accurate registration can be challenging.
5. The block may become fragile as more material is removed.
6. It may take a long time to complete.
7. It requires sufficient printing materials for the whole edition.
8. The same block cannot easily be used to reproduce the original design after extensive reduction.
9. Poor drying between stages may affect subsequent printing.
10. Complex compositions may be difficult for beginners.

11.6 Precautions when using the reduction method

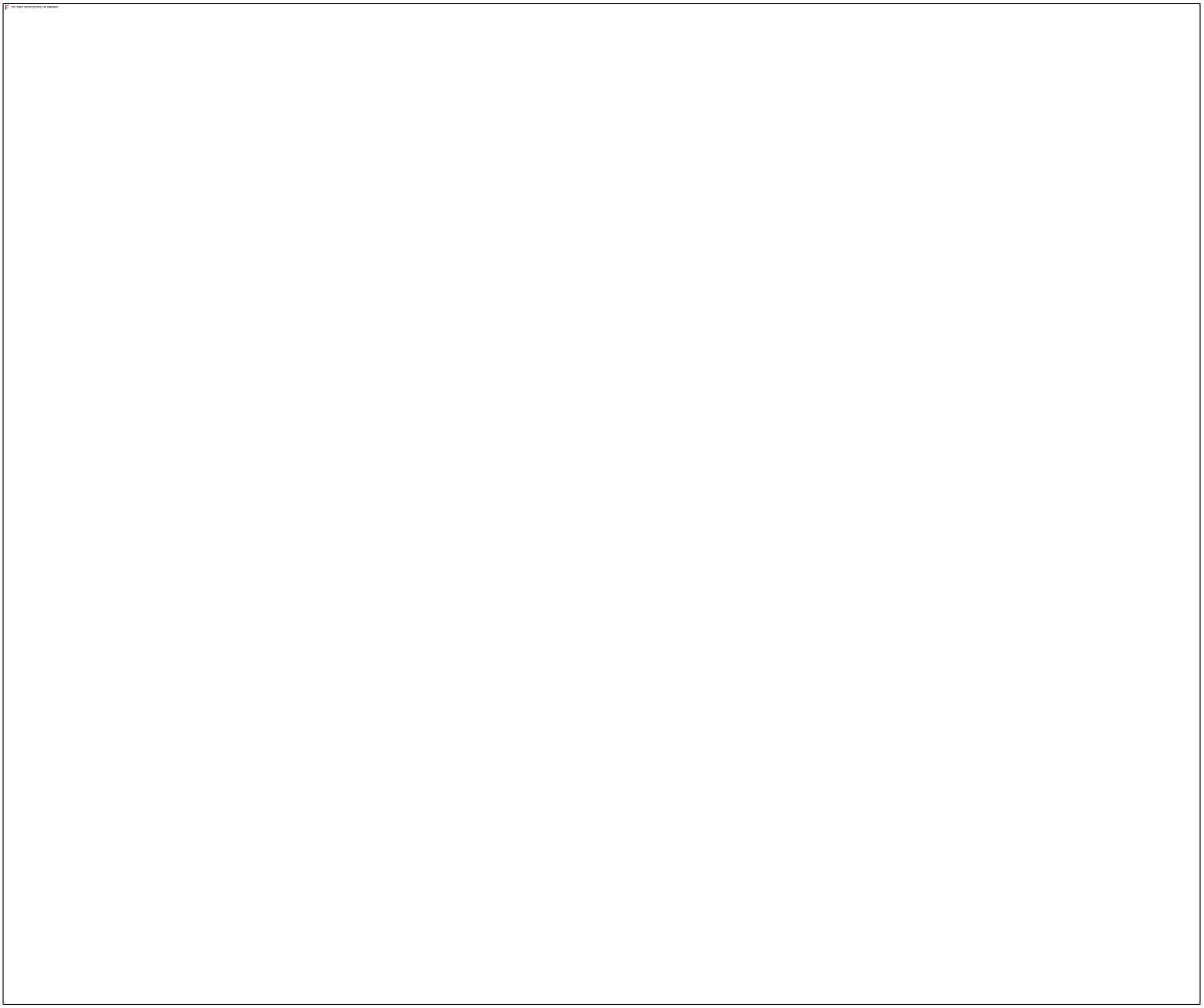
- Plan the entire composition before carving.

- Make a test print before beginning the main work.
- Keep a record of the colour sequence.
- Never carve away areas needed for later stages.
- Use appropriate carving tools.
- Maintain accurate registration.
- Allow sufficient drying between printing stages.
- Avoid applying excessive ink.
- Keep the block clean.
- Store the block safely between stages.

12.0 Artists Associated with Relief and Reduction Printing

Artists provide examples of how relief printing can be used to communicate ideas, explore colour and develop personal styles.

12.1 Pablo Picasso



Pablo Picasso was a highly influential artist who experimented with different forms of printmaking, including linocut.

Contributions and characteristics of his printmaking

1. He explored linocut as a medium for producing expressive images.
2. He experimented with bold shapes and simplified forms.
3. His linocuts demonstrate the use of strong contrasts.
4. He explored multi-colour reduction linocut techniques.
5. His work demonstrates how a single block can be modified progressively to produce colour layers.
6. His printmaking encourages artists to experiment with shape, colour and composition.

Lesson for Grade 11 learners: Picasso's printmaking demonstrates the importance of planning, simplification and creative experimentation when using relief printing.

12.2 Angie Lewin



Angie Lewin is known for printmaking inspired by plants, landscapes and natural forms.

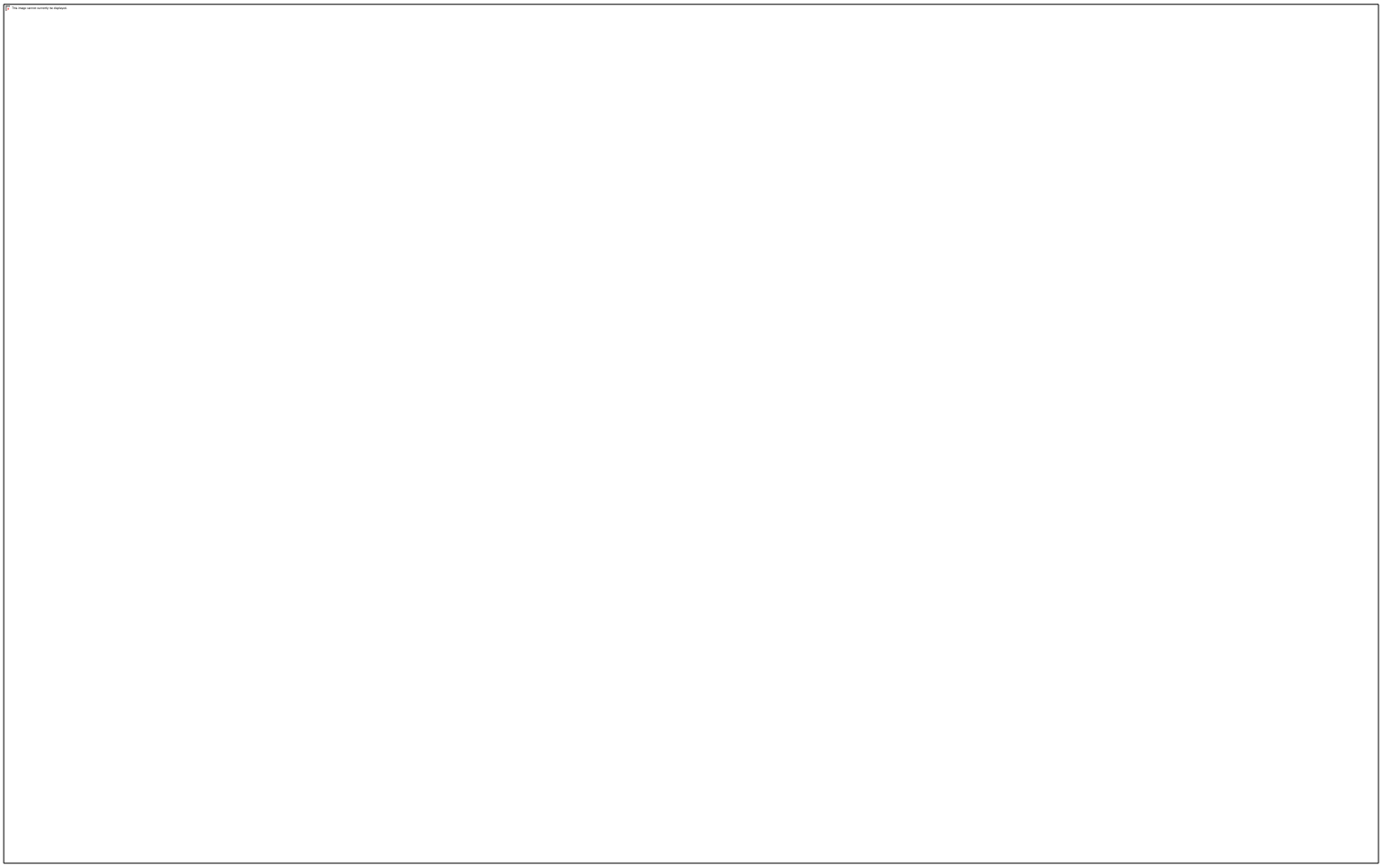
Characteristics of her work

1. Her work frequently draws inspiration from nature.

2. She uses botanical forms such as flowers, grasses and leaves.
3. She explores the relationship between positive and negative spaces.
4. She uses repeated shapes and carefully arranged compositions.
5. Her prints demonstrate how natural forms can be simplified into decorative images.
6. Her work provides inspiration for fabric motifs and repeat patterns.

Lesson for Grade 11 learners: Learners can observe natural forms and simplify them into motifs suitable for carving and printing.

12.3 Dennis Muraguri



Dennis Muraguri is a Kenyan contemporary artist whose practice engages with everyday urban life and popular visual culture, including matatu culture.

Ideas learners can explore from his practice

1. The use of familiar Kenyan subjects as sources of artistic inspiration.
2. The representation of everyday life.
3. The use of visual storytelling.
4. The transformation of local experiences into artistic compositions.
5. The use of strong imagery to communicate identity and social experiences.

Important distinction: These examples provide inspiration from artists' wider visual practices. They should not be taken to mean that all three artists use identical block-printing methods or specialise in fabric printing.

12.4 Comparing the artists

Artist	Inspiration or area of interest	Learning point for fabric printing
Pablo Picasso	Experimental printmaking, bold forms and colour	Simplifying forms and planning colour layers
Angie Lewin	Plants, landscapes and natural forms	Developing botanical motifs and positive-negative spaces
Dennis Muraguri	Kenyan everyday life and popular visual culture	Using local experiences and identity as sources of inspiration

13.0 Factors Affecting the Quality of Relief Block Prints

The quality of a printed fabric depends on the materials, tools, design and printing procedures used.

13.1 Choice of block material

The material used to make the block affects the clarity, durability and appearance of the print.

Block material	Effect on print quality
Good-quality wood	Can produce firm, clear impressions and withstand repeated printing
Linoleum	Allows controlled carving and clear lines
Soft carving block	Easy to carve, but may wear or deform with excessive pressure
Poor-quality or brittle material	May break, chip or produce uneven impressions

Response to the key inquiry question: The choice of block material affects how easily a design can be carved, how much detail it can hold, how durable the block is and how consistently it transfers ink.

13.2 Other factors

1. **Quality of carving:** Poor carving may create unwanted marks or unclear shapes.
2. **Ink consistency:** Ink that is too thick or too thin may affect the print.
3. **Amount of ink:** Excessive ink may fill recessed areas and blur the design.
4. **Printing pressure:** Uneven pressure may produce incomplete impressions.
5. **Fabric quality:** Rough, dirty or unsuitable fabric may affect ink transfer.
6. **Fabric preparation:** Wrinkles and moisture may interfere with printing.
7. **Registration:** Poor alignment affects the arrangement of motifs and colour layers.
8. **Drying:** Inadequate drying may cause smudging or colour transfer.
9. **Block condition:** Damaged or dirty blocks may produce defective prints.
10. **Working environment:** Dust and poor working conditions may affect the final product.

14.0 Care, Maintenance and Storage of Materials

Proper care of printing materials improves their lifespan and maintains print quality.

14.1 Care of printing blocks

- Remove excess ink after printing.
- Clean the block using a method suitable for the block material and ink.
- Avoid soaking wooden blocks in water.
- Dry blocks thoroughly.
- Store blocks in a dry place.
- Protect carved surfaces from damage.
- Do not stack heavy objects on delicate blocks.

14.2 Care of carving tools

- Clean tools after use.
- Dry metal tools to prevent rust.
- Store sharp tools in protective holders.
- Keep cutting edges sharp.
- Do not leave tools scattered on work surfaces.
- Use tools only for their intended purpose.

14.3 Care of rollers

- Clean rollers after printing.
- Remove ink before it dries.
- Avoid damaging the rubber surface.
- Store rollers away from direct sunlight and excessive heat.
- Keep the roller surface free from dust and debris.

14.4 Care of fabric

- Allow printed fabric to dry properly.
- Follow the ink manufacturer's curing instructions.
- Store finished fabric in a clean, dry place.
- Avoid folding wet printed fabric.
- Protect the fabric from dust and unnecessary handling.

15.0 Health and Safety in Relief Block Printing

Relief block printing involves sharp carving tools, inks, dyes and other materials. Learners should observe safety procedures throughout the activity.

15.1 Safety when carving

1. Always use the correct carving tool.
2. Cut away from the body.

3. Keep the supporting hand behind the cutting direction.
4. Use a stable cutting mat.
5. Do not rush while carving.
6. Do not use damaged or loose-handled tools.
7. Keep sharp tools away from the edge of the table.
8. Return tools to their proper storage places.
9. Work under teacher supervision.
10. Do not allow learners to play with carving tools.

15.2 Safety when handling printing inks

1. Read the manufacturer's safety instructions.
2. Use inks suitable for the intended fabric and printing process.
3. Avoid eating or drinking in the printing area.
4. Do not taste or inhale printing materials.
5. Avoid unnecessary skin contact.
6. Use gloves where required by the product instructions.
7. Wash hands after printing.
8. Keep inks in properly labelled containers.
9. Keep containers closed when not in use.
10. Ensure that the working area is adequately ventilated.

15.3 Environmental safety

- Use only the amount of ink required.
- Avoid pouring ink into drains.
- Dispose of waste according to local requirements and product instructions.
- Reuse suitable fabric offcuts for testing.
- Use recycled materials where safe and appropriate.
- Clean printing tools in a controlled manner.
- Avoid releasing harmful substances into the environment.

16.0 Appraisal of Relief-Printed Fabrics

16.1 Meaning of appraisal

Appraisal is the process of examining and judging an artwork to determine its quality, effectiveness and areas for improvement.

In relief block printing, appraisal involves assessing the design, carving, printing, colour arrangement and overall appearance of the decorated fabric.

16.2 Aspects to consider when appraising printed fabrics

1. **Originality:** Is the motif creative and original?
2. **Design:** Is the composition well organised?

3. **Carving quality:** Are the raised and recessed areas clearly defined?
4. **Print clarity:** Are the printed images clear?
5. **Registration:** Are the motifs or colour layers accurately aligned?
6. **Colour choice:** Are the colours appropriate?
7. **Colour harmony:** Do the colours work well together?
8. **Colour contrast:** Are the different parts of the design easy to distinguish?
9. **Repeat pattern:** Is the pattern consistent and attractive?
10. **Movement and flow:** Does the design guide the viewer's eye effectively?
11. **Fabric preparation:** Is the fabric clean and properly prepared?
12. **Finishing:** Is the print dry and properly fixed where necessary?
13. **Functionality:** Is the decorated fabric suitable for its intended use?
14. **Craftsmanship:** Has the learner demonstrated care and skill?
15. **Creativity:** Has the learner experimented with ideas and materials?

16.3 How to appraise own work

A learner should:

1. Display the completed fabric.
2. Observe the printed design carefully.
3. Compare the final work with the original plan.
4. Identify the successful parts.
5. Identify areas that need improvement.
6. Explain the choice of motif and colours.
7. Discuss challenges experienced.
8. Suggest ways of improving the work.

16.4 How to appraise the work of others

When appraising another learner's work:

- Observe the artwork carefully.
- Identify its strengths.
- Give constructive feedback.
- Respect the artist's ideas.
- Avoid insulting or discouraging comments.
- Suggest practical improvements.
- Appreciate creativity and effort.

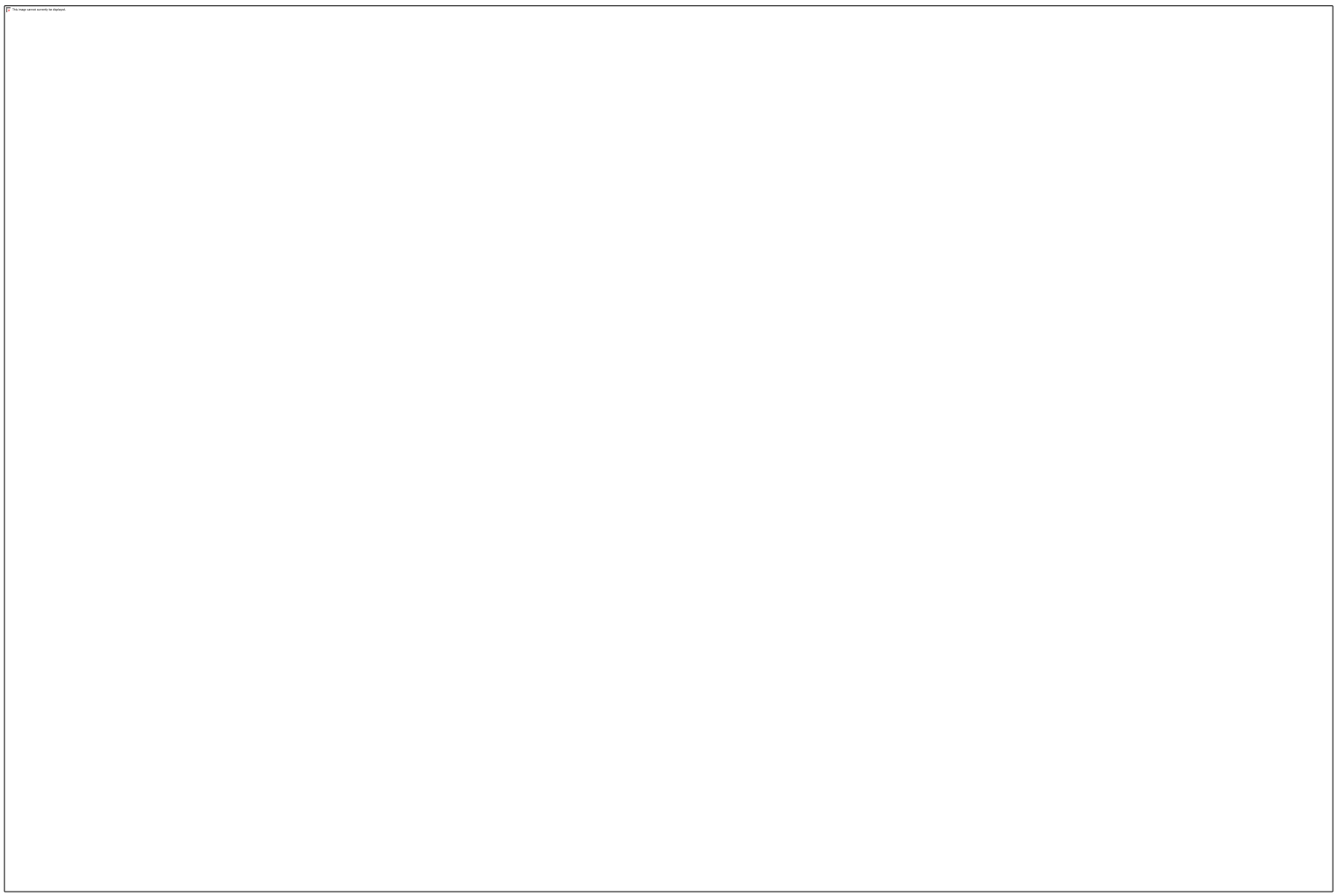
Examples of constructive feedback:

- "The leaf motifs are attractive and well spaced."
- "The colour contrast makes the main subject easy to identify."

- "Some impressions are lighter than others; more even pressure may improve the next print."
- "The second colour is slightly misaligned, so clearer registration guides could help."
- "The composition is interesting, but the empty spaces could be arranged more deliberately."

17.0 Practical Learning Activities and Projects

Project 1: Printing an All-Over Repeat Pattern



Activity: Design and print an all-over repeat pattern on a piece of cotton fabric using a carved relief block.

Requirements

- Develop a freehand motif inspired by nature or the local environment.
- Prepare a suitable printing block.
- Carve the motif.
- Select a one-colour textile printing ink.
- Plan a linear or random repeat pattern.
- Print the design across the fabric.
- Maintain consistent registration.
- Appraise the finished work.

Expected outcome: A decorated fabric displaying a clear, attractive and consistent all-over repeat pattern.

Project 2: Two-Colour Reduction Block Print



Activity: Create a two-colour composition using the reduction method.

Requirements

- Select a theme.
- Sketch an original composition.
- Plan two colour layers.
- Transfer the design onto a suitable block.
- Carve the first-stage block.
- Print the first colour.
- Reduce the same block.
- Print the second colour in accurate registration.
- Allow the print to dry.
- Present and appraise the finished work.

Expected outcome: A two-colour printed composition demonstrating an understanding of reduction carving, colour contrast and registration.

Project 3: Kenyan Identity Through Fabric Printing

Activity: Develop a fabric design inspired by aspects of the Kenyan environment and everyday life.

Possible themes:

- Kenyan wildlife.
- Local plants and vegetation.
- Rural and urban life.
- Farming and food production.
- Local architecture.
- Transport and community activities.

Requirements

1. Research the selected theme.

2. Identify suitable visual references.
3. Develop original motifs.
4. Plan the repeat or composition.
5. Carve a relief printing block.
6. Print the design on fabric.
7. Display the finished product.
8. Explain how the design communicates the selected theme.

Expected outcome: A printed fabric that communicates a Kenyan-inspired theme through original visual elements.

18.0 Application of Relief Block Printing in Kenya

Relief block printing has practical applications in fashion, interior decoration, education, cultural expression and entrepreneurship.

18.1 Fashion and clothing

Printed fabrics can be used to make:

- Shirts.
- Dresses.
- Skirts.
- Trousers.
- Scarves.
- Head wraps.
- Jackets.
- Children's clothing.

18.2 Interior decoration

Relief-printed fabrics can be used to produce:

- Curtains.
- Cushion covers.
- Tablecloths.
- Wall hangings.
- Bed covers.
- Decorative runners.
- Upholstery accents.

18.3 Accessories

Examples include:

- Tote bags.
- Purses.
- Pencil cases.

- Fabric wallets.
- Book covers.
- Laptop sleeves.
- Shopping bags.

18.4 Education and school projects

Learners can use relief block printing to:

- Decorate fabric for art exhibitions.
- Produce fabric book covers.
- Create wall displays.
- Design reusable shopping bags.
- Explore Kenyan themes through printed motifs.
- Develop practical art portfolios.

18.5 Entrepreneurship

Relief block printing can support small businesses.

A learner or artist may establish a small textile decoration enterprise by producing:

- Custom printed fabrics.
- Printed bags.
- Home décor products.
- Fashion accessories.
- Personalised gifts.
- Decorative fabric products for events.

Important entrepreneurial considerations

1. Quality of products.
2. Cost of materials.
3. Labour and production time.
4. Target customers.
5. Product pricing.
6. Packaging.
7. Marketing and promotion.
8. Customer feedback.
9. Safe production practices.
10. Environmental responsibility.

PART II: REVISION QUESTIONS

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer all the questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. What is relief block printing?

A. A process of weaving coloured threads.

B. A process in which raised surfaces transfer ink onto a material.

C. A process of dyeing fabric by tying it.

D. A process of painting fabric using a brush.

2. Which statement correctly describes the principle of relief printing?

A. The recessed areas transfer ink.

B. Both raised and recessed areas transfer ink equally.

C. The raised areas transfer ink while the recessed areas remain unprinted.

D. Ink is transferred only through a mesh screen.

3. Which of the following materials is commonly used for making relief printing blocks?

A. Linoleum

B. Glass

C. Cotton wool

D. Polythene sheet

4. What is the main function of a lino cutter?

A. To spread ink on fabric.

B. To remove unwanted areas from a printing block.

C. To dry printed fabric.

D. To measure the fabric.

5. Which tool is used to spread printing ink evenly over the raised surface of a block?

A. Pair of scissors B. Ruler

C. Roller D. Needle

6. A learner wants to produce a motif inspired by flowers in the school garden. Which source of inspiration is being used?

A. Nature

B. Machinery

C. Architecture

D. Technology

7. What is a motif?

A. A tool used for carving blocks.

B. A decorative unit used in a design.

C. A type of fabric dye.

D. A machine used for printing.

8. Which of the following is an example of a freehand motif?

A. A design drawn directly by hand.

B. A design produced only by a printing machine.

C. A design copied using a ruler only.

D. A design produced by weaving threads.

9. Why should a motif be simplified before carving?

A. To make the fabric heavier.

B. To make the block impossible to print.

C. To make the design easier to carve and print clearly.

D. To remove all visual interest.

10. Which of the following is a characteristic of a linear repeat pattern?

A. Motifs are arranged in straight rows or columns.

B. Motifs are arranged without any visual plan.

C. Motifs are printed only once.

D. Motifs are arranged in circular layers only.

11. What is an all-over repeat pattern?

A. A design printed at one corner of a fabric.

B. A pattern in which motifs are repeated across the intended fabric surface.

C. A design made from a single painted line.

D. A design that contains no repeated elements.

12. A learner prints flowers in straight horizontal rows across a fabric. Which pattern arrangement is being used?

A. Random arrangement

B. Linear arrangement

C. Radial arrangement

D. Spiral arrangement

13. Which statement best describes a random repeat pattern?

A. Motifs are placed in a seemingly irregular arrangement.

B. Motifs are placed only in straight columns.

C. Motifs are printed in a single line.

D. Motifs are arranged in a perfect circle.

14. What is registration in block printing?

A. Washing the fabric before printing.

B. Sharpening the carving tools.

C. Accurately positioning the block or colour layers.

D. Drying the ink after printing.

15. Which of the following helps maintain accurate registration?

A. Printing without measuring.

B. Using registration guides.

C. Moving the fabric during printing.

D. Applying excessive ink.

16. What is the meaning of the reduction method in relief printing?
A. Reducing the size of the fabric.
B. Using less printing ink.
C. Progressively carving the same block after printing each colour stage.
D. Printing without carving a block.
17. Why is reduction printing sometimes called the lost-block method?
A. The block is misplaced during printing.
B. The block is destroyed by water.
C. Areas carved away cannot be restored.
D. The block is always thrown away after the first print.
18. What should an artist do before beginning a reduction print?
A. Start carving without a plan.
B. Plan the composition and colour sequence.
C. Print all colours at the same time.
D. Wash the block in hot water.
19. What is colour separation?
A. Mixing all colours into one container.
B. Dividing a design into different colour areas or layers.
C. Removing colour from the fabric.
D. Painting the entire fabric one colour.
20. Which of the following is an example of complementary colours?
A. Yellow and yellow-orange.
B. Blue and orange.
C. Green and yellow-green.
D. Red and red-orange.

21. Which colour scheme uses colours that are next to one another on the colour wheel?
A. Complementary
B. Analogous
C. Monochromatic
D. Neutral
22. Why should a learner allow the first colour layer to dry sufficiently before printing another layer?
A. To make the fabric shrink.
B. To reduce the risk of smudging and unwanted colour transfer.
C. To make the block heavier.
D. To remove the carved design.
23. Which of the following is an advantage of linoleum as a block-making material?

A. It cannot be carved.

B. It is always transparent.

C. It allows controlled carving of designs.

D. It dissolves immediately in water.

24. What is the purpose of a padded printing surface?

A. To make the fabric waterproof.

B. To support the fabric and help produce even impressions.

C. To remove colour from the block.

D. To sharpen the roller.

25. Which of the following may cause blurred impressions?

A. Applying a controlled amount of ink.

B. Using a clean printing block.

C. Applying excessive ink.

D. Using registration guides.

26. Which artist is widely associated with experimental linocut and reduction printing?

A. Pablo Picasso

B. Isaac Newton

C. Charles Darwin

D. Albert Einstein

27. Angie Lewin's printmaking is particularly useful as inspiration for motifs based on:

A. Electrical circuits only.

B. Plants, landscapes and natural forms.

C. Road construction only.

D. Mathematical equations only.

28. Dennis Muraguri's engagement with Kenyan everyday life and popular visual culture can inspire learners to:

A. Avoid local subject matter.

B. Use local experiences as sources of artistic inspiration.

C. Copy every artwork exactly.

D. Ignore visual storytelling.

29. Which action demonstrates safe carving practice?

A. Cutting towards the supporting hand.

B. Leaving sharp tools on the floor.

C. Cutting away from the body using a stable cutting surface.

D. Running while carrying carving tools.

30. Which of the following is the best way to appraise a fellow learner's printed fabric?

A. Insult the learner's work.

B. Ignore the artwork.

C. Give respectful and constructive feedback.

D. Compare the learner unfairly with others.

SECTION A: ANSWER KEY

Question	Answer	Question	Answer	Question	Answer
1	B	11	B	21	B
2	C	12	B	22	B
3	A	13	A	23	C
4	B	14	C	24	B
5	C	15	B	25	C
6	A	16	C	26	A
7	B	17	C	27	B
8	A	18	B	28	B
9	C	19	B	29	C
10	A	20	B	30	C

SECTION B: STRUCTURED QUESTIONS

Instructions: Answer all the questions. The section carries 50 marks.

QUESTION 1: Understanding Relief Block Printing (8 marks)

a) Define the term relief block printing. (2 marks)

b) State three characteristics of relief block printing. (3 marks)

c) Explain three functions of a roller in relief block printing. (3 marks)

QUESTION 2: Materials, Tools and Block Preparation (8 marks)

a) Identify four materials that can be used to make relief printing blocks. (4 marks)

b) State two qualities of a good relief printing block. (2 marks)

c) Explain two precautions a learner should observe when carving a printing block. (2 marks)

QUESTION 3: Motifs and Repeat Patterns (8 marks)

a) Define the term motif. (2 marks)

b) Identify three sources of inspiration for freehand motifs. (3 marks)

c) Explain three considerations when arranging motifs to produce an attractive all-over repeat pattern. (3 marks)

QUESTION 4: Reduction Method (10 marks)

a) Explain the meaning of reduction relief printing. (2 marks)

b) Outline four stages involved in producing a two-colour reduction print. (4 marks)

c) Explain two reasons why an artist should plan colour separation before beginning reduction printing. (2 marks)

d) State two challenges that may be experienced when using the reduction method. (2 marks)

QUESTION 5: Practical Application and Quality Control (8 marks)

A Grade 11 learner has been asked to print an all-over floral pattern on cotton fabric using a carved relief block.

a) State two procedures for preparing the fabric before printing. (2 marks)

b) Explain three ways of achieving accurate registration when printing the pattern. (3 marks)

c) Identify three factors that may affect the quality of the printed fabric. (3 marks)

QUESTION 6: Appraisal, Safety and Application (8 marks)

a) State three aspects to consider when appraising a relief-printed fabric. (3 marks)

b) Explain two safety precautions when using carving tools. (2 marks)

c) Give three ways in which relief block printing can be used to generate income in Kenya. (3 marks)

Total: 50 marks

PART III: SUGGESTED MARKING SCHEME

QUESTION 1: Understanding Relief Block Printing (8 marks)

a) Define relief block printing. (2 marks)

- A fabric decoration or printmaking technique in which a design is carved or prepared on a block, leaving raised areas. (1)
- Ink is applied to the raised areas and transferred onto fabric by pressing the block onto it. (1)

b) State three characteristics. (3 marks)

Award 1 mark each for any three:

1. It uses a raised printing surface.
2. Unwanted areas are carved away.
3. Raised areas receive and transfer ink.
4. It can produce repeated impressions.
5. It can be used on fabric and other suitable surfaces.
6. It can produce single-colour or multi-colour designs.
7. It requires pressure to transfer the image.

c) Explain three functions of a roller. (3 marks)

Award 1 mark each for any three well-explained functions:

1. Spreads ink evenly on the printing slab.
2. Transfers a controlled layer of ink onto the raised areas of the block.
3. Helps prevent excessive accumulation of ink.
4. Supports consistent inking during repeated printing.
5. Helps produce clearer and more uniform impressions.

QUESTION 2: Materials, Tools and Block Preparation (8 marks)

a) Identify four materials used to make relief printing blocks. (4 marks)

Award 1 mark each for any four:

1. Wood.
2. Linoleum.
3. Soft carving blocks.
4. Suitable recycled rubber.
5. Firm suitable foam blocks.
6. Other suitable carving materials.

b) State two qualities of a good relief printing block. (2 marks)

Award 1 mark each for any two:

1. Firm and stable.
2. Smooth printing surface.
3. Durable.
4. Suitable for carving.
5. Free from cracks and damage.
6. Able to produce clear impressions.

c) Explain two precautions when carving. (2 marks)

Award 1 mark each for any two explained precautions:

1. Cut away from the body to reduce the risk of injury.
2. Use a stable cutting mat to prevent movement.
3. Hold the tool firmly to maintain control.
4. Keep the supporting hand away from the cutting direction.
5. Use the correct carving tool for the material.
6. Store sharp tools safely after use.

QUESTION 3: Motifs and Repeat Patterns (8 marks)

a) Define motif. (2 marks)

- A motif is a decorative visual unit or element. (1)
- It may be repeated or combined with other elements to form a larger design or pattern. (1)

b) Identify three sources of inspiration. (3 marks)

Award 1 mark each for any three:

1. Nature.
2. Cultural heritage.
3. Geometric forms.
4. Human-made objects.
5. Personal experiences.
6. Imagination.
7. Architecture.
8. Animals and plants.

c) Explain three considerations when arranging motifs. (3 marks)

Award 1 mark each for any three well-explained points:

1. **Spacing:** Motifs should have appropriate spaces between them to avoid overcrowding.
2. **Rhythm:** Repetition should create a pleasing visual sequence.
3. **Balance:** Motifs should be distributed to create visual stability.
4. **Movement:** Their arrangement should guide the viewer's eye across the fabric.
5. **Consistency:** Motifs should maintain an appropriate size and style.
6. **Registration:** Motifs should be accurately positioned.
7. **Colour harmony:** Selected colours should work well together.

QUESTION 4: Reduction Method (10 marks)

a) Explain the meaning of reduction relief printing. (2 marks)

- It is a relief printing technique in which the same block is progressively carved after each printing stage. (1)
- The successive reductions allow different colour layers to be printed from the same block. (1)

b) Outline four stages in producing a two-colour reduction print. (4 marks)

Award 1 mark each for any four stages in the correct sequence:

1. Develop and transfer the design onto the block.
2. Carve the first-stage block, leaving the required raised areas.
3. Apply the first colour and print it onto the fabric.
4. Allow the first colour to dry sufficiently.
5. Carve away selected raised areas to reduce the block.
6. Apply the second colour to the remaining raised areas.
7. Register the block accurately over the first print.
8. Print the second colour and allow the fabric to dry.

c) Explain two reasons for planning colour separation. (2 marks)

Award 1 mark each for any two:

1. It helps determine the colour sequence.
2. It identifies which areas should remain raised at each stage.
3. It prevents accidental removal of important design areas.
4. It helps create effective colour contrast.
5. It reduces printing mistakes.
6. It supports accurate registration.

d) State two challenges of the reduction method. (2 marks)

Award 1 mark each for any two:

1. Carved areas cannot be restored.
2. Poor registration may misalign colour layers.
3. The block may become fragile after repeated carving.
4. The process requires careful planning.
5. It is time-consuming.
6. Mistakes may damage the whole composition.

QUESTION 5: Practical Application and Quality Control (8 marks)

a) State two procedures for preparing fabric. (2 marks)

Award 1 mark each for any two:

1. Wash the fabric where necessary to remove dirt and finishes.
2. Dry the fabric completely.
3. Iron the fabric to remove wrinkles.
4. Cut the fabric to the required size.
5. Spread the fabric on a padded printing surface.
6. Secure the fabric to prevent movement.

b) Explain three ways of achieving accurate registration. (3 marks)

Award 1 mark each for any three:

1. Draw guidelines to show where each motif should be placed.
2. Use a ruler to measure spacing between impressions.
3. Use a registration template.
4. Mark the block's positioning points.
5. Use masking tape to guide placement.
6. Keep the fabric firmly secured.
7. Use registration marks to align successive colour layers.

c) Identify three factors affecting print quality. (3 marks)

Award 1 mark each for any three:

1. Quality of the block.
2. Quality of carving.
3. Type and consistency of ink.
4. Amount of ink applied.
5. Printing pressure.
6. Fabric preparation.
7. Registration accuracy.
8. Drying conditions.
9. Cleanliness of the block.
10. Quality of the printing surface.

QUESTION 6: Appraisal, Safety and Application (8 marks)

a) State three aspects to consider when appraising a printed fabric. (3 marks)

Award 1 mark each for any three:

1. Originality of the motif.
2. Clarity of the print.
3. Quality of carving.
4. Colour harmony.
5. Colour contrast.
6. Registration accuracy.
7. Pattern consistency.
8. Creativity.
9. Overall finishing.
10. Suitability for intended use.

b) Explain two safety precautions when using carving tools. (2 marks)

Award 1 mark each for any two:

1. Cut away from the body to prevent injuries.
2. Use a stable cutting surface to prevent slipping.
3. Keep the supporting hand away from the cutting direction.
4. Store sharp tools safely after use.
5. Use tools under appropriate supervision.

c) Give three ways relief block printing can generate income in Kenya. (3 marks)

Award 1 mark each for any three:

1. Producing printed fabrics for sale to tailors and fashion designers.
2. Making and selling printed tote bags.
3. Producing cushion covers and other home décor products.

4. Making printed scarves and head wraps.
5. Producing customised gifts.
6. Offering fabric printing services to customers.
7. Selling printed tablecloths and curtains.
8. Supplying printed textile products to shops and craft markets.

STRAND 3.0: INDIGENOUS CRAFTS (3D ART)

SUB-STRAND 3.1: POTTERY CRAFTS

1.0 Introduction to Indigenous Crafts

1.1 Meaning of indigenous crafts

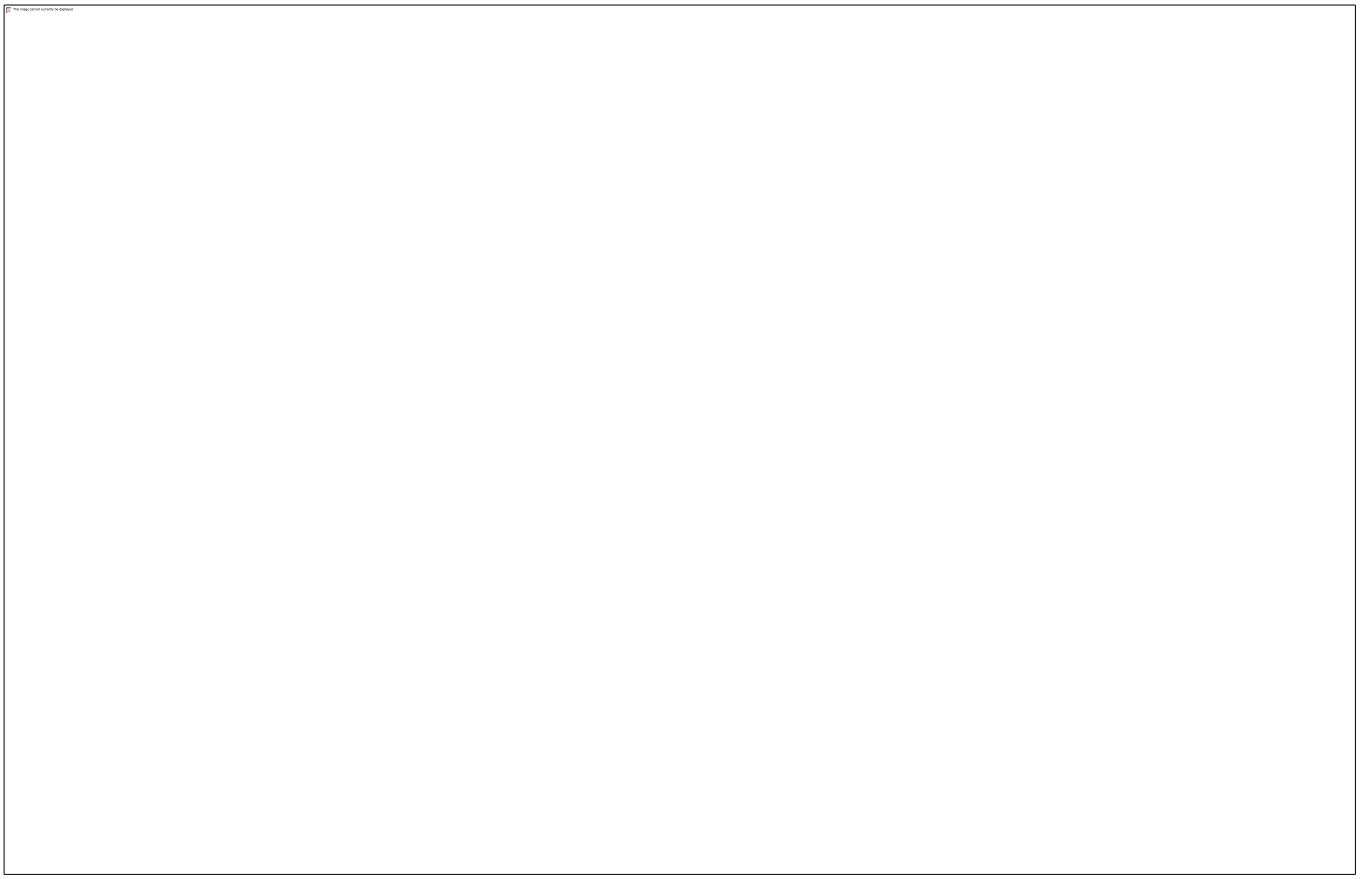
Indigenous crafts are traditional creative skills, techniques and products developed by local communities and passed from one generation to another.

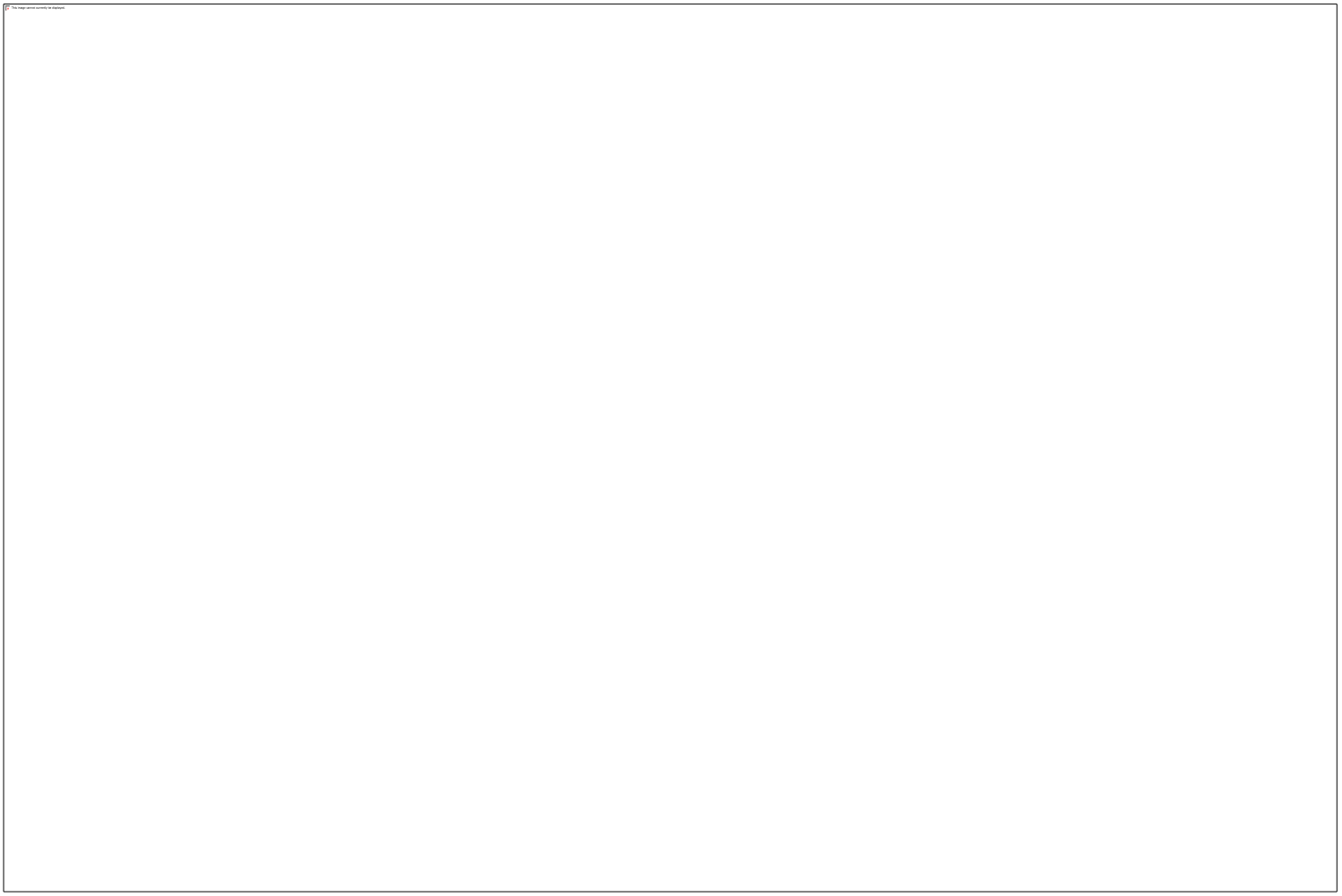
They are often made using locally available materials, traditional knowledge, cultural practices and skills.

Indigenous crafts reflect the history, beliefs, lifestyles, environment and identity of communities.

Examples of indigenous crafts in Kenya and Africa include:

1. Pottery and clay modelling.
2. Basketry.
3. Wood carving.
4. Leatherwork.
5. Beadwork.
6. Weaving.
7. Metalwork.
8. Stone carving.
9. Mat making.
10. Traditional textile decoration.







1.2 Meaning of pottery

Pottery is the art and process of making objects from clay by shaping, modelling or constructing them, decorating them, drying them and usually firing them to produce hard and durable ceramic objects.

Pottery products may be functional, decorative or both.

Examples of pottery products:

- Water pots.
- Cooking pots.
- Storage jars.
- Cups and mugs.
- Bowls.
- Plates.
- Flower vases.
- Candle holders.
- Decorative sculptures.
- Incense holders.
- Clay tiles.





1.3 Meaning of indigenous pottery

Indigenous pottery refers to pottery practices developed and used by local communities over generations, using their traditional knowledge, locally available clay, tools, construction methods and decorative styles.

Indigenous pottery is important because it:

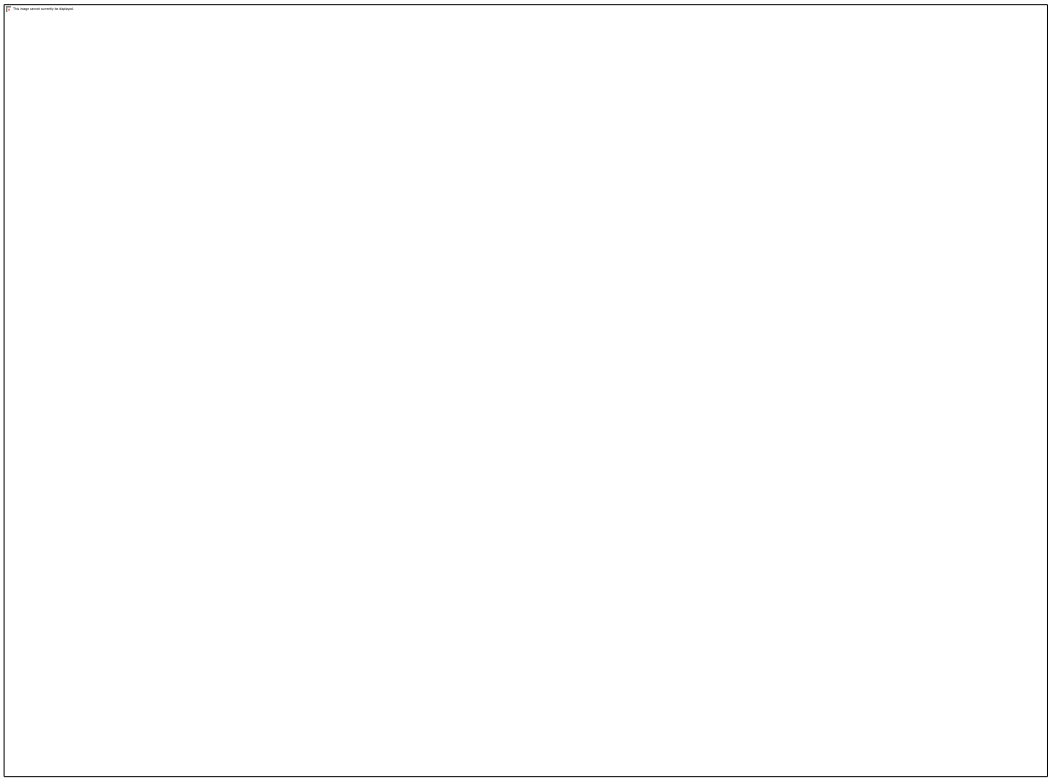
1. Preserves cultural heritage.
2. Provides household utensils.
3. Supports livelihoods and income generation.
4. Reflects community identity.
5. Promotes artistic creativity.
6. Provides knowledge about traditional technologies.
7. Supports tourism and cultural exhibitions.
8. Encourages the use of locally available materials.
9. Provides opportunities for intergenerational learning.
10. Contributes to the creative economy.

1.4 Indigenous pottery in Kenya

Pottery has a long history among communities in Kenya. Different communities have developed pottery traditions according to their environments, available materials, needs and cultural practices.

Some Kenyan communities with pottery traditions include:

a) Luo community



Traditional pottery among Luo communities around the Lake Victoria region has included the production of vessels for domestic and other community uses.

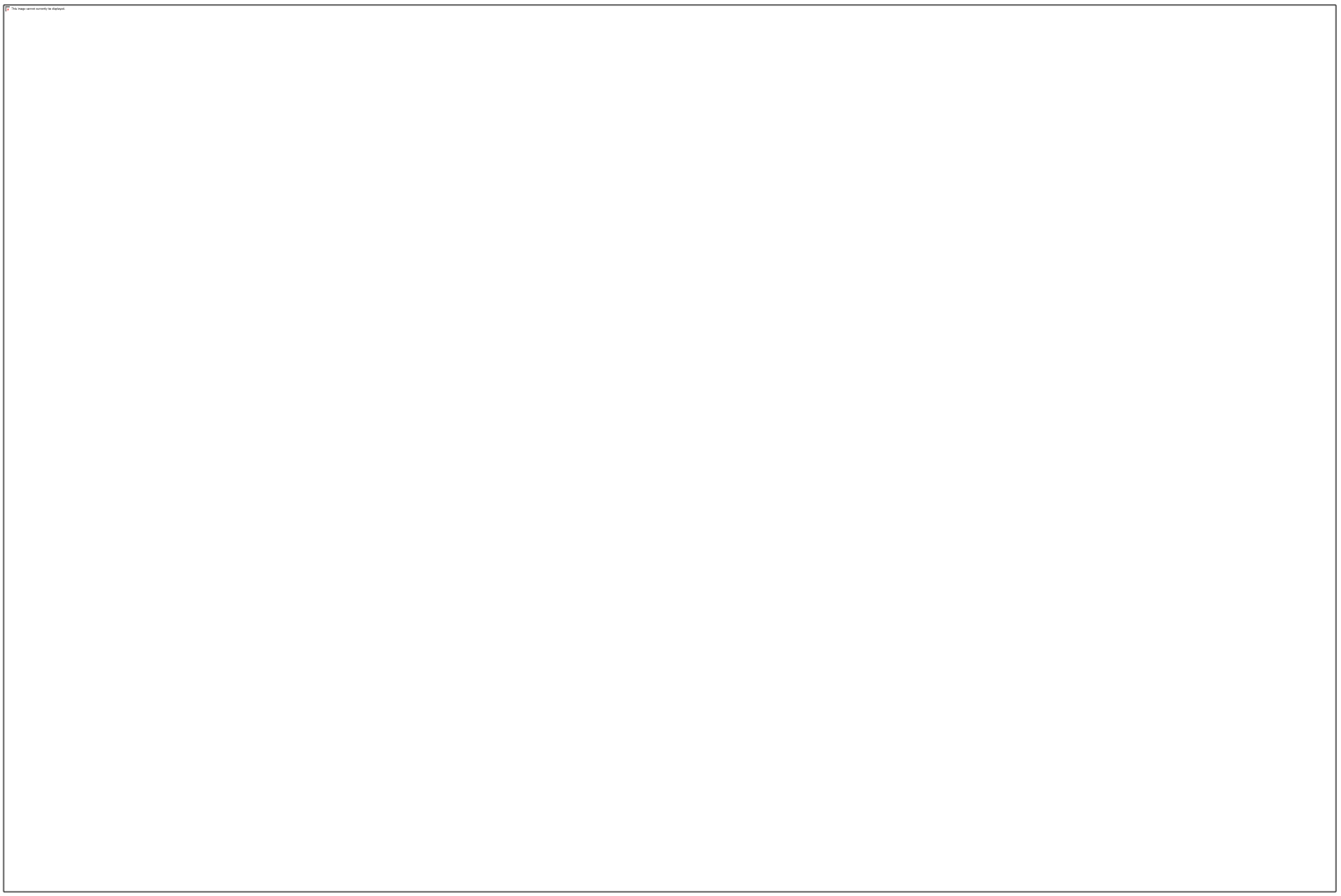
Common pottery products include:

- Cooking pots.
- Water containers.
- Storage vessels.
- Bowls.
- Other household containers.

Features and cultural significance:

1. Clay is obtained from suitable local deposits.
2. Traditional hand-building methods may be used.
3. Vessels are shaped according to their intended functions.
4. Decorative marks may be applied to the surfaces.
5. Pottery knowledge is transmitted through practical learning and observation.
6. Pottery products have served domestic, social and economic purposes.

b) Luhya community



Pottery traditions among communities in western Kenya have included the making of household vessels using locally available clay.

Examples of products include:

- Cooking vessels.
- Water pots.

- Storage containers.
- Bowls.
- Serving vessels.

The forms, construction methods and decorative features may vary among communities and individual potters.

c) Other Kenyan communities

Pottery has also been practised in different parts of Kenya, including communities in the Rift Valley, western Kenya, coastal regions and other areas where suitable clay deposits and pottery traditions exist.

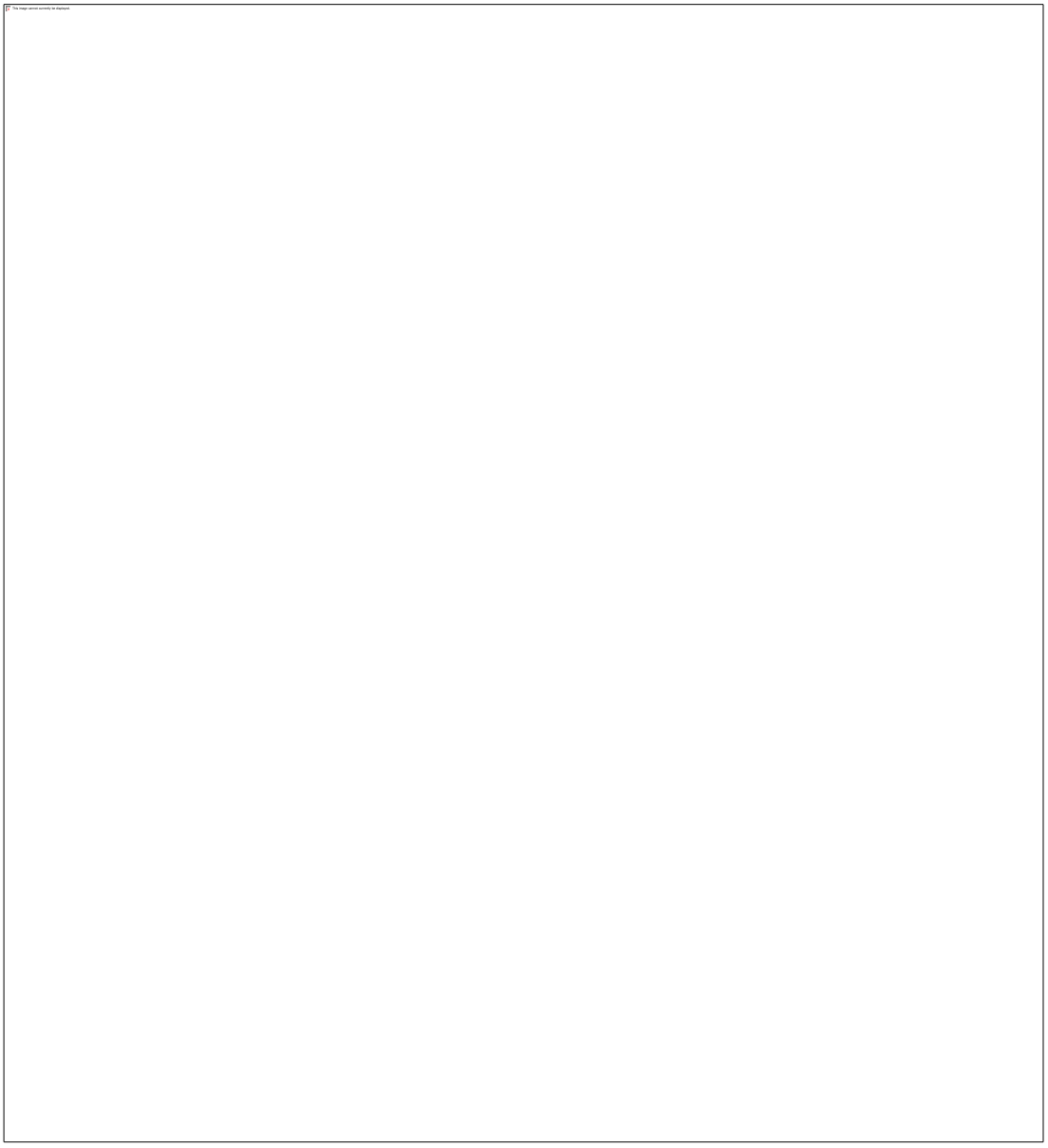
Learners should explore examples from their local environment and, where possible, interview practising potters.

1.5 Indigenous pottery in Africa

African communities have developed distinctive pottery traditions using different materials, techniques and decorative styles.

The following examples provide useful areas of study.

a) Nupe pottery of Nigeria



The Nupe people of Nigeria are known for pottery traditions that include the production of domestic and decorative vessels.

Learners can study:

- Vessel shapes.
- Surface decoration.
- Clay preparation.
- Construction methods.
- The relationship between pottery and everyday life.

b) Zulu pottery of South Africa



Zulu pottery traditions include vessels made for domestic and cultural purposes.

Learners can observe:

- Vessel forms.
- Surface treatment.

- Decorative patterns.
- The use of shape and proportion.
- The relationship between objects and cultural practices.

c) Other African pottery traditions



Other African pottery traditions can be studied to understand the diversity of pottery in Africa.

1.6 Lessons learners can draw from indigenous pottery

1. Use of locally available materials.
2. Creativity in shaping clay.
3. Understanding the functional purpose of objects.
4. Respect for cultural heritage.
5. Skill in surface decoration.
6. Development of distinctive forms.
7. Knowledge of traditional firing methods.
8. Appreciation of handmade objects.
9. Development of sustainable craft practices.
10. Opportunities for entrepreneurship.

Cultural appreciation: Learners should study indigenous pottery respectfully, acknowledge the communities from which examples originate and avoid treating all African pottery as having the same appearance or meaning.

2.0 Understanding Clay as a Pottery Material

2.1 Meaning of clay

Clay is a naturally occurring fine-grained earth material made mainly of very small mineral particles. When mixed with an appropriate amount of water, it becomes plastic and can be shaped into different forms.

When dried, clay becomes firm. When fired at a suitable temperature, it undergoes permanent physical and chemical changes and becomes a ceramic material.

2.2 Properties of clay

Clay has several properties that make it suitable for pottery.

a) Plasticity

Plasticity is the ability of clay to be shaped and retain its form without immediately cracking or collapsing.

Importance:

- Allows the potter to model different shapes.
- Makes slab construction possible.
- Supports joining of clay components.
- Enables surface modelling and decoration.

b) Workability

Workability refers to how easily clay can be manipulated during construction.

A workable clay body should be neither excessively wet nor too dry.

c) Cohesion

Cohesion is the ability of clay particles to hold together.

Importance:

- Helps the clay maintain its shape.
- Supports the joining of slabs.
- Reduces the likelihood of the clay falling apart during modelling.

d) Shrinkage

Shrinkage is the reduction in size of clay as it loses moisture during drying and firing.

Importance:

- Must be considered when determining the dimensions of pottery.
- Excessive or uneven shrinkage can cause cracking and warping.
- Different clay bodies shrink at different rates.

e) Porosity

Porosity refers to the presence of small spaces or pores within a material.

In pottery, the level of porosity affects how much water a fired clay body can absorb.

f) Fusibility

Fusibility is the tendency of clay minerals and other ingredients to soften or partially melt at high temperatures.

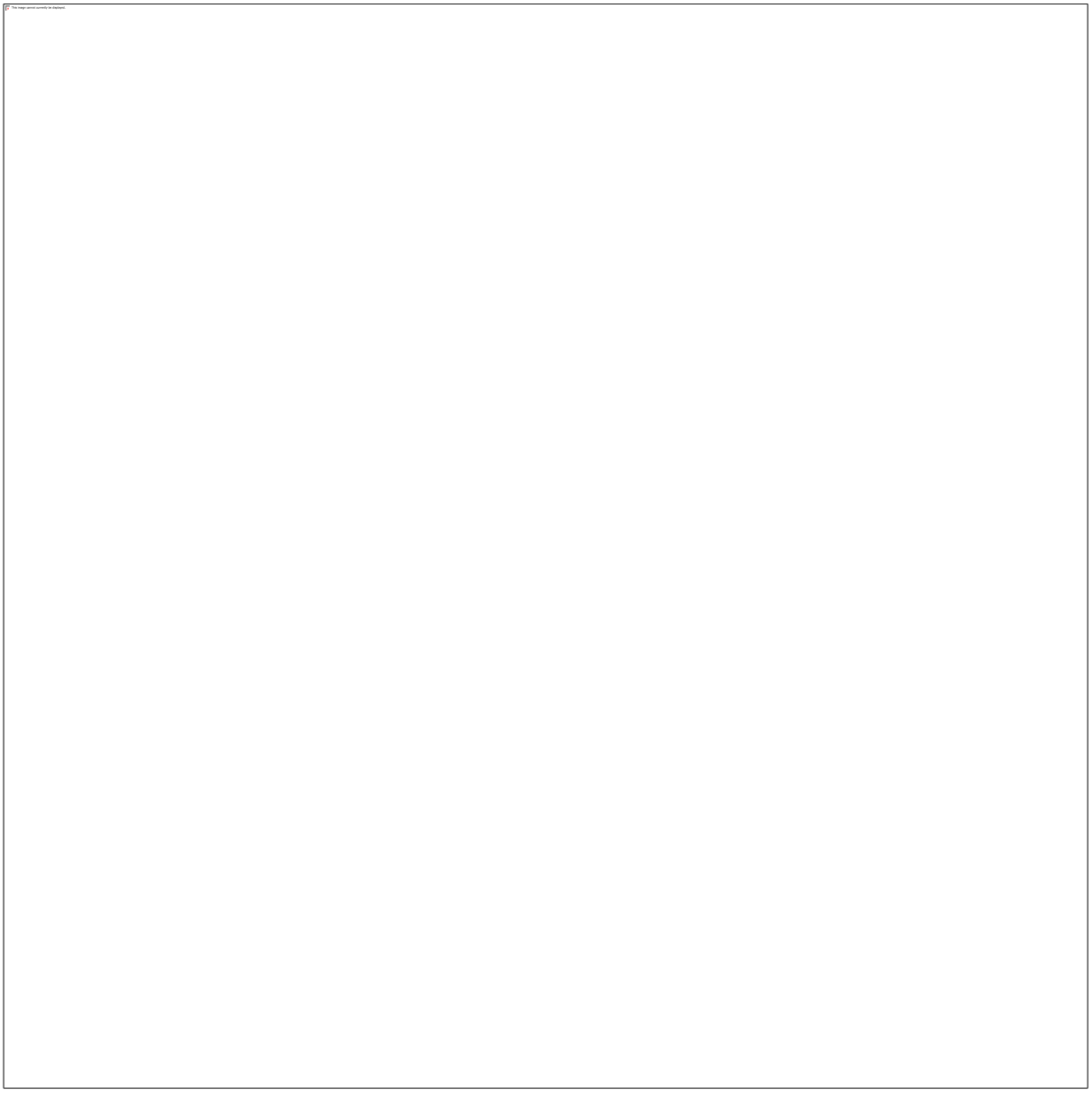
It is important when selecting clay for a particular firing temperature.

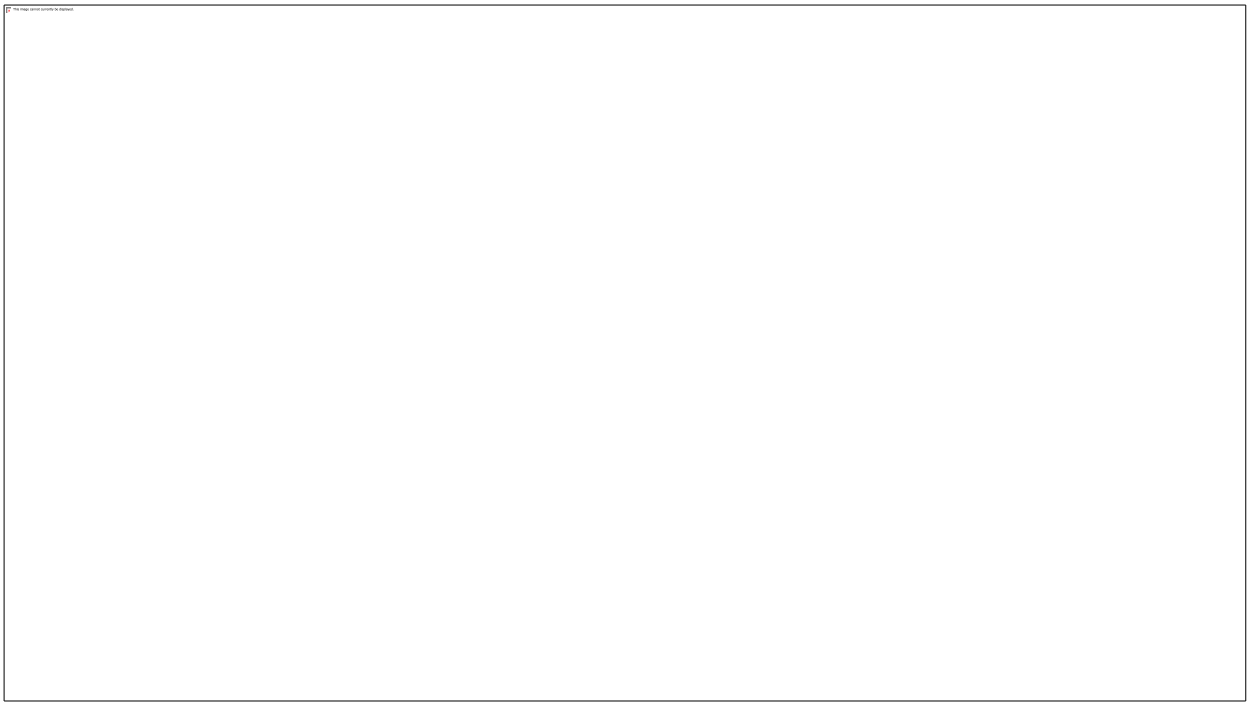
g) Colour

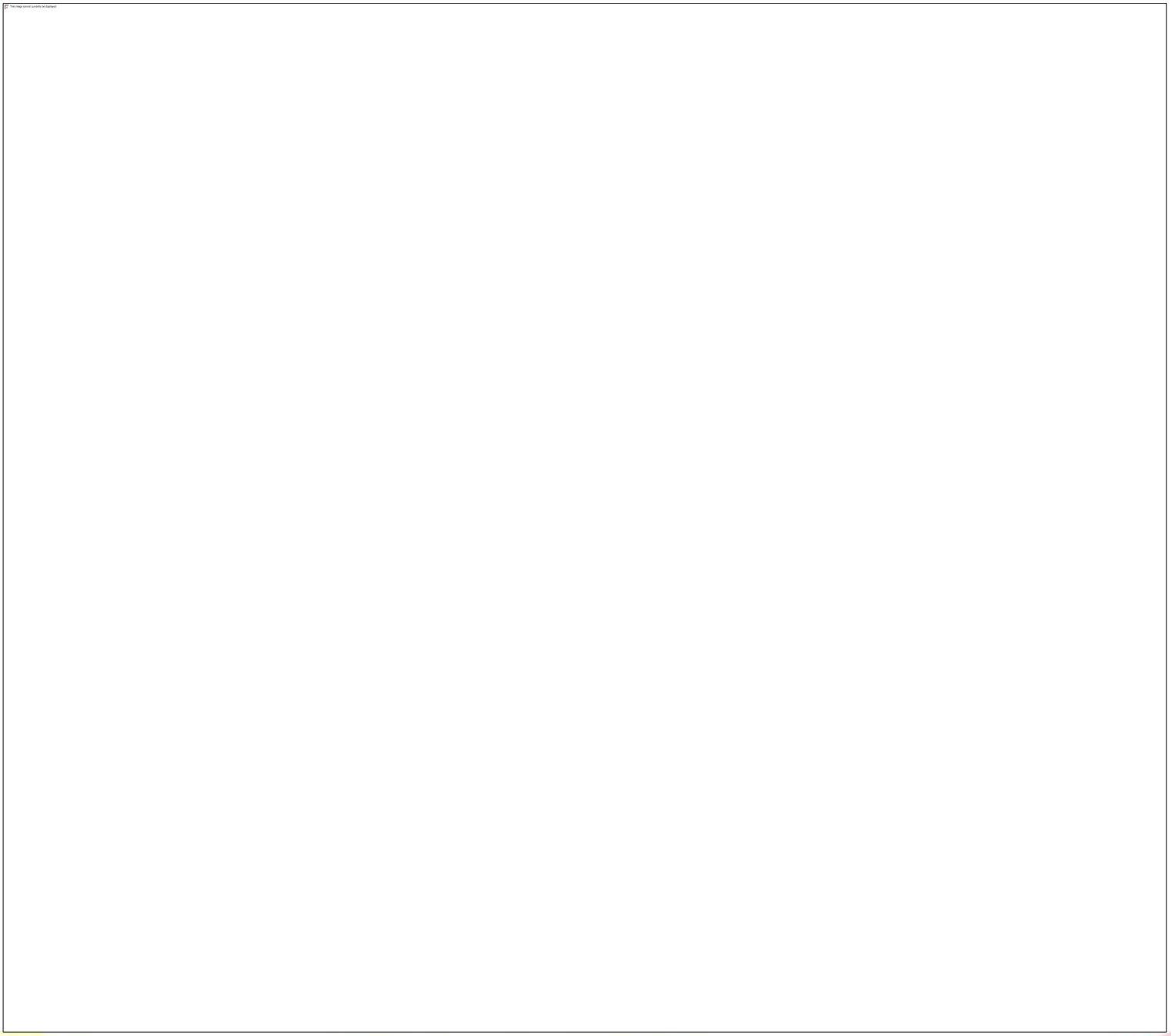
Clay may have different natural colours depending on its mineral composition and impurities.

Examples include:

- Red.
- Brown.
- Grey.
- Cream.
- White.
- Yellowish clay.







2.3 Types of clay used in pottery

a) Earthenware clay

Earthenware is a type of clay body that is generally fired at relatively low temperatures compared with stoneware and porcelain.

Characteristics:

1. Often contains iron and other mineral impurities.
2. May produce red, brown or other earthy colours.
3. Is generally suitable for hand-building.
4. May remain porous after firing unless glazed or otherwise treated.
5. Is commonly used for traditional pottery and decorative objects.

Uses:

- Flower pots.
- Decorative vases.
- Traditional cooking and storage vessels.
- Bowls.
- Decorative tiles.

b) Stoneware clay

Stoneware clay is used to produce strong ceramic objects when fired to its appropriate maturation temperature.

Characteristics:

1. Usually matures at higher temperatures than earthenware.
2. Can produce strong and durable pottery.
3. Often becomes relatively dense after firing.
4. May have different natural colours.
5. Is suitable for functional and decorative ware.

Uses:

- Mugs.
- Plates.
- Bowls.
- Vases.
- Serving dishes.

c) Kaolin or china clay

Kaolin is a relatively pure clay mineral commonly associated with the production of porcelain.

Characteristics:

1. It is usually white or light-coloured.
2. It has relatively low plasticity compared with many other pottery clays.

3. It is used in ceramic bodies and other ceramic products.
4. It requires appropriate formulation and firing conditions.

Uses:

- Porcelain.
- Fine ceramic ware.
- Ceramic mixtures.
- Specialised ceramic products.

d) Ball clay

Ball clay is a fine-grained, highly plastic clay used in ceramic bodies.

Characteristics:

1. Has high plasticity.
2. Helps improve workability.
3. May have a darker natural colour before firing.
4. Is often blended with other clays.

Uses:

- Ceramic bodies.
- Pottery mixtures.
- Improving plasticity in clay bodies.

2.4 Preparing clay for pottery

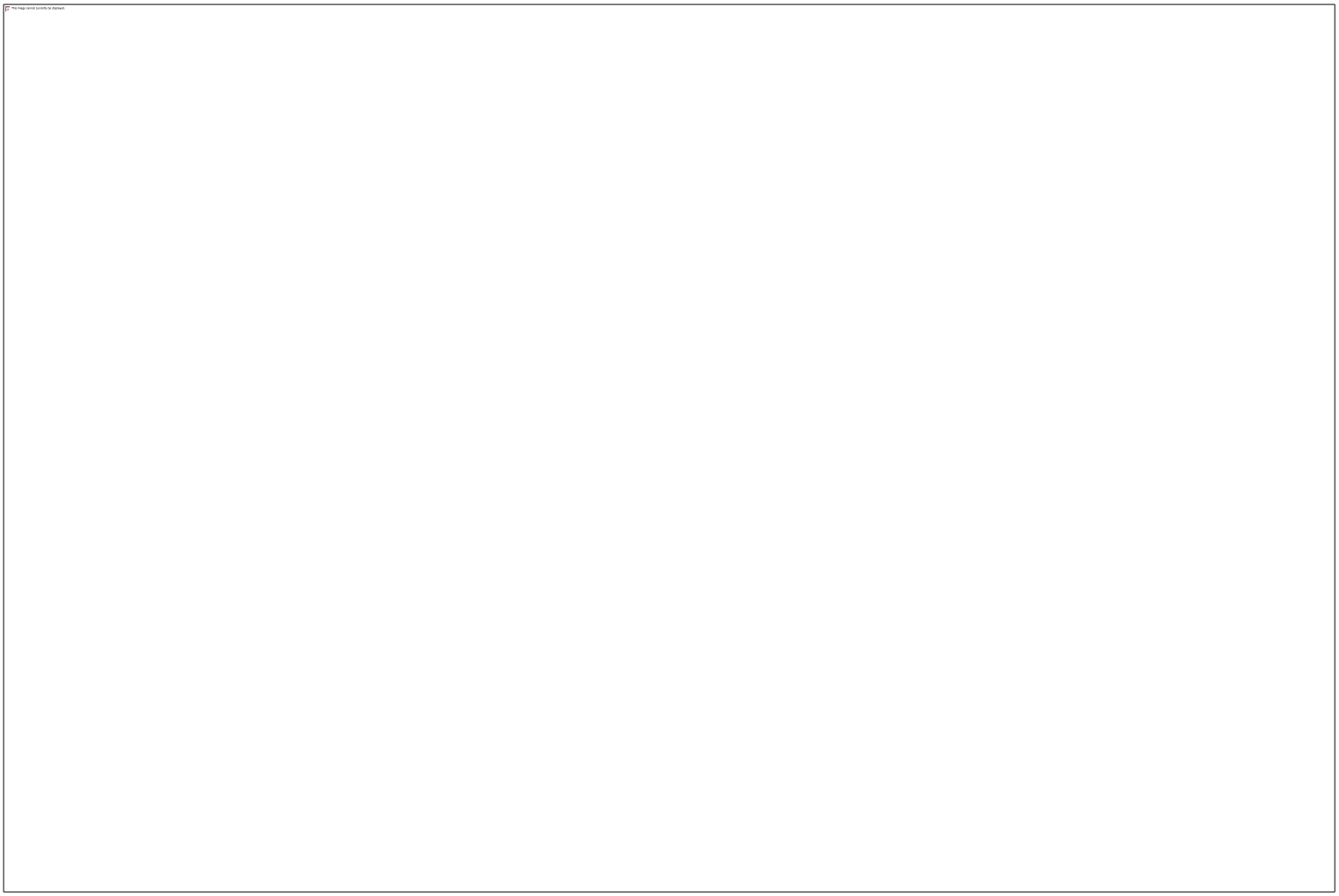
Clay must be properly prepared before it is used for modelling.

The preparation process may involve:

1. Collecting suitable clay.
2. Removing stones, roots and other impurities.
3. Drying the clay where appropriate.
4. Breaking large lumps into smaller pieces.
5. Adding water gradually.
6. Mixing the clay thoroughly.
7. Sieving or screening where necessary.
8. Removing excess water.
9. Wedging or kneading the clay.
10. Storing it in a suitable condition before use.

2.5 Meaning of wedging

Wedging is the process of kneading and compressing clay to make it more uniform, remove trapped air pockets and distribute moisture more evenly.



Importance of wedging:

1. Helps remove trapped air.
2. Makes the clay more uniform.
3. Distributes moisture evenly.
4. Improves workability.
5. Helps reduce certain construction defects.
6. Prepares clay for modelling.
7. Makes the clay easier to shape.

2.6 Common problems caused by poorly prepared clay

Problem	Possible cause	Prevention
Cracking	Uneven moisture or rapid drying	Prepare clay uniformly and dry gradually
Air bubbles	Poor wedging	Wedge clay properly
Weak joints	Poor joining technique	Score and slip the joining surfaces
Warping	Uneven slab thickness or uneven drying	Maintain uniform thickness and support the form

Slumping	Excessively wet or weak clay	Use clay at a suitable working consistency
Surface defects	Stones or impurities	Clean and sieve clay where necessary

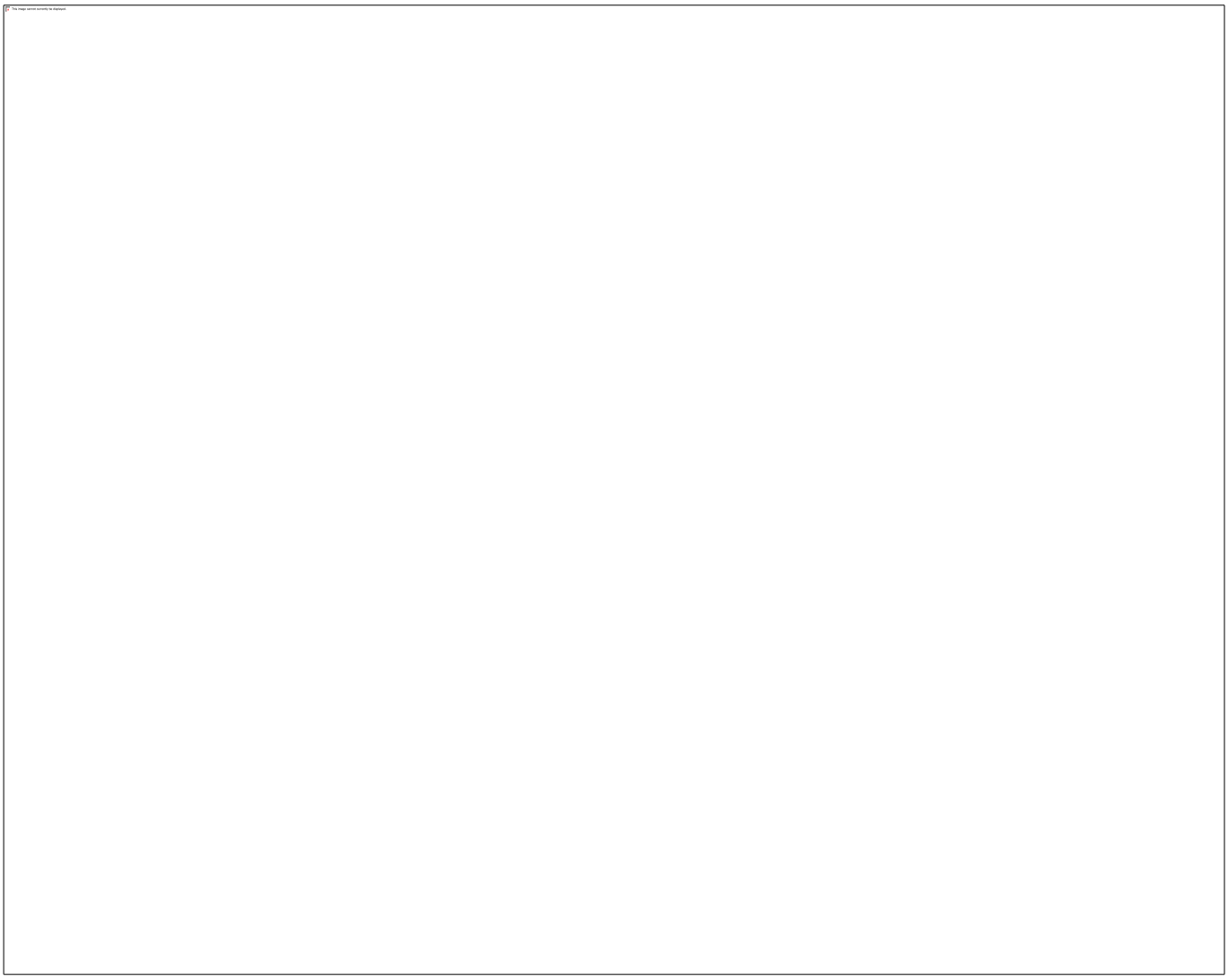
3.0 Understanding Greenware in Pottery

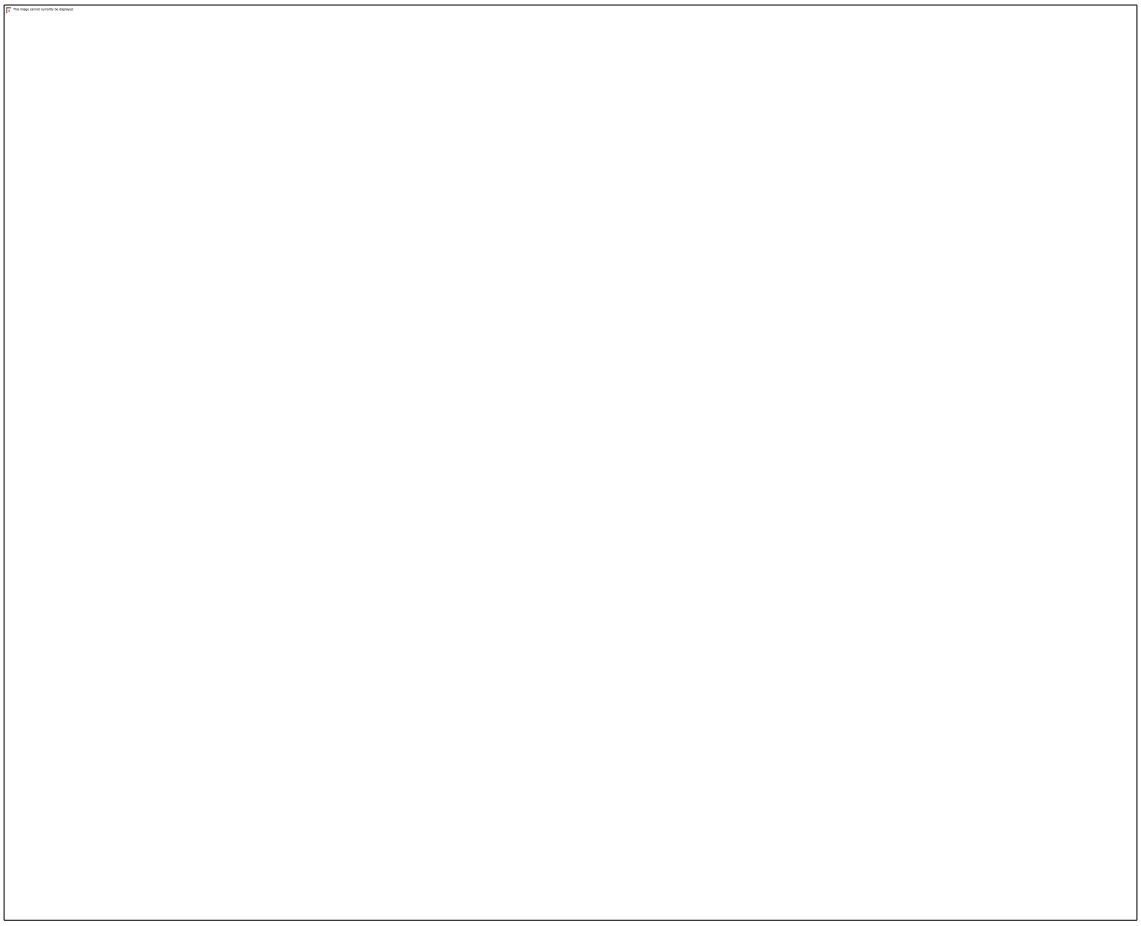
3.1 Meaning of greenware

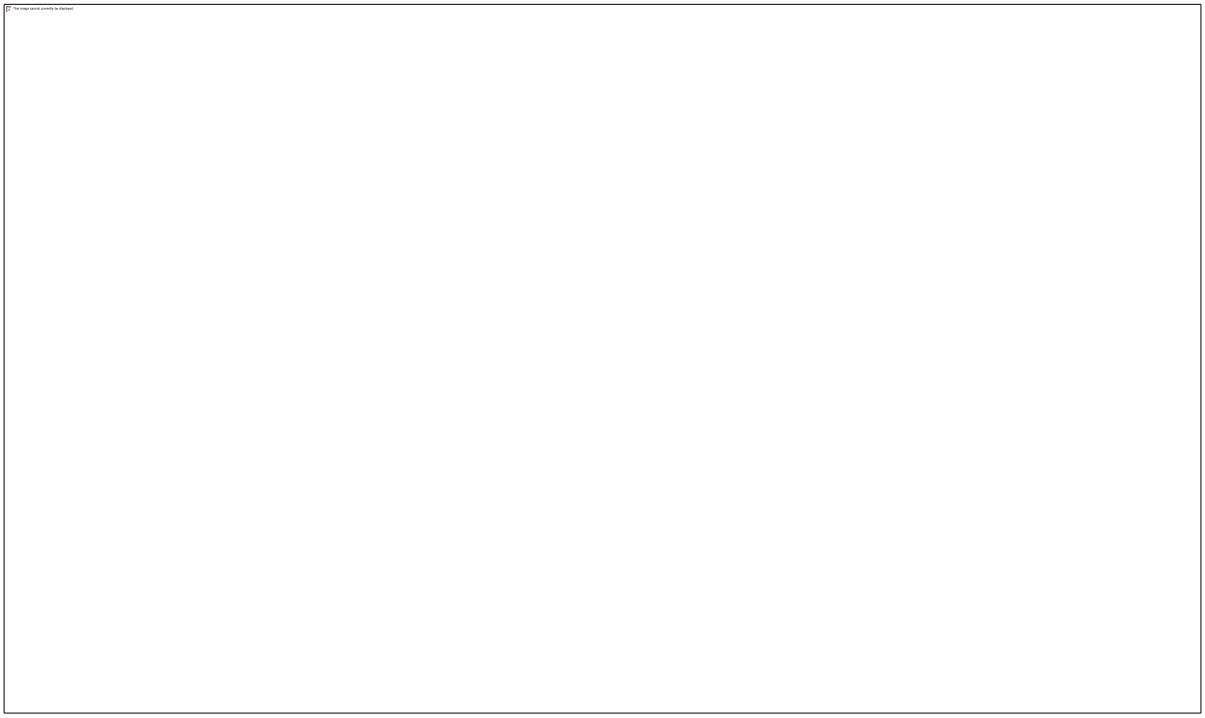
Greenware is pottery that has been shaped from clay but has not yet been fired in a kiln.

It may be wet, leather hard or bone dry, depending on the stage of drying.

Greenware is still unfired and can be damaged by water, pressure or careless handling.







3.2 Characteristics of greenware

1. It has not undergone firing.
2. It may be soft or firm depending on its moisture content.
3. It can be decorated using suitable unfired-clay techniques.
4. It is generally more fragile than fired pottery.
5. It may shrink as moisture is lost.
6. It can crack if dried too quickly or unevenly.

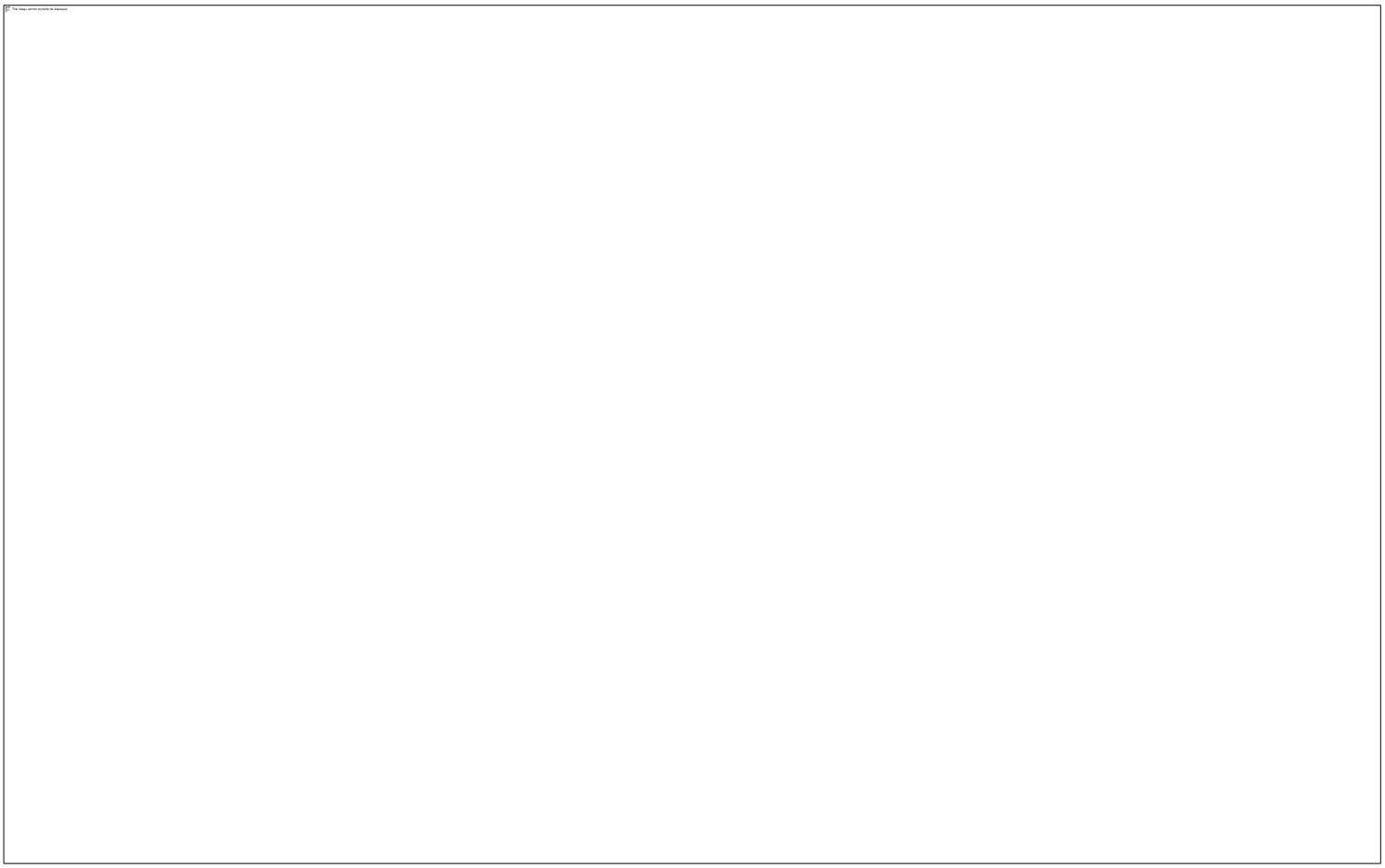
7. It can be reshaped more easily when sufficiently moist.
8. It requires careful handling.
9. It should be dried appropriately before firing.
10. It is not yet as strong as fired ceramic ware.

3.3 Stages of greenware

Greenware passes through different stages as moisture is removed from the clay.

The main stages include:

1. Wet clay.
2. Plastic stage.
3. Soft leather-hard stage.
4. Leather-hard stage.
5. Firm leather-hard stage.
6. Bone-dry stage.



a) Wet clay stage

This is the stage when clay contains a relatively high amount of water.

Characteristics:

- Very soft.
- Easily moulded.
- Can be reshaped.

- May slump if unsupported.
- Can be joined easily using appropriate methods.

Uses:

- Initial modelling.
- Shaping.
- Forming slabs.
- Joining clay components.

b) Plastic stage

Plastic clay is moist enough to be shaped and manipulated while retaining its form.

Characteristics:

1. It can be rolled into slabs.
2. It can be modelled by hand.
3. It can be joined using scoring and slipping.
4. It can be stretched or compressed.
5. It is suitable for slab construction.

c) Soft leather-hard stage

This stage occurs when clay has lost some moisture but remains slightly soft.

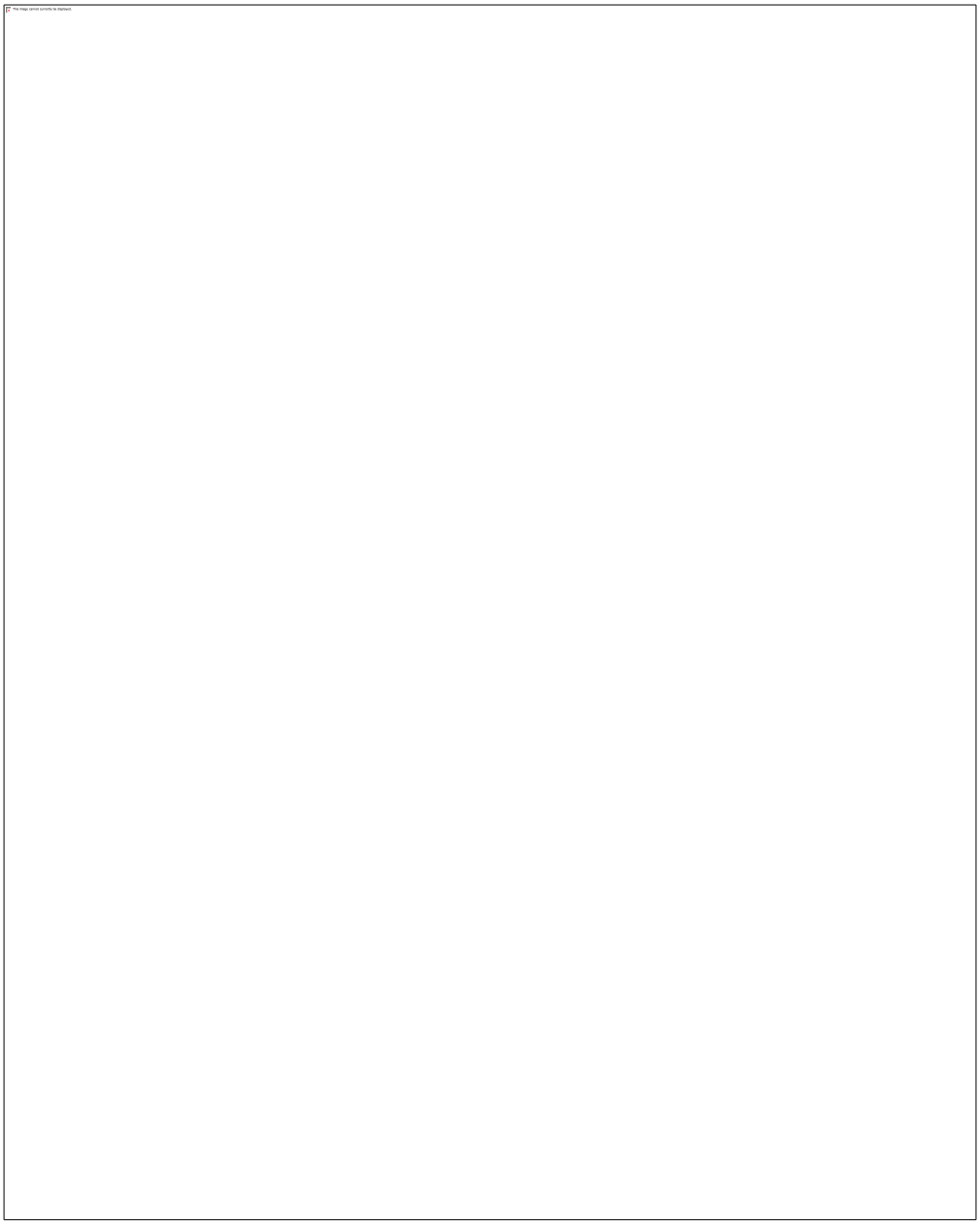
Characteristics:

- Can support its own shape better than wet clay.
- Can still be modified.
- Can be trimmed carefully.
- Can be joined with suitable preparation.
- Is suitable for certain surface treatments.

d) Leather-hard stage

Leather-hard clay has dried sufficiently to become firm while retaining a small amount of moisture.

It is usually firm enough to handle without easily losing its shape, but it can still be carved, incised or decorated.



Characteristics of leather-hard clay:

1. It is firm and holds its shape.
2. It is no longer easily moulded like wet clay.
3. It can be carved using suitable tools.
4. It can be incised to create decorative patterns.
5. It is suitable for sgraffito.
6. It can receive suitable engobe decoration.
7. It can receive slip trailing.
8. It is easier to handle than very wet clay.
9. It can still crack if handled roughly.
10. It continues to shrink slightly as it dries.

e) Firm leather-hard stage

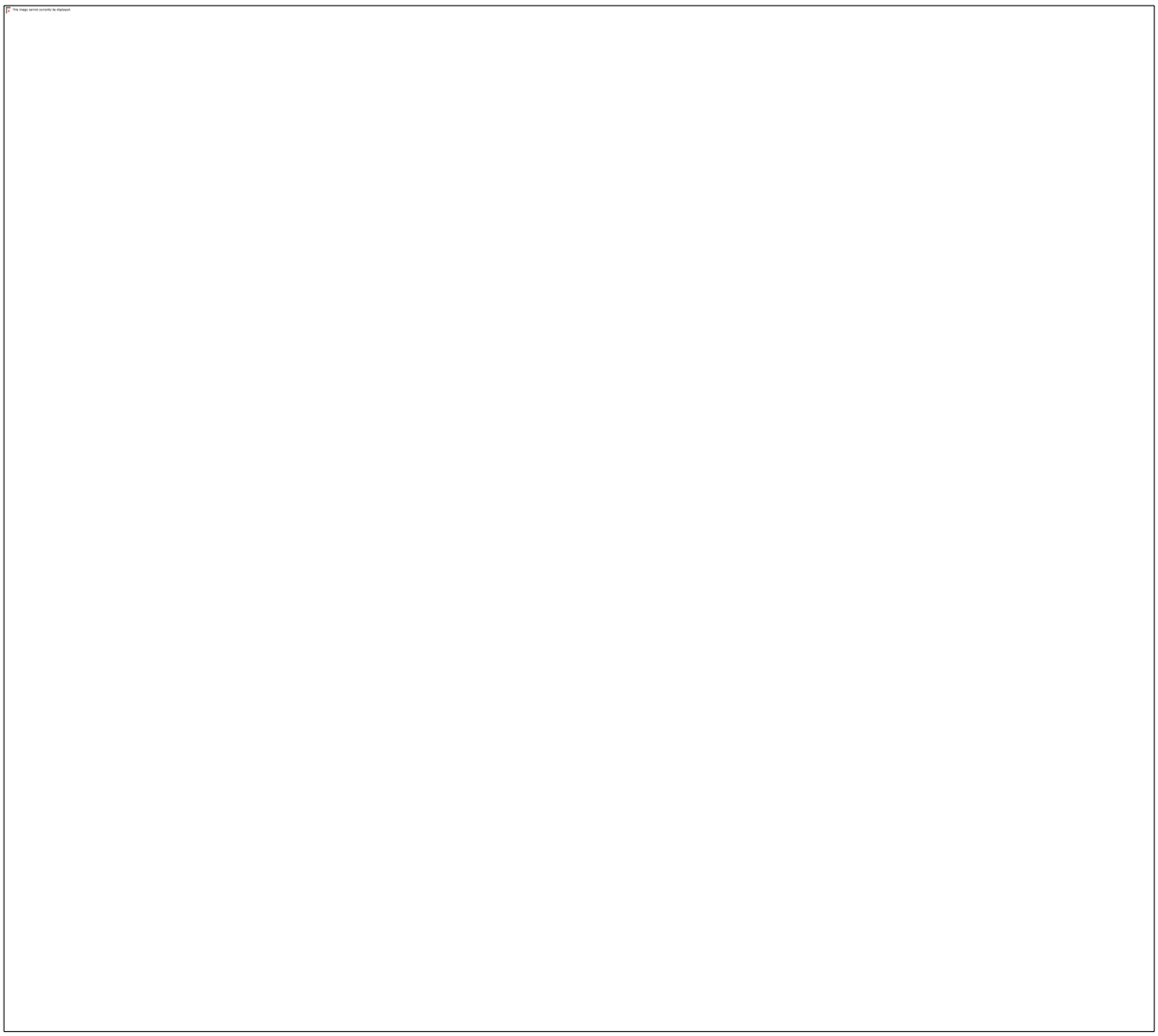
At this stage, clay is firmer and contains less moisture than soft leather-hard clay.

Characteristics:

- Holds its shape firmly.
- Can be carefully carved.
- Can be trimmed.
- Is suitable for detailed surface decoration.
- Requires controlled pressure when decorating.

f) Bone-dry stage

Bone-dry clay has lost almost all free moisture and is ready for firing if it is otherwise properly prepared.



Characteristics:

1. It is very dry.
2. It is fragile and can break easily.
3. It has lost most of its free moisture.
4. It is generally unsuitable for wet decoration techniques that require plastic clay.
5. It should be handled carefully.
6. It is ready for the appropriate initial firing process.

Important distinction: Bone-dry clay is not fired clay. It remains unfired greenware.

3.4 Importance of leather-hard clay in pottery decoration

Leather-hard clay is especially useful for the three decorative techniques in this sub-strand.

It is important because:

1. It is firm enough to hold its shape during decoration.
2. It can be incised or scratched.
3. It allows the artist to create clear decorative lines.
4. It can receive engobe coatings.
5. It can support slip-trailing designs.
6. It is less likely to deform than very wet clay.
7. It allows more controlled surface decoration.
8. It can be handled more easily during detailed work.

4.0 Decorative Techniques in Pottery

4.1 Meaning of decorative techniques in pottery

Decorative techniques in pottery are methods used to improve the visual appearance and surface quality of clay objects by adding patterns, colours, lines, textures, shapes and other artistic features.

Decoration may be applied when clay is wet, leather hard, bone dry or after firing, depending on the technique and materials used.

Importance of decorating pottery

1. **Improves aesthetic appeal:** Decoration makes pottery attractive and visually interesting.
2. **Expresses cultural identity:** Patterns may reflect community traditions, beliefs and lifestyles.
3. **Creates individuality:** Artists can develop unique decorative styles.
4. **Adds texture:** Decoration can make the surface appear or feel textured.
5. **Communicates ideas:** Motifs can tell stories or express emotions.
6. **Improves market value:** Well-decorated pottery may attract buyers.
7. **Enhances functionality and identification:** Decorative features may help distinguish different products.
8. **Encourages creativity:** Artists experiment with different techniques and materials.

4.2 Main decorative techniques covered in this sub-strand

The three main techniques are:

1. Sgraffito.
2. Engobe.
3. Slip trailing.



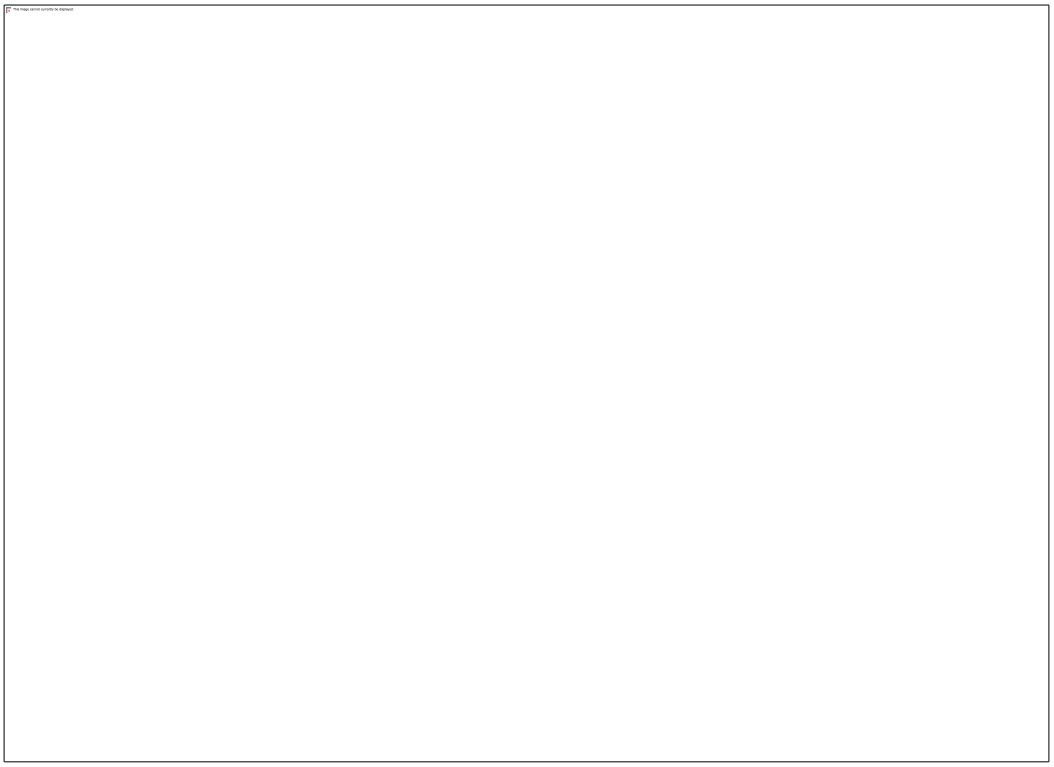
5.0 Sgraffito Technique

5.1 Meaning of sgraffito

Sgraffito is a pottery decoration technique in which a layer of coloured slip or engobe is applied to a clay surface and then scratched, scraped or incised to reveal the underlying clay body or another coloured layer.

The word *sgraffito* comes from an Italian word associated with scratching.

The technique produces contrasting lines, shapes, patterns and images on the surface of pottery.



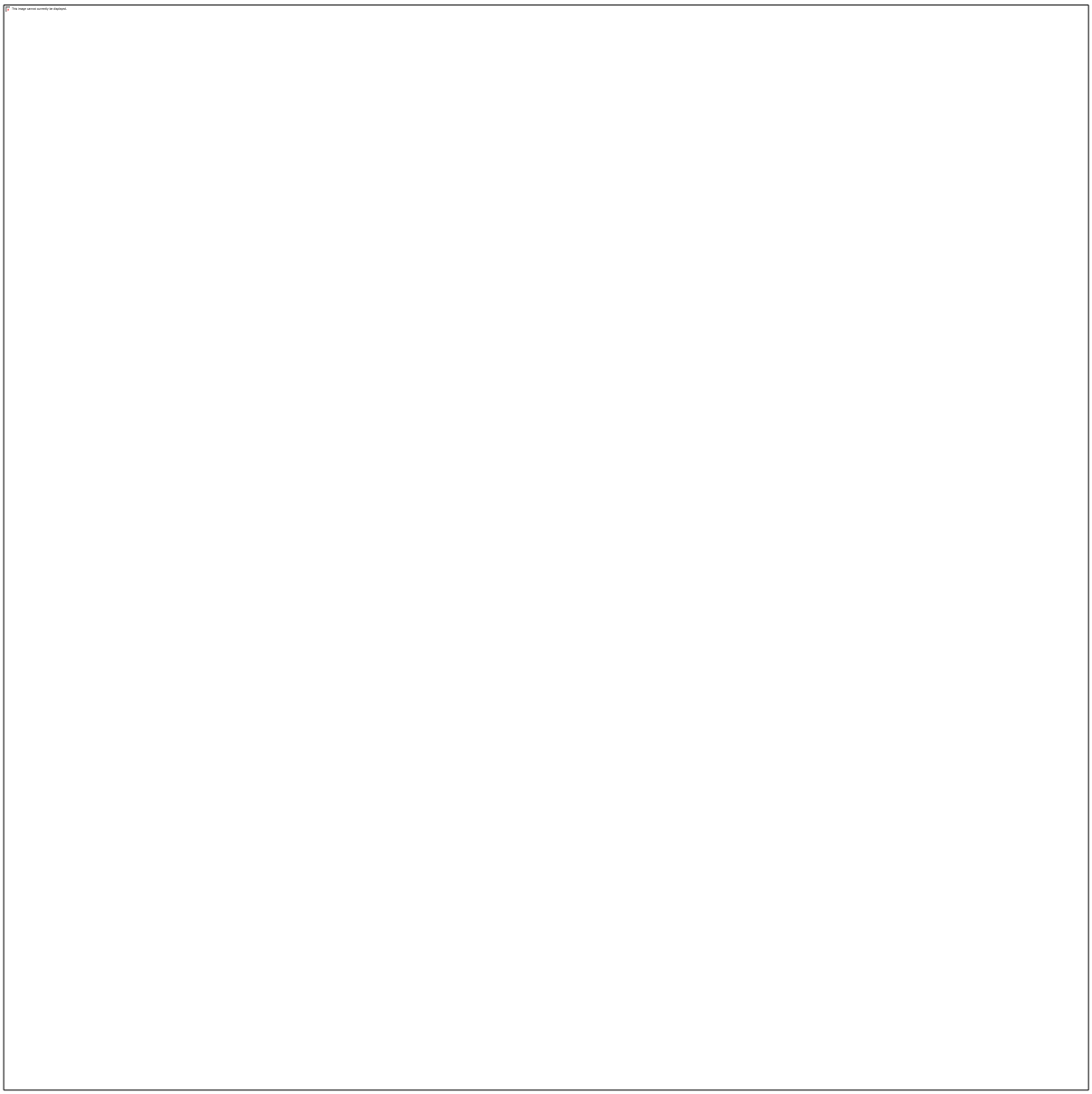


5.2 Characteristics of sgraffito

1. It involves scratching or incising a coated clay surface.
2. It is commonly carried out on leather-hard clay.
3. It may use coloured slip or engobe.
4. It reveals the clay body or a lower decorative layer.
5. It creates contrasting lines and shapes.
6. It can produce detailed patterns.
7. It may be used for figurative or abstract designs.

8. It requires controlled pressure and suitable tools.
9. It can be used on slab-built vases and other pottery forms.
10. It creates both visual and tactile effects.

5.3 Materials and tools used in sgraffito



Materials:

- Leather-hard clay item.
- Coloured slip or engobe.
- Water.
- Suitable clay body.
- Sponge.
- Clean working surface.

Tools:

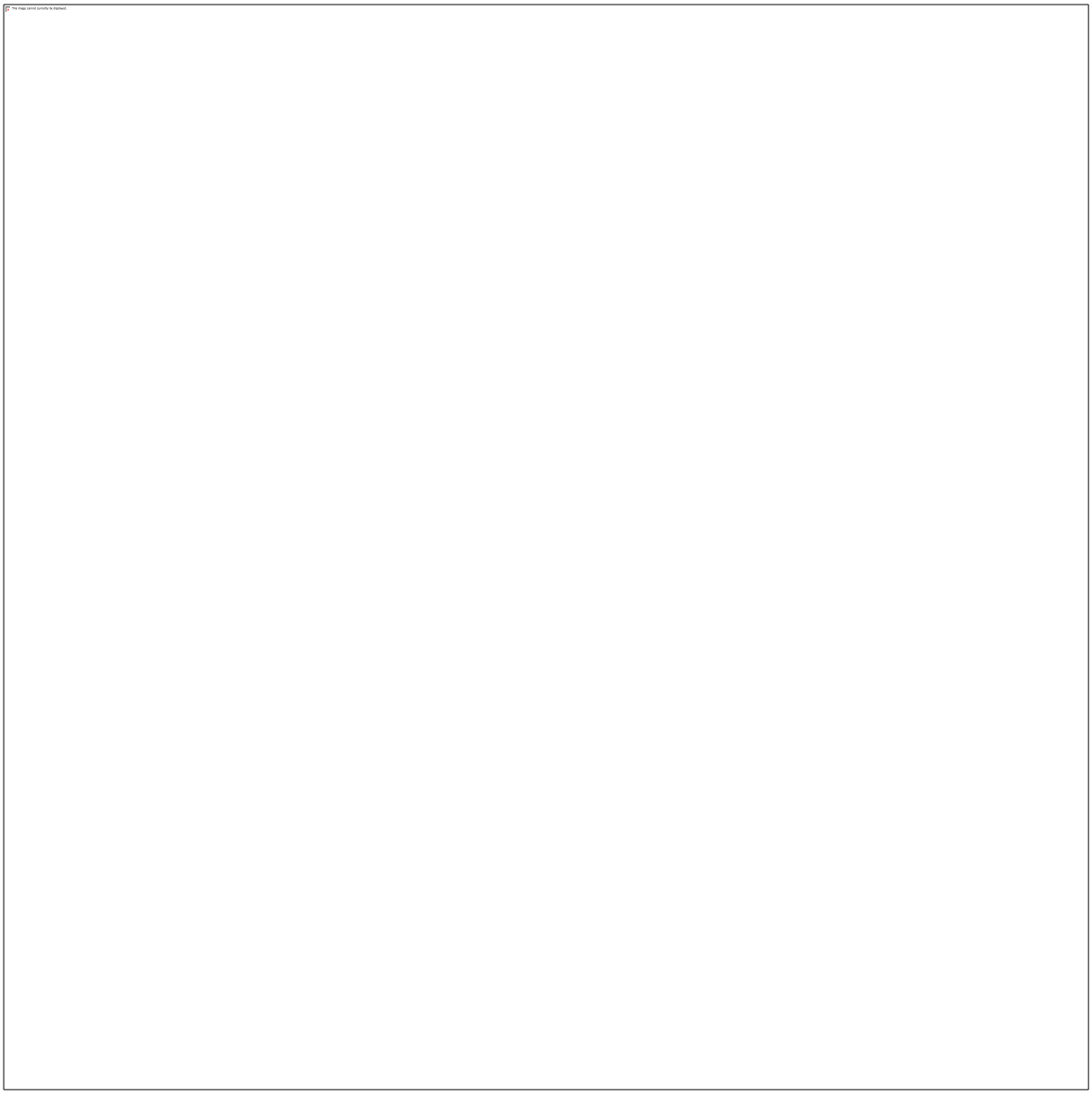
- Wooden modelling tools.
- Metal stylus.

- Needle tool.
- Small carving tools.
- Loop tools.
- Fine brushes.
- Pencil or design marker suitable for clay.
- Soft cloth.

5.4 Steps in applying the sgraffito technique







Step 1: Prepare the clay object

- Construct the pottery item.
- Allow it to dry to the leather-hard stage.
- Ensure that the surface is firm enough to support decoration.
- Remove dust and loose particles.

Step 2: Prepare the decorative coating

- Select a suitable coloured slip or engobe.
- Mix it to an appropriate consistency.
- Ensure that it is smooth and free from lumps.

Step 3: Apply the coating

- Use a brush or another suitable applicator.
- Apply a thin, even layer of engobe or slip.
- Cover the intended decorative area.
- Allow the coating to become suitable for scratching.

Step 4: Develop the design

- Sketch the intended motif lightly where appropriate.
- Choose a suitable pattern.
- Plan the areas to be scratched.
- Consider contrast between the coating and the underlying clay.

Step 5: Scratch the surface

- Use a needle tool, stylus or suitable carving tool.
- Scratch or incise the design through the coating.
- Reveal the underlying clay.
- Vary line thickness where appropriate.
- Avoid cutting too deeply into the clay body.

Step 6: Refine the design

- Remove loose particles carefully.
- Clean unwanted marks.
- Improve the edges of the scratched lines.
- Check the overall balance of the design.

Step 7: Dry and fire

- Allow the decorated item to dry gradually.
- Ensure it is completely dry before firing.
- Fire according to the clay body and coating specifications.
- Apply glaze or other appropriate finishing treatment if required by the intended result.

5.5 Common sgraffito designs

Sgraffito can be used to create many different designs.

a) Geometric patterns

- Triangles.
- Squares.
- Diamonds.
- Circles.
- Zigzags.
- Lines.

b) Nature-inspired patterns

- Leaves.
- Flowers.
- Birds.
- Fish.

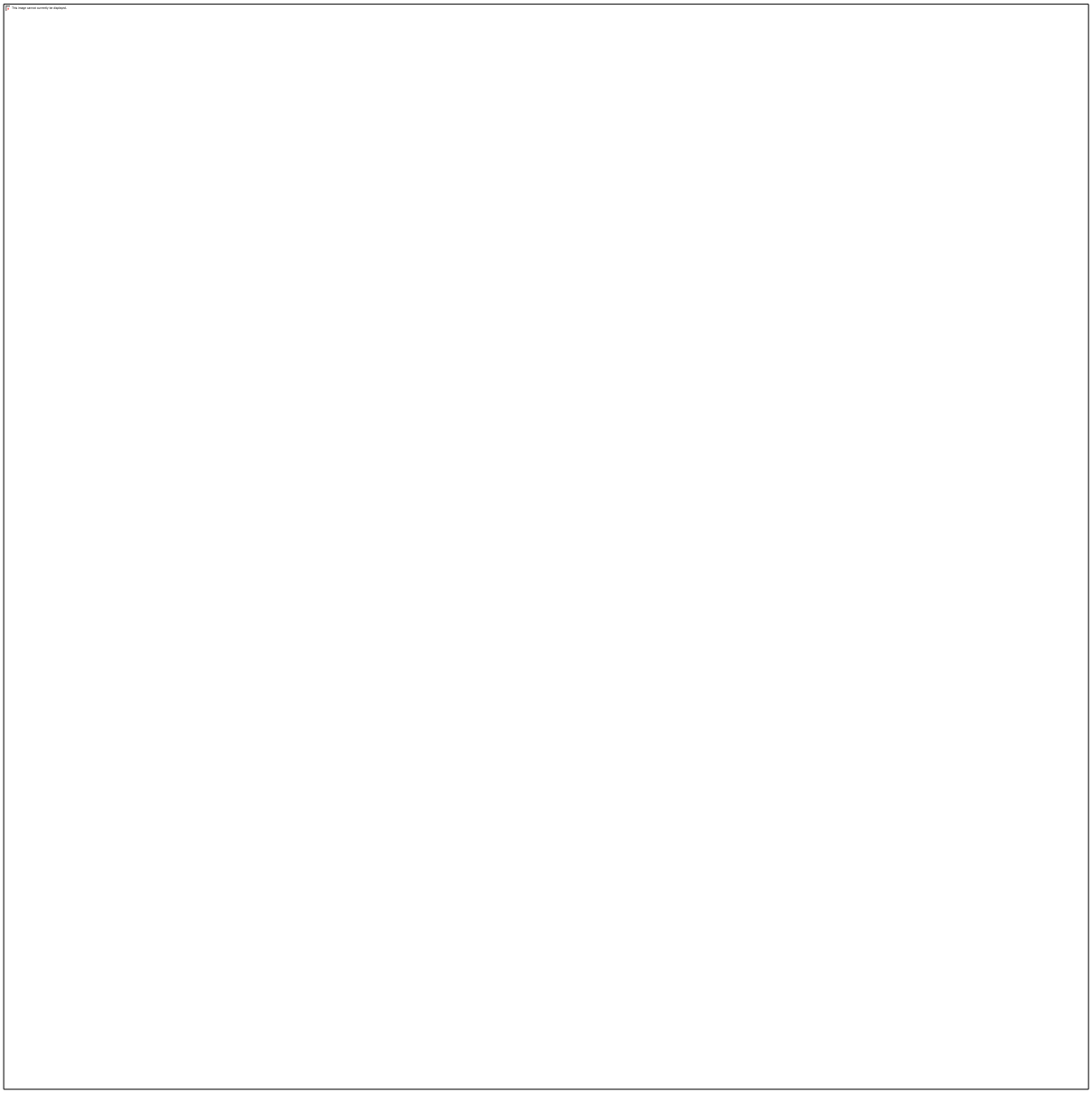
- Trees.
- Fruits.

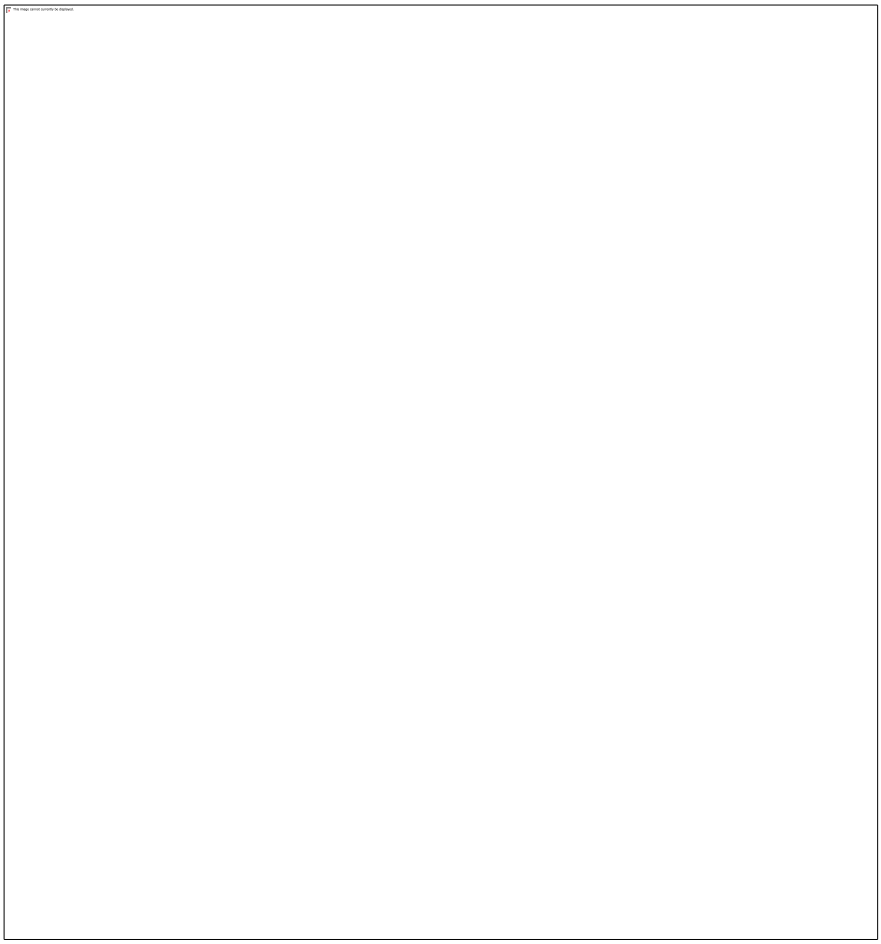
c) Cultural patterns

- Traditional geometric motifs.
- Basket-inspired patterns.
- Beadwork-inspired designs.
- Decorative motifs informed by local artefacts.

d) Figurative patterns

- Human figures.
- Animals.
- Everyday activities.
- Storytelling scenes.







5.6 Advantages of sgraffito

1. Produces attractive contrasting designs.
2. Allows the creation of detailed decorative lines.
3. Encourages creativity.
4. Can be used for both simple and complex patterns.
5. Adds texture to pottery surfaces.
6. Can communicate cultural or personal ideas.
7. Uses relatively simple tools.
8. Can enhance the appearance and value of pottery products.

5.7 Limitations of sgraffito

1. It requires careful control of the scratching tool.
2. Excessive scratching may weaken the clay surface.
3. Poorly prepared coatings may peel or crack.
4. The design may become unclear if the coating and clay have similar colours.
5. Very detailed designs may be time-consuming.
6. Decoration may be damaged if the clay is too wet or too dry.
7. Uneven application of the coating may affect the final appearance.

5.8 Precautions when using sgraffito

- Use clay at a suitable leather-hard stage.
- Apply the coating evenly.
- Avoid scratching too deeply.
- Use clean and appropriate tools.
- Do not exert excessive pressure.
- Remove loose particles carefully.
- Allow the decorated item to dry gradually.
- Ensure complete drying before firing.

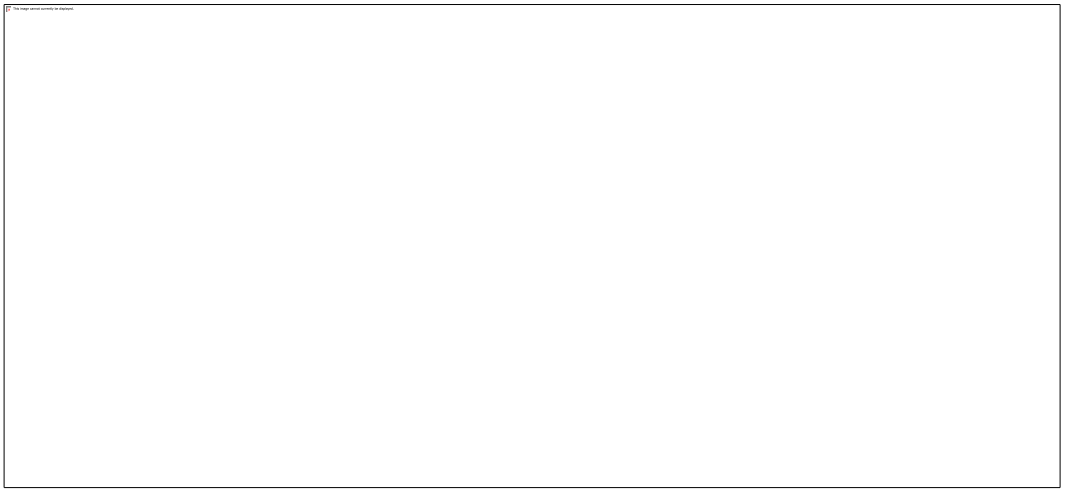
6.0 Engobe Technique

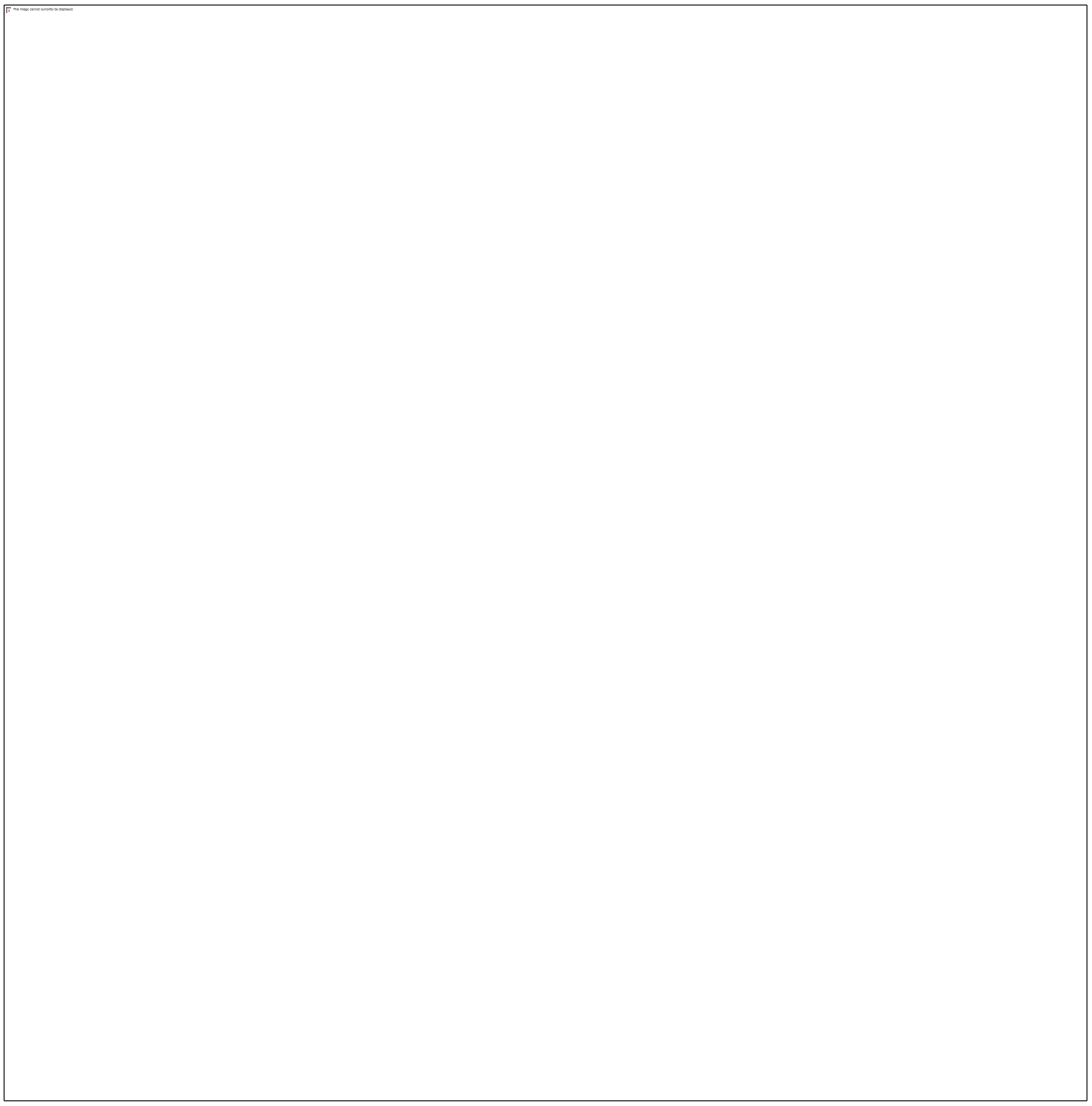
6.1 Meaning of engobe

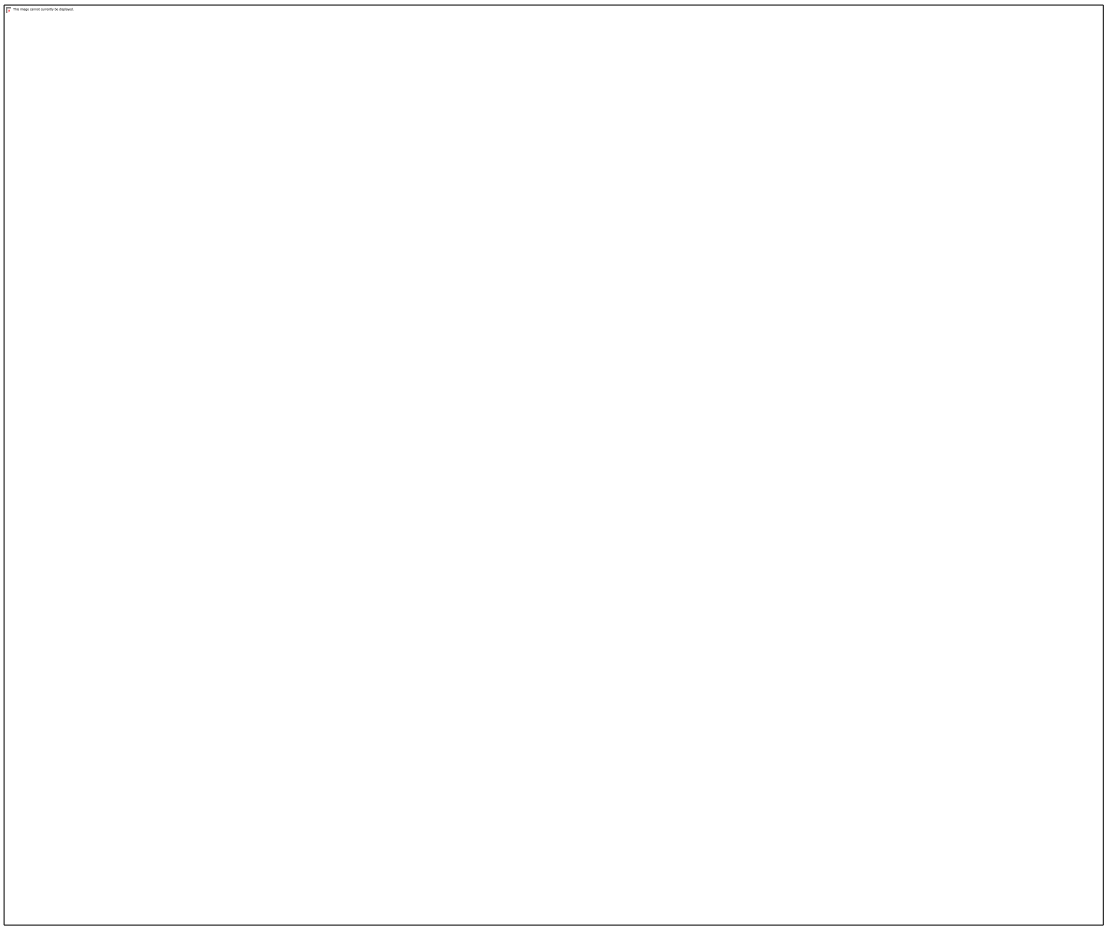
Engobe is a liquid clay-based coating applied to the surface of a pottery item to change its colour, improve its appearance or provide a surface for further decoration.

It is made from fine clay and water, often with added colouring oxides or ceramic stains.

Engobe may be applied to leather-hard or, where the clay body and engobe are compatible, other suitable stages of clay production.







6.2 Characteristics of engobe

1. It is clay-based.
2. It is usually applied in liquid or creamy form.
3. It can be coloured using suitable ceramic colourants.
4. It may be applied using a brush, dipping or pouring.
5. It can provide a smooth or textured surface depending on application.
6. It can be used as a background for other decorative techniques.
7. It can be scratched to produce sgraffito.
8. It should be compatible with the clay body and firing conditions.
9. It can be used on functional and decorative pottery.
10. It becomes part of the ceramic surface when properly fired.

6.3 Materials and tools used in engobe decoration

Materials:

- Engobe.
- Clay item.
- Water, where required for preparation.
- Suitable ceramic colourants.
- Sponge.
- Clean containers.

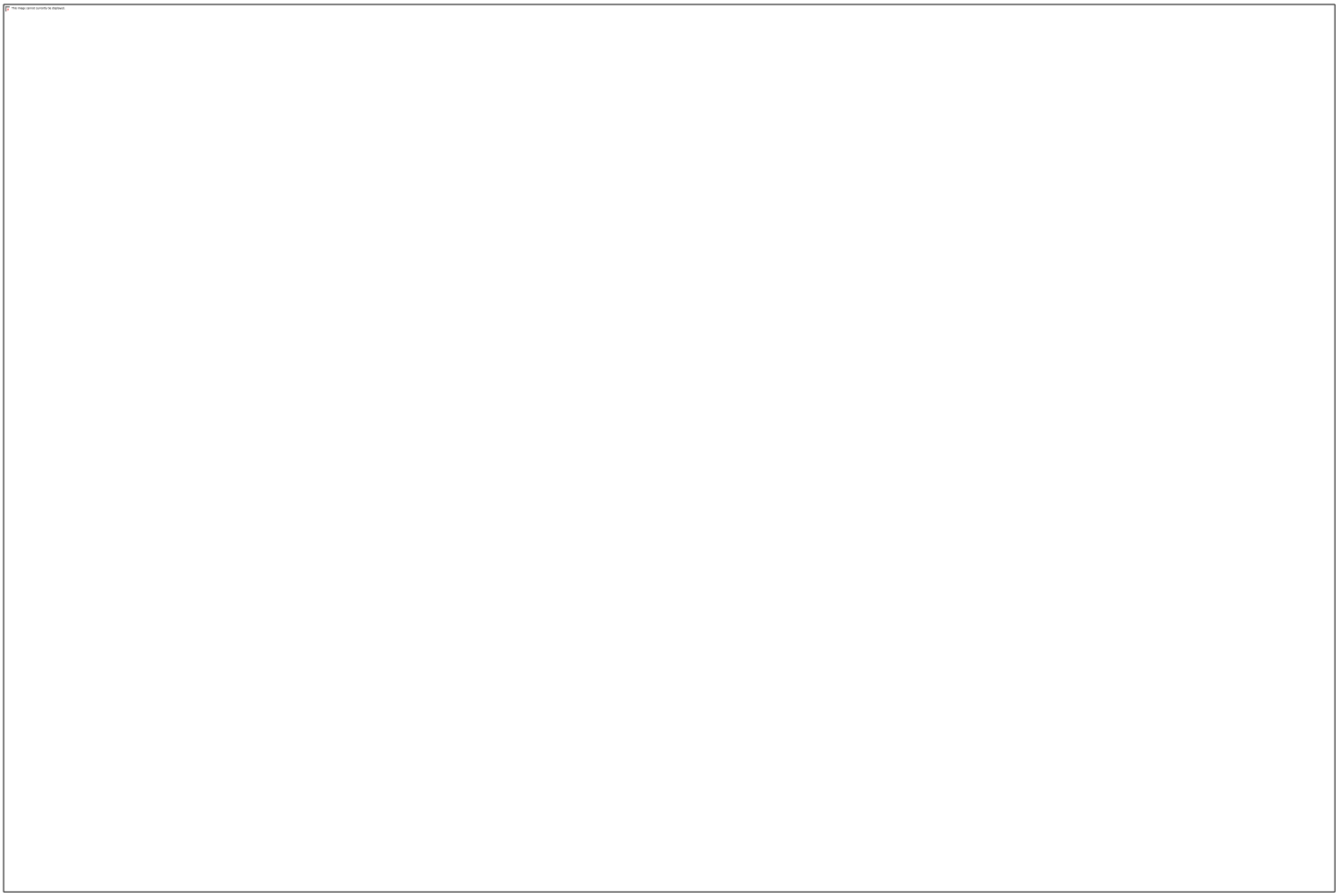
Tools:

- Soft brushes.
- Wide brushes.
- Sponges.
- Dipping containers.
- Pouring containers.
- Palette knives.
- Stirring tools.

6.4 Methods of applying engobe

a) Brushing

Engobe is applied to the clay surface using a brush.



Characteristics:

- Suitable for controlled decoration.
- Allows the artist to apply different colours to specific areas.
- Can produce painted motifs and patterns.
- May require several thin coats for even coverage.

b) Dipping

The clay item is immersed in a container of engobe.

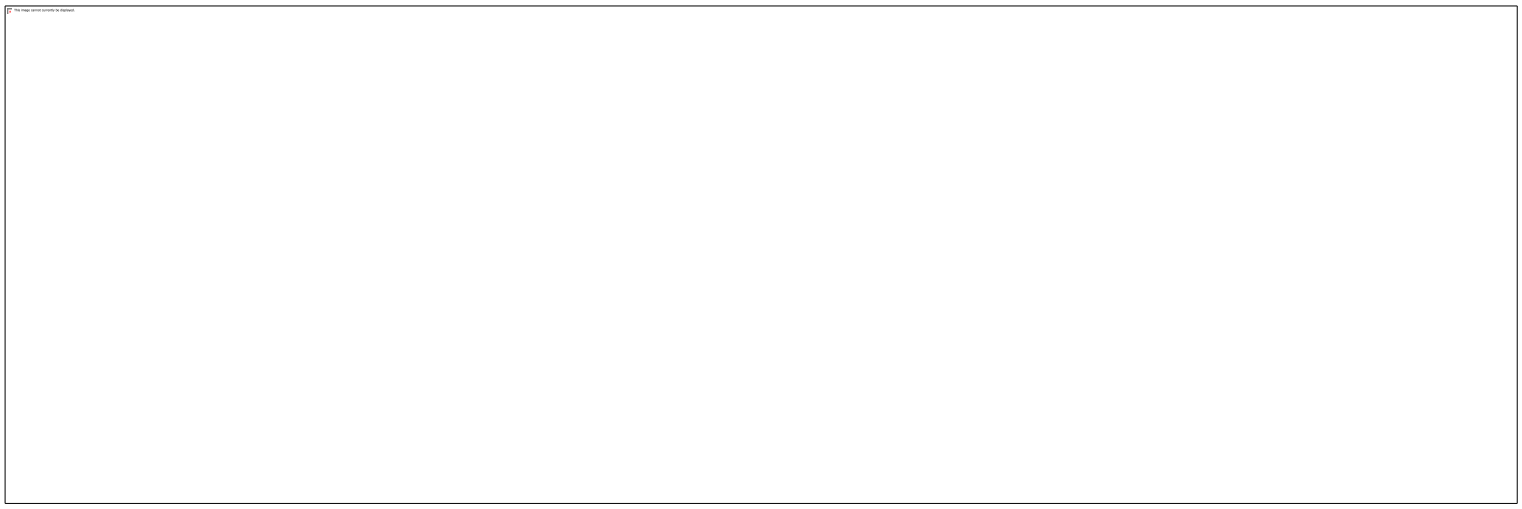


Characteristics:

- Can cover large areas quickly.
- May produce a relatively even coating when the engobe is prepared properly.
- Requires control to avoid excessive coating.
- The item must be suitable for handling and dipping.

c) Pouring

Engobe is poured over the surface of a pottery item.



Characteristics:

- Can produce flowing patterns.
- Creates interesting surface effects.
- Allows controlled movement of colour.
- May be used to decorate selected sections of a vessel.

d) Sponging

Engobe is applied using a sponge.



Characteristics:

- Produces textured effects.
- Can create repeated marks.
- Can be used for irregular decorative patterns.
- Allows the artist to experiment with surface effects.

e) Layering

Two or more engobe colours are applied in layers.

Characteristics:

- Creates visual depth.
- Allows colour combinations.
- Can be used before sgraffito.
- Supports complex decorative compositions.

6.5 Steps in applying engobe to a leather-hard vase

Step 1: Prepare the vase

- Construct the vase using the slab technique.
- Allow it to dry to a suitable leather-hard stage.
- Ensure the surface is clean.
- Remove loose clay particles.

Step 2: Prepare the engobe

- Select the desired colour.
- Stir the engobe thoroughly.
- Ensure that it has an appropriate consistency.
- Remove lumps where necessary.

Step 3: Apply the first coat

- Use a clean brush or another suitable applicator.
- Apply an even layer.
- Avoid excessive coating.
- Allow the layer to settle or dry sufficiently for the next operation.

Step 4: Apply additional decoration

The artist may:

- Add another engobe colour.
- Use a sponge to create texture.
- Apply patterns with a brush.
- Use sgraffito to reveal an underlying layer.

Step 5: Refine the surface

- Remove unwanted marks.
- Improve the edges of decorative areas.
- Check that the design is balanced.
- Avoid damaging the clay form.

Step 6: Dry and fire

- Allow the item to dry gradually.
- Ensure that it is completely dry before firing.
- Fire according to the compatibility of the clay body and engobe.
- Glaze if required for the intended finish and use.

6.6 Advantages of engobe

1. Adds colour to pottery.
2. Improves surface appearance.
3. Can cover the natural colour of the clay.
4. Can create a background for sgraffito.
5. Allows a wide range of decorative effects.
6. Can be applied using several methods.
7. Encourages colour experimentation.
8. Can enhance the market appeal of pottery.

6.7 Limitations of engobe

1. Poorly prepared engobe may produce an uneven finish.
2. Incompatible engobe may peel or crack.
3. Excessive application may cause defects.
4. Some colours may change during firing.
5. The technique requires knowledge of clay and firing compatibility.
6. Improper drying may cause cracking or surface damage.

6.8 Precautions when applying engobe

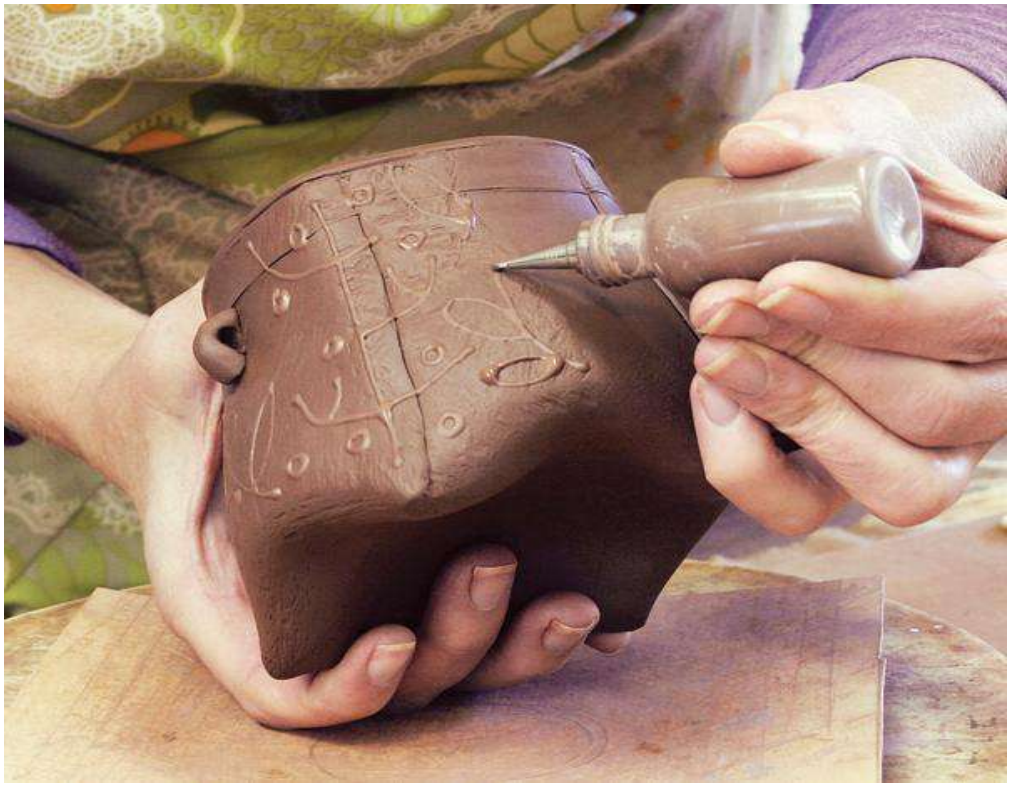
- Use engobe compatible with the clay body.
- Stir thoroughly before application.
- Apply controlled and even coats.
- Avoid excessive thickness.
- Ensure the clay is at a suitable stage.
- Allow the item to dry gradually.
- Follow the manufacturer's or workshop's firing guidance.

7.0 Slip Trailing Technique

7.1 Meaning of slip trailing

Slip trailing is a pottery decoration technique in which liquid clay slip is applied to the surface of a clay object through a nozzle, piping tool or other controlled applicator to create raised lines, dots, patterns and decorative textures.

The slip is usually applied to leather-hard or another suitable clay surface.





7.2 Meaning of slip

Slip is a mixture of clay and water that forms a liquid or creamy suspension.

It may be used for:

- Joining clay components.
- Decorating pottery.
- Coating surfaces.
- Creating raised decorative patterns.
- Applying coloured clay decoration.

Difference between slip and engobe:

- Slip is a general liquid clay mixture used for joining, coating or decorating.
- Engobe is a prepared clay-based coating intended mainly for surface decoration and may contain added ceramic colourants.

The two materials can overlap in composition, but their purpose and formulation may differ.

7.3 Characteristics of slip trailing

1. It uses liquid or creamy clay slip.
2. The slip is applied through a nozzle or similar applicator.
3. It creates raised decorative lines and shapes.
4. It can produce dots, curves, spirals and patterns.
5. It adds texture to pottery.
6. It requires controlled movement of the applicator.
7. It may use one or several colours.
8. It can be applied to slab-built vases.
9. It can be combined with engobe and other decorative techniques.
10. It produces a three-dimensional surface effect.

7.4 Materials and tools used in slip trailing



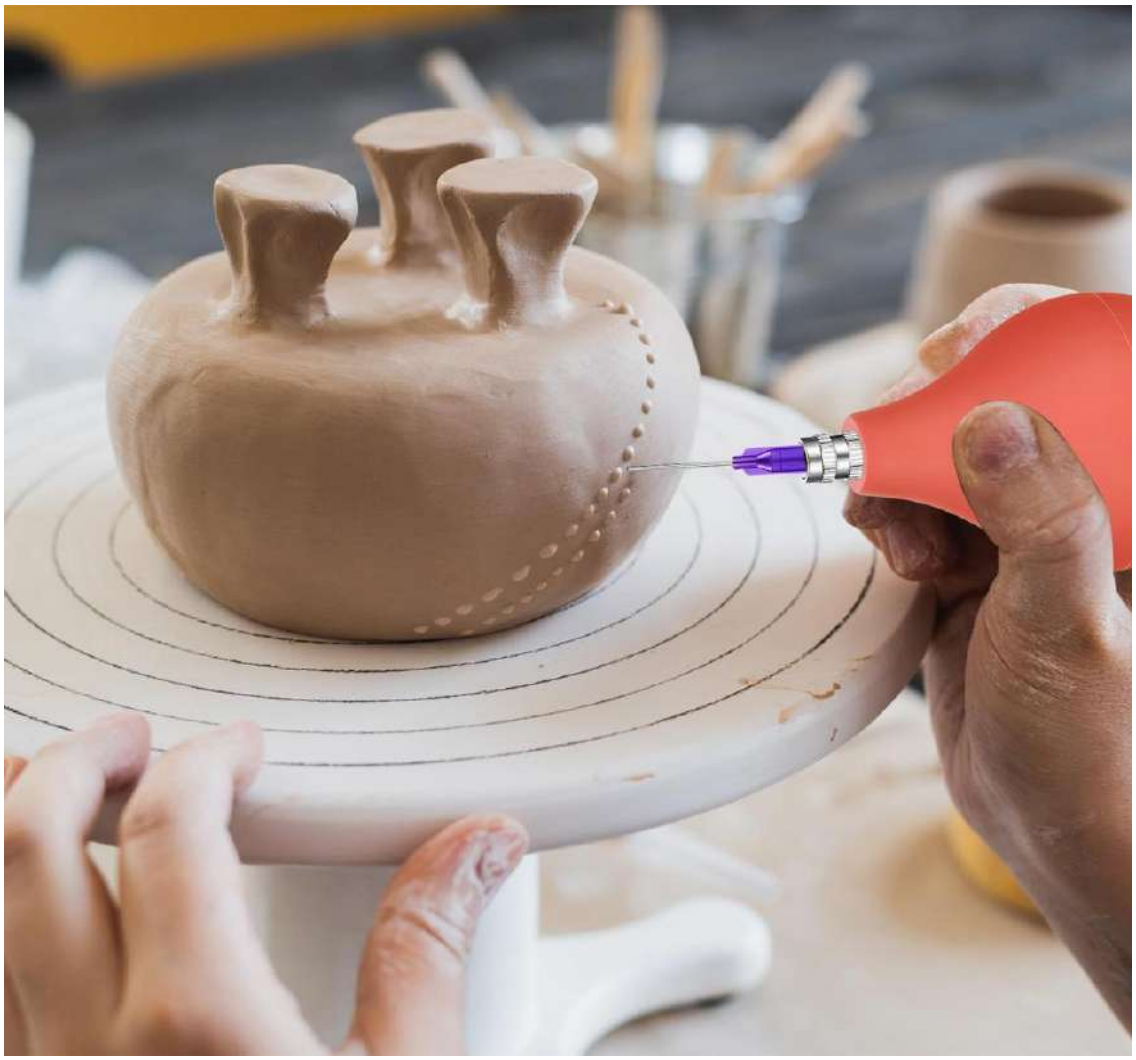
Materials:

- Clay slip.
- Suitable clay item.
- Water for preparing slip.
- Ceramic colourants where required.
- Clean containers.

Tools:

- Slip trailer.
- Squeeze bottle with nozzle.
- Piping bag.
- Small funnel.
- Brush.
- Stirring stick.
- Sponge.
- Palette knife.

7.5 Steps in applying slip trailing





Step 1: Prepare the pottery item

- Construct the item.

- Allow it to reach a suitable leather-hard stage.
- Clean the surface.
- Ensure the item can support the applied slip.

Step 2: Prepare the slip

- Place suitable clay in a clean container.
- Add water gradually.
- Mix until a smooth, creamy consistency is achieved.
- Remove lumps.
- Ensure that the slip can flow through the nozzle without running excessively.

Step 3: Prepare the applicator

- Fill a slip trailer, squeeze bottle or piping bag.
- Fit a suitable nozzle.
- Test the flow on a scrap clay surface.

Step 4: Plan the design

- Decide on the pattern.
- Identify the areas to be decorated.
- Consider the thickness and direction of the lines.
- Plan spacing and repetition.

Step 5: Apply the slip

- Hold the applicator steadily.
- Squeeze gently and consistently.
- Move the nozzle smoothly over the surface.
- Create the intended lines, dots or patterns.
- Avoid excessive pressure.

Step 6: Refine the decoration

- Correct any unwanted marks while the slip is still workable.
- Remove excess slip where necessary.
- Check that the raised patterns are evenly distributed.

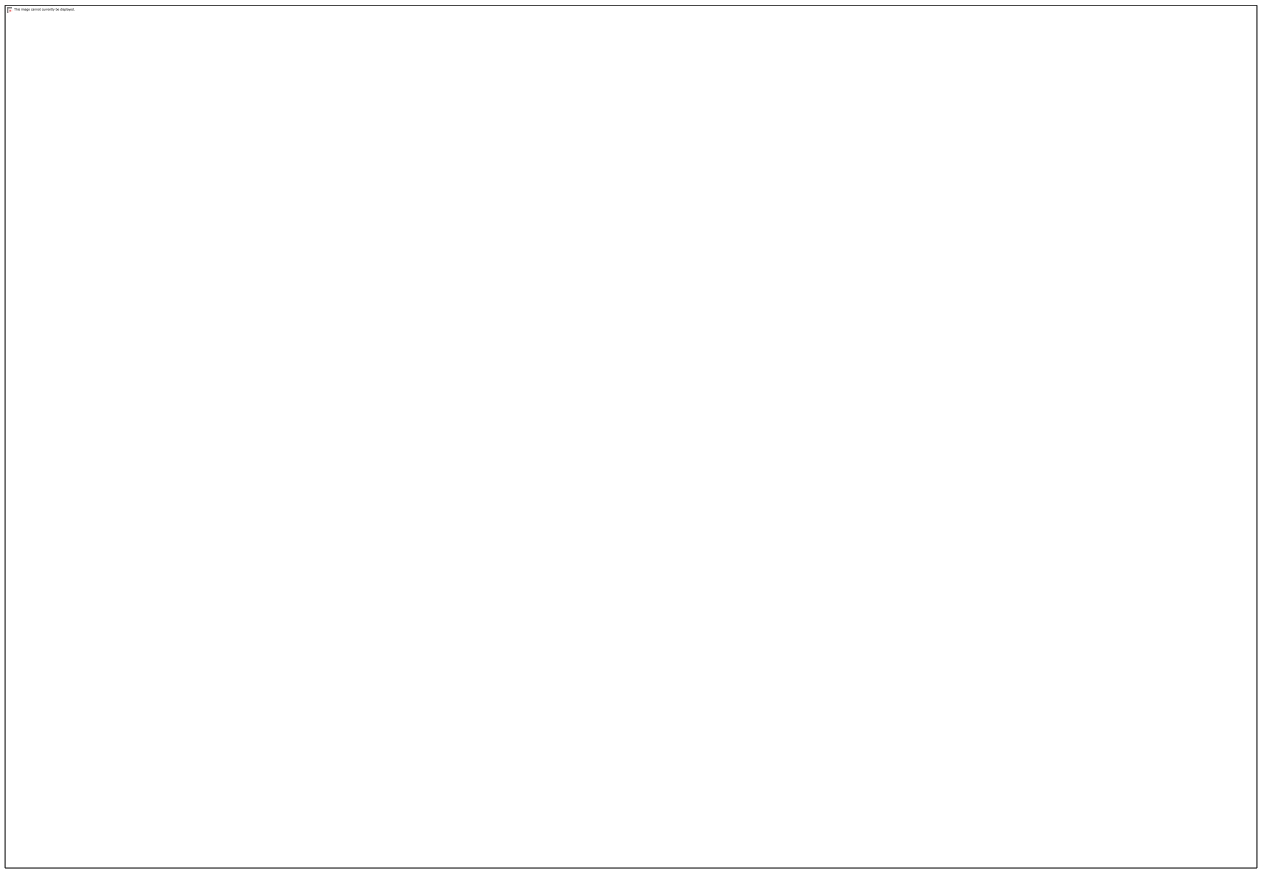
Step 7: Dry and fire

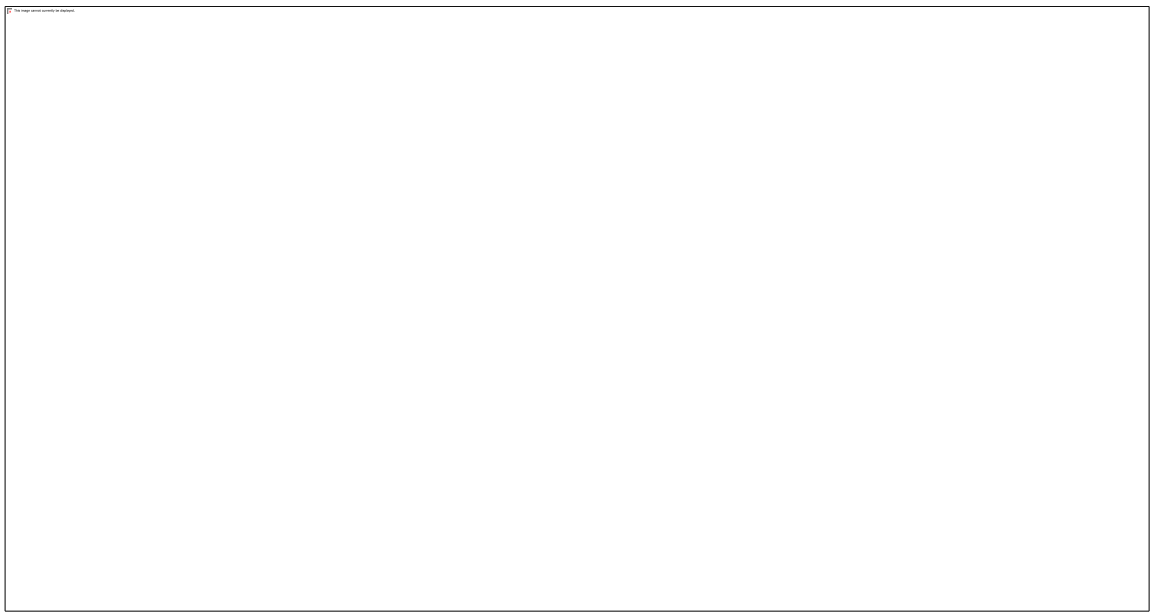
- Allow the decorated item to dry slowly.
- Avoid unnecessary handling.
- Ensure that the item is completely dry before firing.
- Fire using appropriate clay-body and slip specifications.

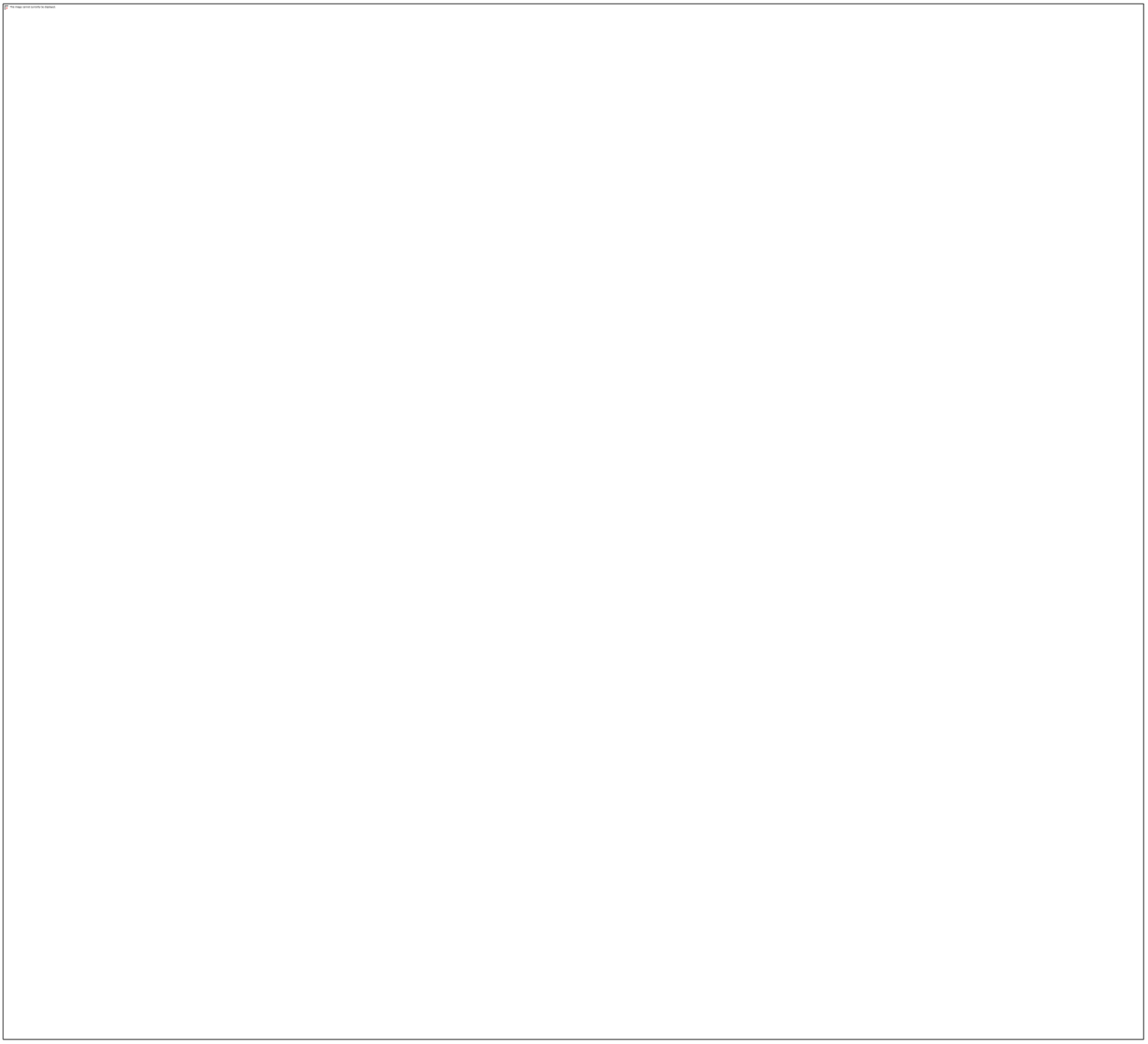
7.6 Common slip-trailing designs

1. Straight lines.

2. Curved lines.
3. Dots.
4. Spirals.
5. Waves.
6. Zigzags.
7. Geometric patterns.
8. Floral patterns.
9. Leaf patterns.
10. Repeated borders.







7.7 Advantages of slip trailing

1. Creates raised decorative patterns.
2. Adds actual texture to pottery.
3. Allows controlled line work.
4. Produces attractive surface effects.
5. Can be combined with other decoration techniques.
6. Encourages creativity and experimentation.
7. Can create both simple and complex designs.
8. Can improve the appearance of slab-built vases.

7.8 Limitations of slip trailing

1. Requires consistent control of the applicator.

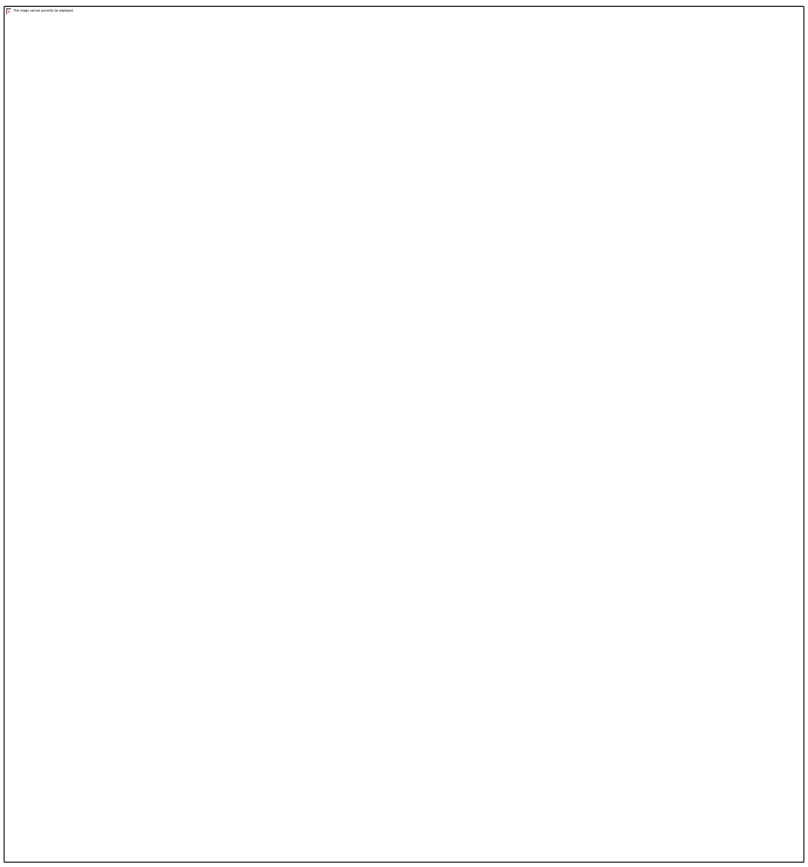
2. Slip that is too thin may run down the surface.
3. Slip that is too thick may block the nozzle.
4. Excessive decoration may make the object visually crowded.
5. Thick applications may dry unevenly.
6. Poorly attached slip may crack or detach.
7. Uneven drying may cause surface defects.

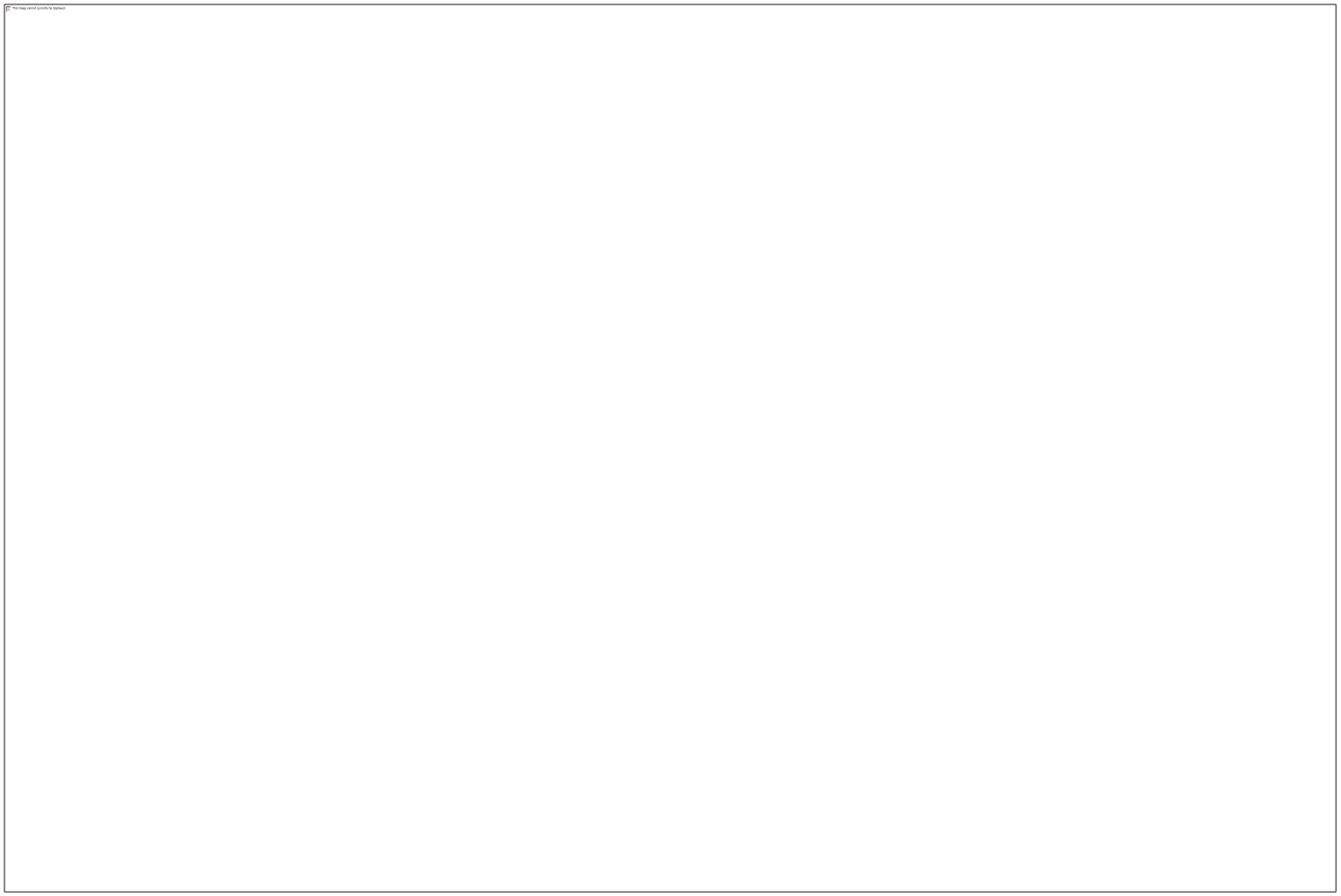
7.9 Precautions when using slip trailing

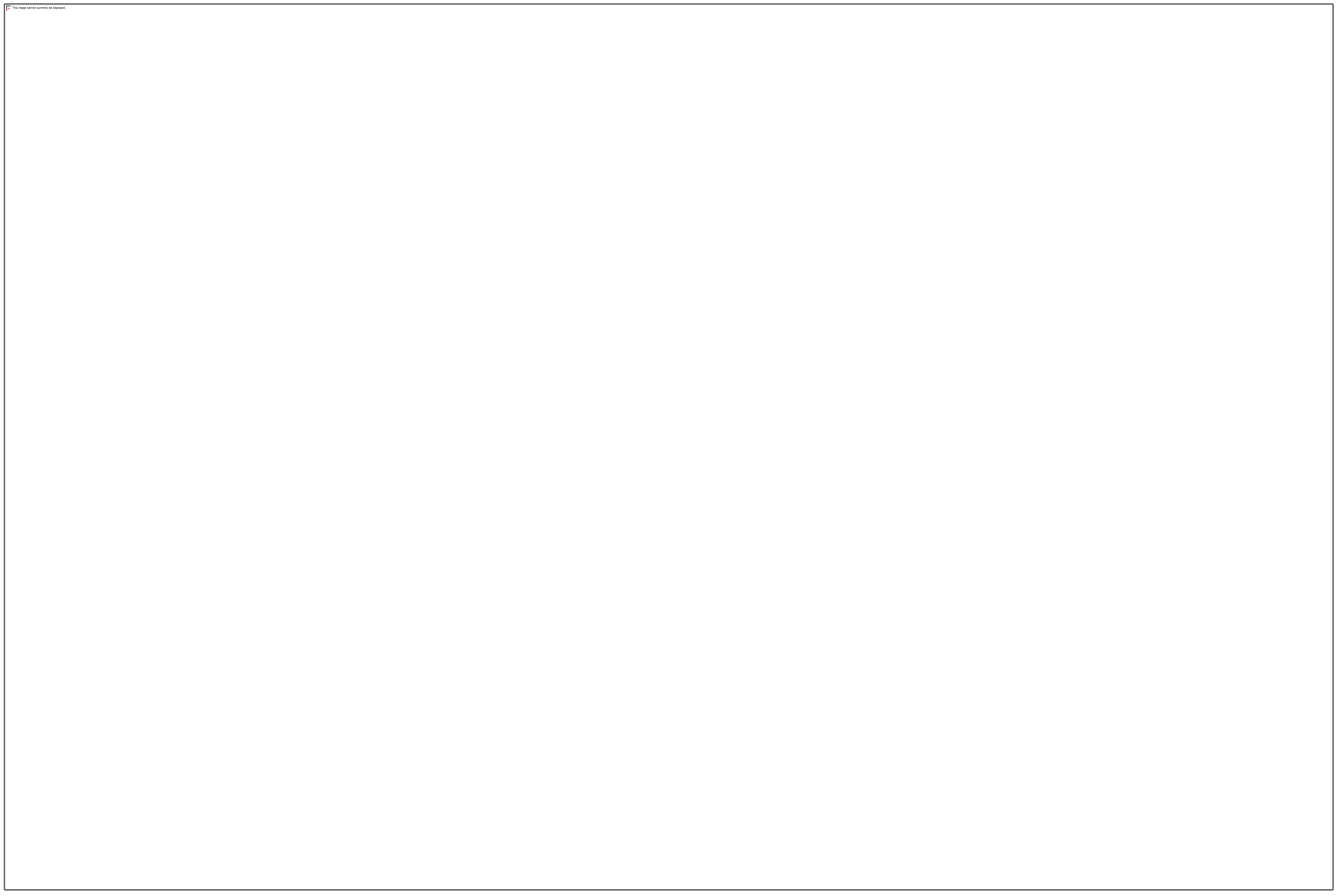
- Use slip with a suitable consistency.
- Test the applicator before decorating.
- Apply the slip evenly.
- Avoid excessively thick raised lines.
- Ensure good contact between the slip and the clay surface.
- Avoid overcrowding the design.
- Allow the item to dry gradually.
- Ensure compatibility between the slip and the clay body.

8.0 Comparison of the Three Decorative Techniques

The three techniques have different processes and produce different surface effects.







Aspect	Sgraffito	Engobe	Slip trailing
Meaning	Scratching through a coating to reveal the layer beneath	Applying a clay-based decorative coating	Applying liquid clay slip to create raised designs
Main material	Coloured slip or engobe	Engobe	Clay slip
Main tools	Stylus, needle tool, carving tools	Brushes, sponges, dipping containers	Nozzle, squeeze bottle, piping bag
Surface effect	Incised or scratched lines	Coloured or coated surface	Raised lines and patterns
Common clay stage	Leather hard	Leather hard or another compatible stage	Leather hard or another suitable stage
Main purpose	Create contrasting patterns and images	Add colour and improve surface appearance	Create raised decorative patterns
Main skill	Controlled scratching	Controlled coating	Controlled application of slip

8.1 Combining the three techniques

An artist may combine sgraffito, engobe and slip trailing on one pottery item.

For example, a slab-built vase may have:

- A coloured engobe coating.
- Scratched leaf and flower patterns created through sgraffito.
- Raised slip-trailing lines around the neck and base.



Important: When combining techniques, the artist should consider the thickness of the coatings, the moisture content of the clay, the drying sequence and the compatibility of the materials.

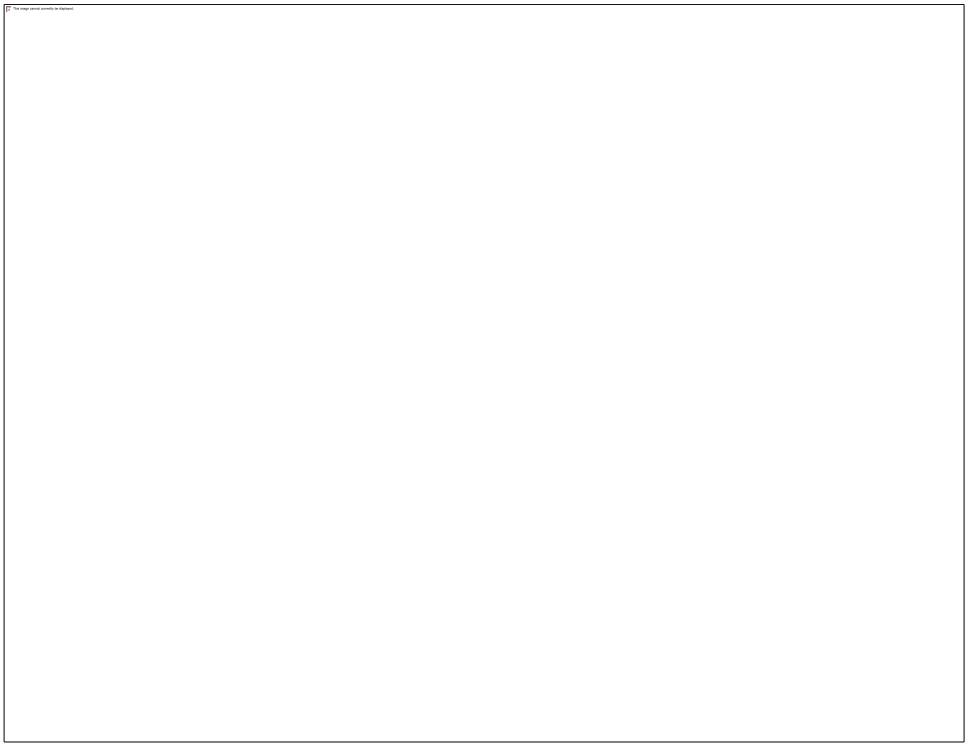
9.0 Modelling Pottery Items Using the Slab Technique

9.1 Meaning of the slab technique

The slab technique is a hand-building method in pottery in which clay is rolled or pressed into flat sheets called slabs and then joined together to construct three-dimensional objects.

The slabs are cut into selected shapes and assembled to create functional or decorative pottery items.

The technique is suitable for making vases, boxes, trays, containers, tiles and sculptural forms.







9.2 Characteristics of the slab technique

1. It uses flat sheets of clay.
2. The sheets are called slabs.
3. Slabs are rolled or pressed to a required thickness.
4. The slabs are cut into appropriate shapes.
5. The cut pieces are joined to form a three-dimensional object.
6. It can produce angular, geometric and curved forms.
7. It allows the construction of functional and decorative objects.
8. It requires careful control of slab thickness.
9. It involves scoring and slipping when joining components.
10. It allows different surface decoration techniques to be applied.

9.3 Materials used in slab construction

- Prepared clay.

- Water.
- Clay slip.
- Engobe for decoration where required.
- Suitable clay body.
- Plaster or other suitable drying boards, where available.

9.4 Tools and equipment used





Tool or equipment	Function

Rolling pin	Rolls clay into flat slabs
Slab roller	Produces slabs of controlled thickness
Canvas-covered board	Provides a suitable surface for rolling clay
Wooden battens	Help maintain uniform slab thickness
Ruler	Measures slab dimensions
Craft knife or clay cutting tool	Cuts slabs into required shapes
Needle tool	Trims edges and creates marks
Wooden modelling tools	Shapes and smooths clay
Metal rib	Smooths and compresses clay surfaces
Sponge	Smooths surfaces and controls moisture
Wire cutter	Cuts clay from a larger mass
Soft brush	Applies slip to joining surfaces
Modelling stick	Supports shaping and finishing
Template	Guides accurate cutting of slab components

9.5 Preparing clay for slab construction

Before making slabs, the clay should be properly prepared.

Steps:

1. Select suitable clay.
2. Remove stones and other impurities.
3. Knead or wedge the clay.
4. Ensure that moisture is evenly distributed.
5. Remove trapped air where possible.
6. Form the clay into a manageable lump.
7. Place it on a suitable rolling surface.
8. Prepare the rolling tools and thickness guides.

9.6 Preparing clay slabs





Step 1: Prepare the working surface

- Use a clean, flat surface.

- Cover it with canvas or another suitable material.
- Ensure that the surface is stable.
- Remove dust and unwanted particles.

Step 2: Prepare the clay

- Wedge the clay.
- Form it into a suitable lump.
- Ensure that the clay is neither excessively wet nor too dry.

Step 3: Flatten the clay

- Place the clay on the prepared surface.
- Use the palm of the hand to flatten it initially.
- Roll it using a rolling pin or slab roller.
- Turn the clay regularly to promote even thickness.

Step 4: Control the thickness

- Place two wooden battens of equal thickness on either side of the clay.
- Roll the pin across the battens.
- Ensure that the clay reaches the required thickness.
- Avoid making some areas thinner than others.

Step 5: Cut the slabs

- Measure the required dimensions.
- Use a ruler and suitable cutting tool.
- Cut the base, sides and other components according to the design.
- Keep the edges clean and straight where required.

Step 6: Allow the slabs to firm slightly

- Place the slabs on a suitable board.
- Allow them to firm up slightly if they are too soft to handle.
- Cover them where necessary to prevent rapid drying.
- Avoid allowing them to become bone dry before joining.

10.0 Construction of a Slab-Built Vase

10.1 Meaning of a vase

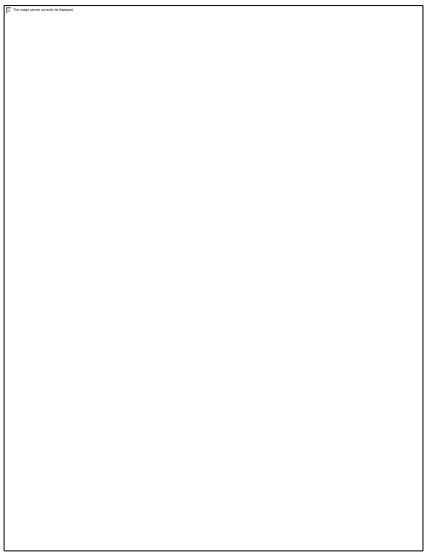
A vase is a hollow container, commonly used for holding flowers or as a decorative object.

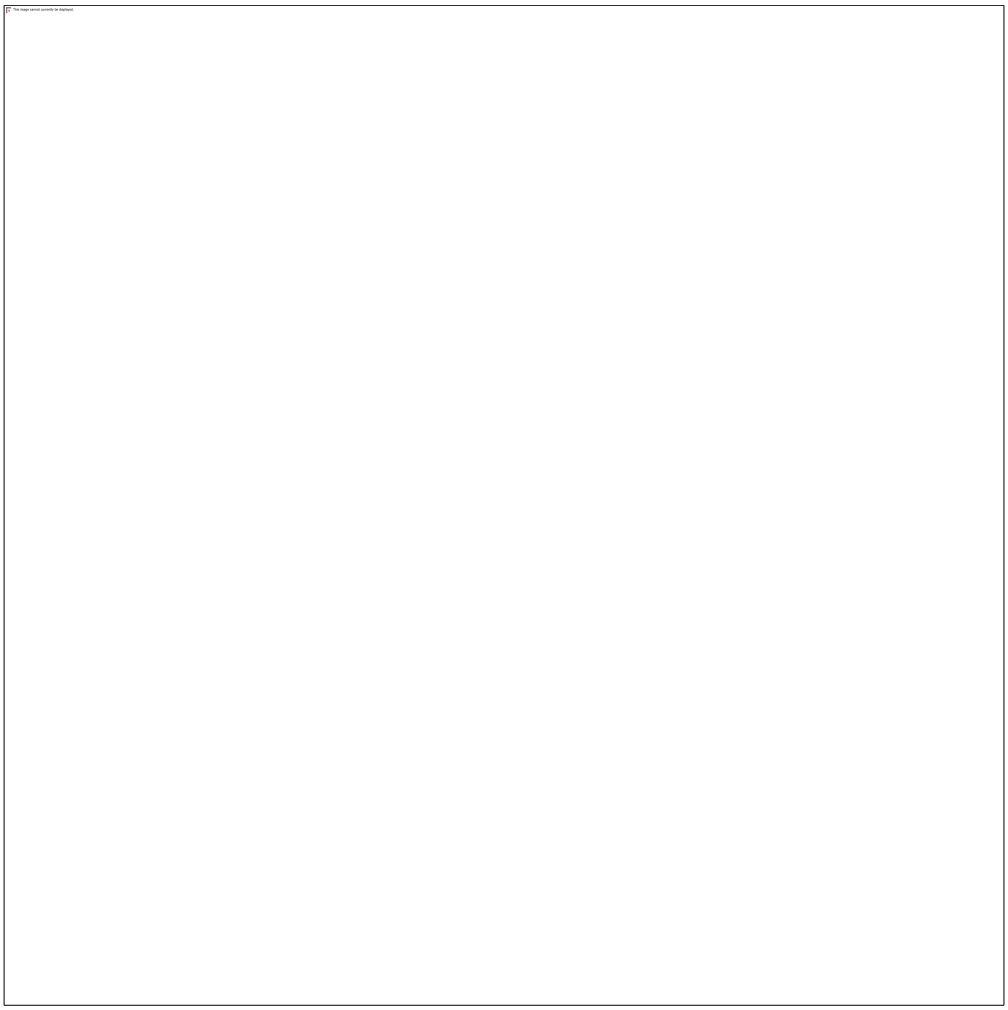
Vases may have different shapes, sizes and designs.

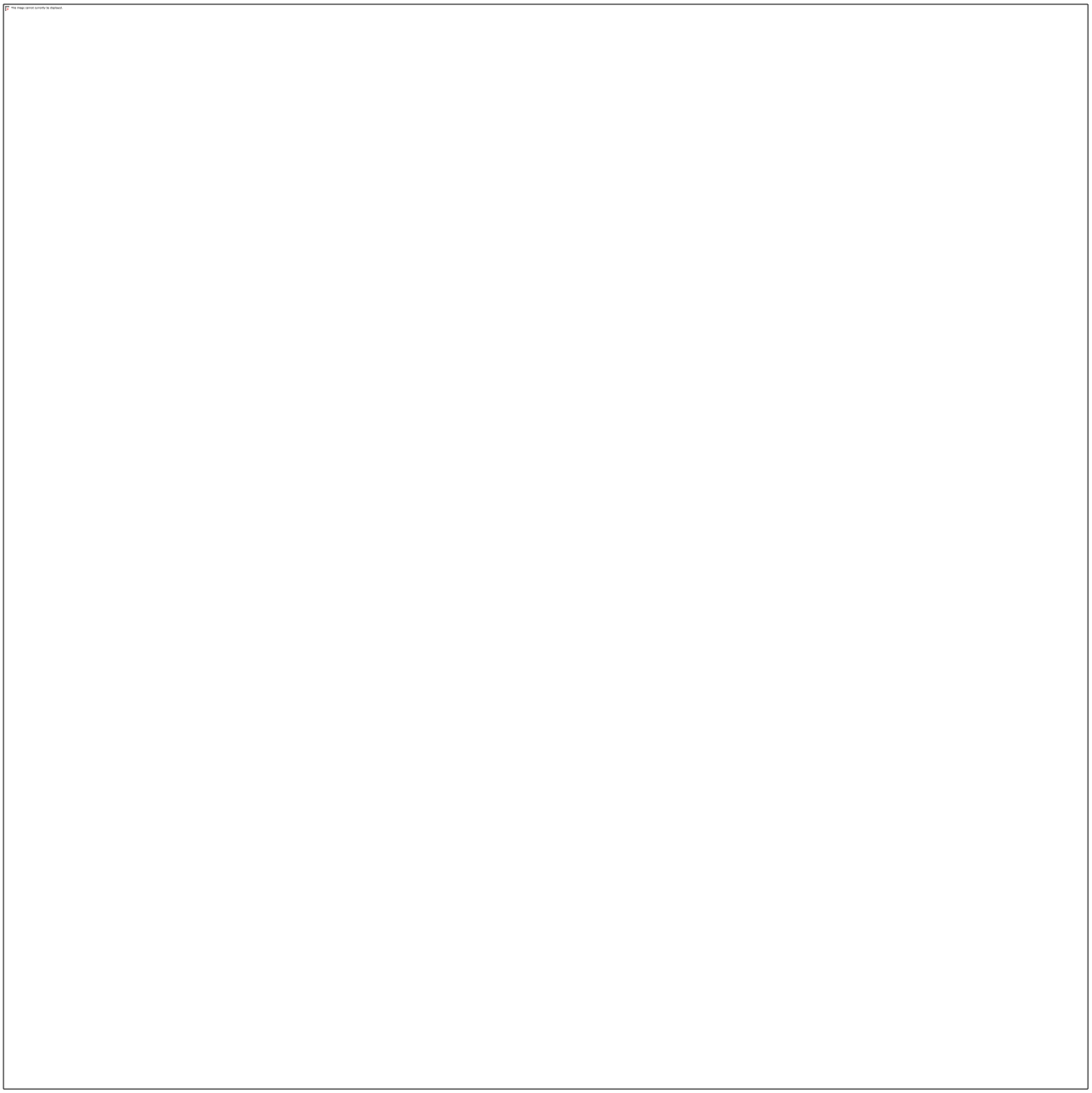
Examples include:

- Cylindrical vases.
- Rectangular vases.
- Angular vases.

- Curved vases.
- Tall narrow-necked vases.
- Wide-mouthed vases.
- Sculptural decorative vases.







10.2 Characteristics of a well-constructed slab vase

1. Has a stable base.
2. Has uniform wall thickness.
3. Has securely joined components.
4. Has balanced proportions.
5. Has a suitable opening.
6. Has smooth or deliberately finished edges.
7. Has a stable overall form.
8. Has a suitable surface for decoration.
9. Has no major cracks or weak joints.
10. Is appropriately dried before firing.

10.3 Factors to consider when designing a slab vase

a) Dimensions

Dimensions refer to the measurements of the vase, including its height, width, depth and opening.

The artist should consider:

- Intended use.
- Available clay.
- Size of the working area.
- Stability of the vase.
- Proportion between the base and body.

b) Uniformity of slab thickness

Uniformity means maintaining approximately equal thickness throughout the clay slabs used in construction.

Importance:

1. Reduces uneven drying.
2. Helps prevent warping.
3. Supports structural stability.
4. Improves the appearance of the vase.
5. Helps different sections shrink more consistently.

c) Balance

Balance refers to the arrangement of the vase's visual and physical weight to create stability.

A well-balanced vase should:

- Stand firmly.
- Have a suitable base.
- Avoid excessive weight at the top.
- Have a harmonious relationship between its height and width.

d) Creativity

Creativity involves developing original and interesting forms, patterns and decorative features.

A learner may experiment with:

- Unusual openings.
- Geometric forms.
- Asymmetrical shapes.
- Curved walls.
- Contrasting surfaces.
- Decorative handles.
- Different textures.

e) Functionality

The artist should consider whether the vase is intended for:

- Holding flowers.
- Holding dry decorative materials.
- Display.
- Interior decoration.
- Another specific purpose.

10.4 Steps in constructing a slab vase







Step 1: Develop the design

- Decide on the intended form.
- Make preliminary sketches.
- Determine the dimensions.
- Plan the base and wall shapes.
- Consider the decoration.
- Prepare a cutting template where necessary.

Step 2: Prepare the clay

- Select suitable clay.
- Wedge the clay thoroughly.
- Ensure that moisture is evenly distributed.
- Remove trapped air as far as possible.

Step 3: Roll out the slabs

- Place clay on a suitable surface.
- Use a rolling pin or slab roller.
- Maintain uniform thickness using battens.
- Roll enough clay for the base and walls.

Step 4: Cut the base

- Draw the base shape on the slab.
- Cut the base carefully.
- Smooth the edges.
- Place it on a suitable support.

The base may be square, rectangular, circular or another suitable shape.

Step 5: Cut the side walls

- Measure the required dimensions.
- Cut the wall slabs.
- Ensure that the edges fit together.
- Check that the walls have approximately uniform thickness.

Step 6: Prepare the joining surfaces

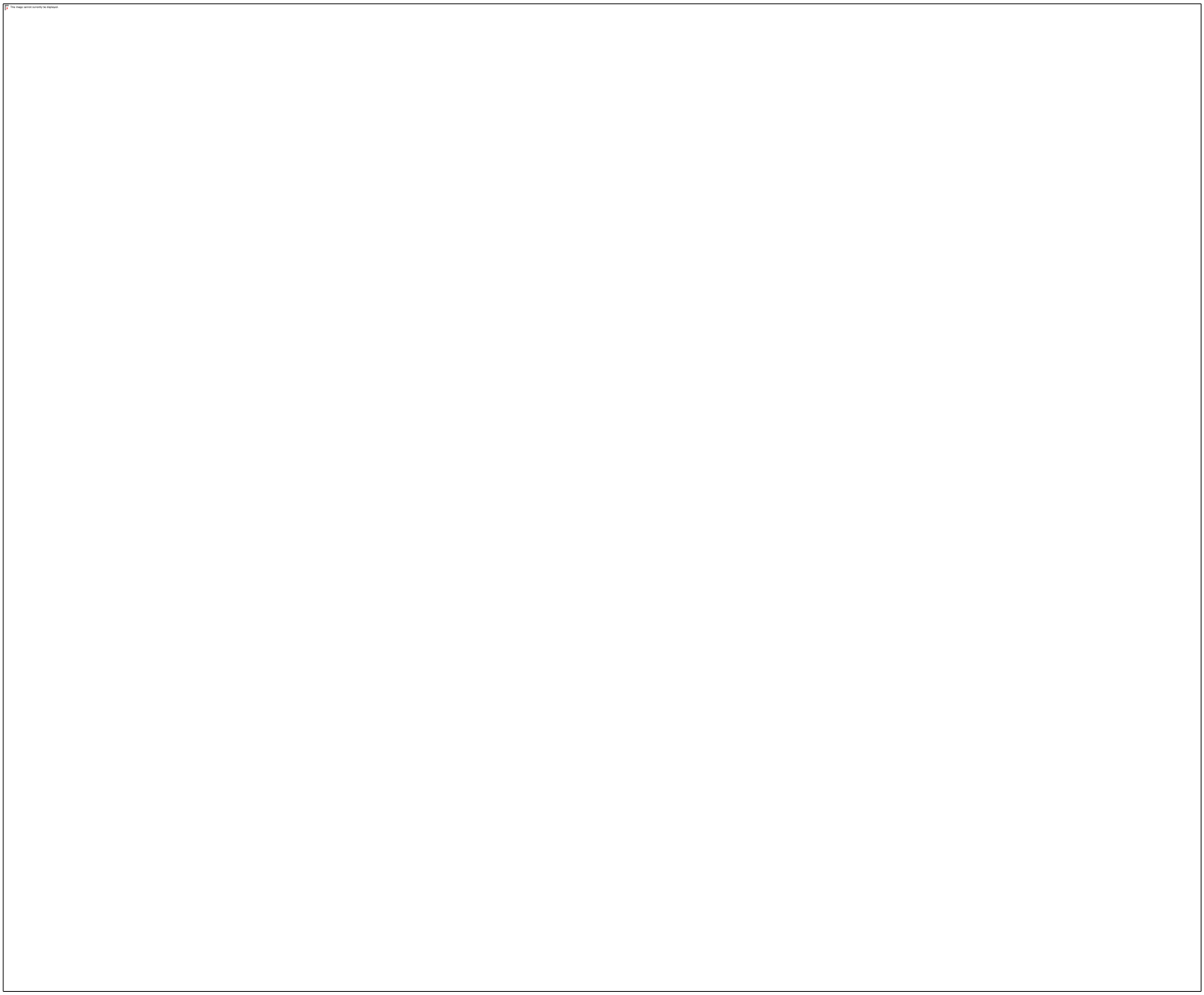
Joining is essential in slab construction.

The most common joining method involves scoring and slipping.

Meaning of scoring: Scoring is the process of scratching or roughening the surfaces that are to be joined.

Meaning of slipping: Slipping involves applying clay slip to the scored surfaces to help bond the pieces.





Procedure:

1. Score the edges to be joined.

2. Apply a thin layer of suitable clay slip.
3. Position the slabs accurately.
4. Press the joints together gently.
5. Reinforce the joint with a small coil of clay where appropriate.
6. Smooth the joint using a modelling tool.
7. Avoid excessive pressure that may distort the form.

Step 7: Assemble the vase

- Attach the side walls to the base.
- Join the side walls together.
- Support the form while joining.
- Check the alignment of the walls.
- Ensure that the vase is not leaning unintentionally.

Step 8: Refine the shape

- Smooth the joints.
- Correct uneven edges.
- Refine the opening.
- Check the dimensions.
- Remove unwanted marks.
- Ensure that the vase stands properly where appropriate.

Step 9: Allow the vase to firm

- Support the vase where necessary.
- Cover it loosely to control drying.
- Allow the clay to become firm enough for decoration.
- Avoid direct heat or strong sunlight.

Step 10: Check the construction

Examine the vase for:

- Uniform thickness.
- Strong joints.
- Balanced form.
- Cracks.
- Distorted walls.
- Weak corners.
- Stability.

11.0 Uniformity in Slab Thickness

11.1 Meaning of slab thickness

Slab thickness refers to the distance between the two surfaces of a rolled clay sheet.

The thickness should be appropriate for the size, shape and intended use of the pottery item.

11.2 Importance of uniform slab thickness

1. Promotes even drying.
2. Reduces the risk of cracking.
3. Helps control shrinkage.
4. Improves structural stability.
5. Makes joining easier.
6. Improves the appearance of the final item.
7. Reduces the likelihood of warping.
8. Helps the vase maintain its intended proportions.
9. Makes the item easier to decorate.
10. Supports more consistent firing.

11.3 Problems caused by uneven slab thickness

- Thin areas may dry faster than thick areas.
- Thick areas may retain moisture longer.
- Different sections may shrink at different rates.
- Weak sections may collapse.
- The vase may warp.
- Cracks may develop during drying or firing.

11.4 How to maintain uniform thickness

1. Use wooden thickness guides.
2. Roll the clay evenly.
3. Turn the slab regularly.
4. Avoid applying excessive pressure to one section.
5. Measure thickness at different points.
6. Use a slab roller where available.
7. Avoid joining slabs of very different moisture levels.
8. Inspect the slab before cutting.

12.0 Drying Slab-Built Pottery

12.1 Meaning of drying

Drying is the process of allowing moisture to leave the clay gradually before firing.

Drying is a very important stage because poorly dried pottery may crack, warp or break during firing.



12.2 Importance of controlled drying

1. Reduces the risk of cracking.
2. Allows moisture to escape gradually.
3. Helps different sections shrink more evenly.
4. Reduces warping.
5. Prepares the object for firing.
6. Protects decorative details.
7. Helps preserve the intended form.
8. Improves the quality of the final ceramic product.

12.3 Why should slab-built vases be dried under shade?

Drying under shade helps slow down moisture loss, especially in environments where direct sunlight and high temperatures may cause rapid drying.

It helps:

- Reduce uneven shrinkage.
- Minimise cracking.
- Protect delicate joints.
- Prevent some areas from drying much faster than others.
- Maintain the intended shape.

12.4 Steps in drying a slab-built vase

1. Place the vase on a flat, suitable surface.
2. Support weak sections where necessary.
3. Cover loosely with plastic or another suitable material initially if drying needs to be slowed.
4. Allow moisture to escape gradually.
5. Turn or adjust the object only when it is sufficiently firm and safe to handle.
6. Monitor the base, corners and joints.
7. Reduce covering gradually as drying progresses.
8. Allow the vase to reach the leather-hard stage for decoration.
9. Continue drying after decoration.
10. Ensure the vase is completely bone dry before firing.

Important: Drying time depends on the size of the vase, slab thickness, clay composition, humidity, air movement and room temperature. Do not use a fixed drying period for all pottery items.

13.0 Decorating Leather-Hard Slab-Built Vases

Leather-hard clay is a suitable stage for applying the three decorative techniques in this sub-strand.

13.1 Preparing the vase for decoration

Before decoration:

1. Check that the vase is firm enough to handle.
2. Remove loose dust.
3. Inspect the joints.
4. Ensure that the surface is not excessively wet.
5. Select the decorative technique or combination of techniques.
6. Prepare the required materials.
7. Sketch the design if necessary.
8. Plan the placement of motifs.
9. Consider the balance of decorated and undecorated areas.
10. Work carefully to avoid damaging the vase.

13.2 Example of a decorated slab vase





A learner may design a vase inspired by the natural environment around the school.

The design may include:

- A green engobe background.
- Sgraffito leaf patterns.
- Slip-trailed curved lines around the neck.
- Geometric patterns near the base.

The final design should show a clear relationship between the form, decoration and intended use.

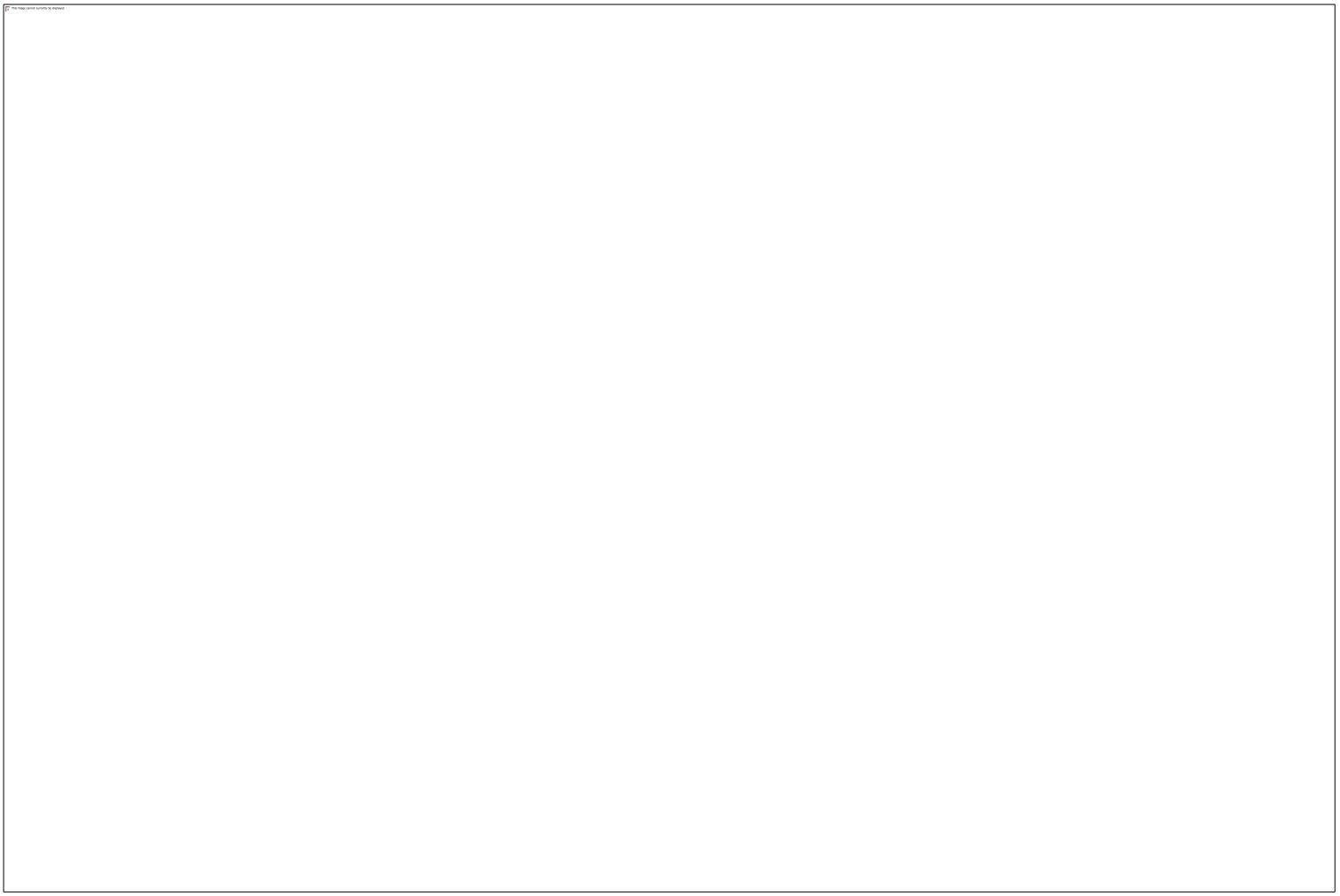
14.0 Firing Decorated Slab Vases

14.1 Meaning of firing in pottery

Firing is the process of heating dried clay objects to a sufficiently high temperature in a kiln so that they undergo permanent physical and chemical changes and become ceramic materials.

Firing changes fragile dried clay into a harder and more durable object.



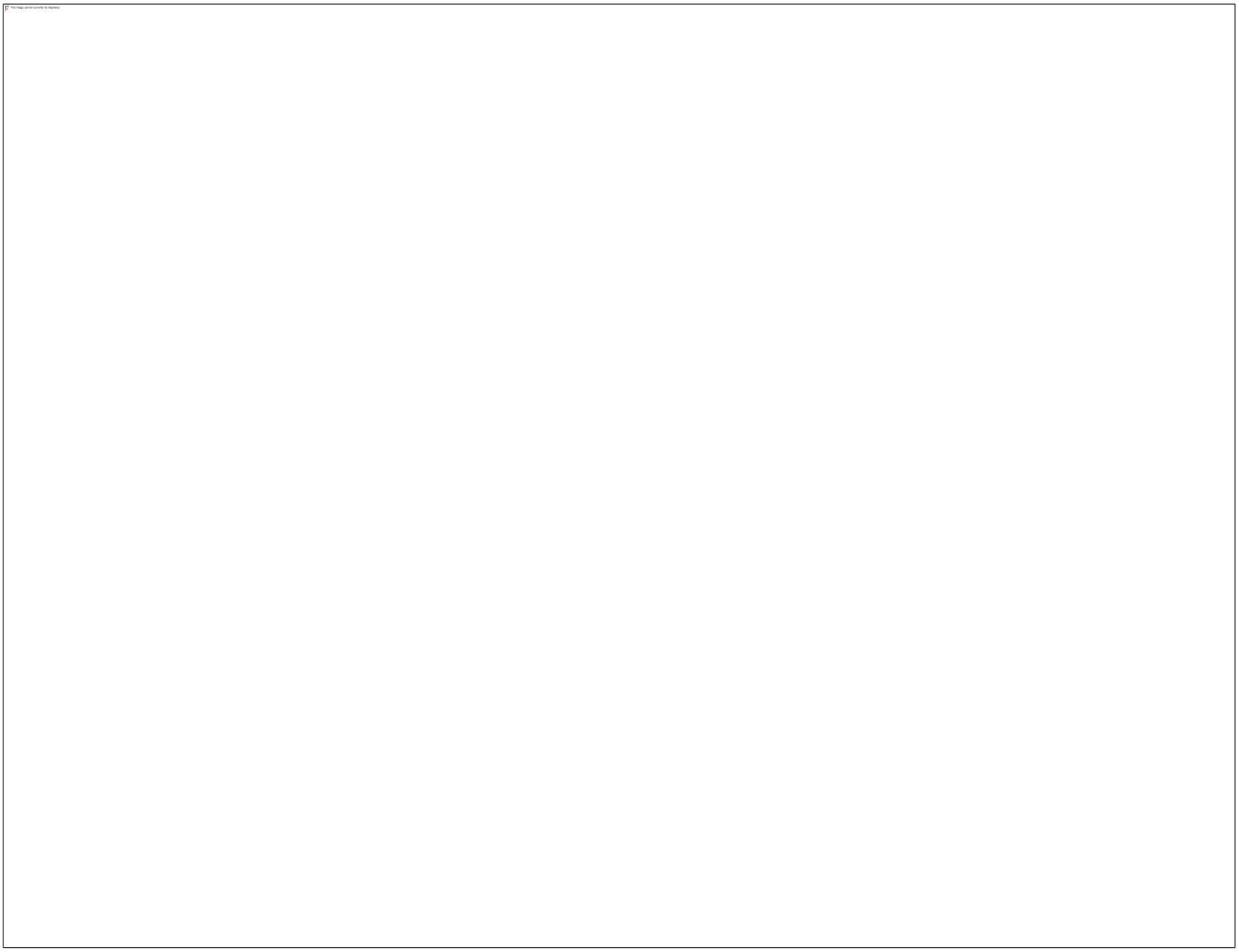


14.2 Importance of firing pottery

1. Hardens the clay permanently.
2. Improves the strength of the pottery.
3. Changes the physical and chemical structure of the clay.
4. Makes the object more durable.
5. Develops the final colour of the clay and decorative coatings.
6. Prepares pottery for glazing where required.
7. Makes the product suitable for its intended use, depending on the clay body and firing conditions.
8. Helps develop the intended ceramic surface finish.

14.3 Meaning of a kiln

A kiln is a specially designed enclosed heating chamber used to fire clay objects and other ceramic materials at controlled temperatures.



Types of kilns

a) Electric kiln

An electric kiln uses electrical heating elements to generate heat.

Characteristics:

- Uses electricity.
- Allows controlled heating.
- Is commonly used in schools, studios and ceramic workshops.
- Can provide consistent firing conditions when operated correctly.

b) Gas kiln

A gas kiln uses fuel gas to produce heat.

Characteristics:

- Uses gas as a fuel source.
- Can achieve a range of firing conditions.
- Requires appropriate ventilation and safety controls.
- Is used in some professional pottery workshops.

c) Wood-fired kiln

A wood-fired kiln uses wood as fuel.

Characteristics:

- Uses burning wood to generate heat.
- May produce distinctive surface effects.
- Requires careful control of the firing process.
- Needs appropriate outdoor or specialised facilities.

d) Traditional firing structures

Some pottery traditions use locally constructed firing arrangements rather than modern electric or gas kilns.

These methods vary widely between communities and require knowledge of local materials, fuel, firing conditions and safety.

14.4 Stages in preparing pottery for firing

Stage 1: Complete construction

- Ensure that the vase is properly constructed.
- Check all joints.
- Smooth rough areas.
- Remove unwanted clay particles.

Stage 2: Complete decoration

- Apply the selected decorative techniques.
- Ensure that the decoration is properly attached.
- Remove loose particles.
- Check that the decorative features are not excessively thick.

Stage 3: Dry the pottery

- Allow the vase to dry gradually.
- Protect it from rapid temperature changes.
- Ensure that all sections are completely dry.
- Check thick joints and the base carefully.

Stage 4: Inspect the bone-dry vase

Before firing:

- Check for cracks.
- Inspect the base.
- Check the joints.
- Ensure that the object is not damp.
- Remove loose dust.
- Confirm that the clay and decorative materials are suitable for the planned firing.

Stage 5: Load the kiln

- Arrange the pottery carefully.
- Avoid overcrowding.
- Ensure that pieces do not touch one another where this may cause sticking or damage.
- Follow the kiln manufacturer's loading instructions.
- Use appropriate kiln furniture and supports.

Stage 6: Fire the pottery

- Follow the recommended firing schedule.
- Monitor the temperature.
- Avoid opening the kiln during firing unless the kiln operating procedure specifically permits it.
- Follow the teacher's or technician's instructions.

Stage 7: Cooling

- Allow the kiln to cool according to its operating procedure.
- Do not remove hot pottery.
- Avoid exposing hot ceramic objects to sudden temperature changes.
- Remove the pottery only when it is safe to do so.

Stage 8: Inspect the fired vase

Examine:

- Strength.
- Shape.
- Cracks.
- Surface finish.
- Colour.
- Decorative details.
- Stability.
- Suitability for the intended purpose.

14.5 Meaning of bisque firing

Bisque firing is an initial firing process used to convert dried greenware into a hard, porous ceramic body.

It is commonly carried out before glazing.

Characteristics:

1. It makes the clay easier to handle.
2. It removes remaining chemically bound water and other volatile substances through controlled heating.
3. It produces a porous ceramic body.
4. It prepares pottery for glazing.

5. It makes the object more durable than unfired greenware.

14.6 Meaning of glaze firing

Glaze firing is a firing process in which a glaze coating is heated until it develops the intended glass-like surface.

Characteristics:

- It may produce a glossy, satin or matt finish.
- It can improve the appearance of pottery.
- It may reduce water absorption depending on the glaze and clay body.
- It requires compatible glaze and clay-body firing temperatures.

Important: Not every decorated vase must be glazed. Some pottery is intentionally left unglazed, depending on its intended appearance and use.

14.7 Firing safety precautions

1. Only trained or authorised persons should operate kilns.
2. Follow the kiln manufacturer's instructions.
3. Keep combustible materials away from the kiln.
4. Use suitable protective equipment when handling hot kiln furniture.
5. Do not touch hot kiln surfaces.
6. Maintain appropriate ventilation.
7. Keep learners at a safe distance during firing.
8. Never open a kiln carelessly while it is hot.
9. Do not remove hot pottery without proper procedures.
10. Keep the kiln area clean and free from unnecessary materials.

15.0 Appraisal and Appreciation of Decorated Slab Vases

15.1 Meaning of appraisal

Appraisal is the process of examining and evaluating an artwork to determine its strengths, weaknesses, quality and effectiveness.

In pottery, appraisal involves assessing the form, construction, decoration, surface finish, creativity and overall appearance of a finished pottery item.

15.2 Meaning of appreciation

Appreciation is the recognition and understanding of the artistic qualities, creativity, skills and cultural value of an artwork.

When learners appreciate pottery, they recognise the effort and ideas involved in producing the object.

15.3 Aspects to consider when appraising a slab-built vase

a) Form and shape

Examine:

- Overall shape.
- Height and width.

- Proportion.
- Opening.
- Base.
- Balance.

b) Construction quality

Check:

- Uniformity of slab thickness.
- Strength of joints.
- Smoothness of joining.
- Stability.
- Absence of unwanted cracks.
- Maintenance of the intended shape.

c) Surface decoration

Assess:

- Quality of sgraffito.
- Evenness of engobe.
- Quality of slip trailing.
- Clarity of patterns.
- Suitability of decorative techniques.

d) Colour

Examine:

- Colour choice.
- Colour contrast.
- Colour harmony.
- Consistency of colour application.
- Relationship between colour and form.

e) Texture

Check:

- Raised decorative areas.
- Incised patterns.
- Smooth and rough surfaces.
- Variety of surface effects.
- Relationship between texture and design.

f) Creativity and originality

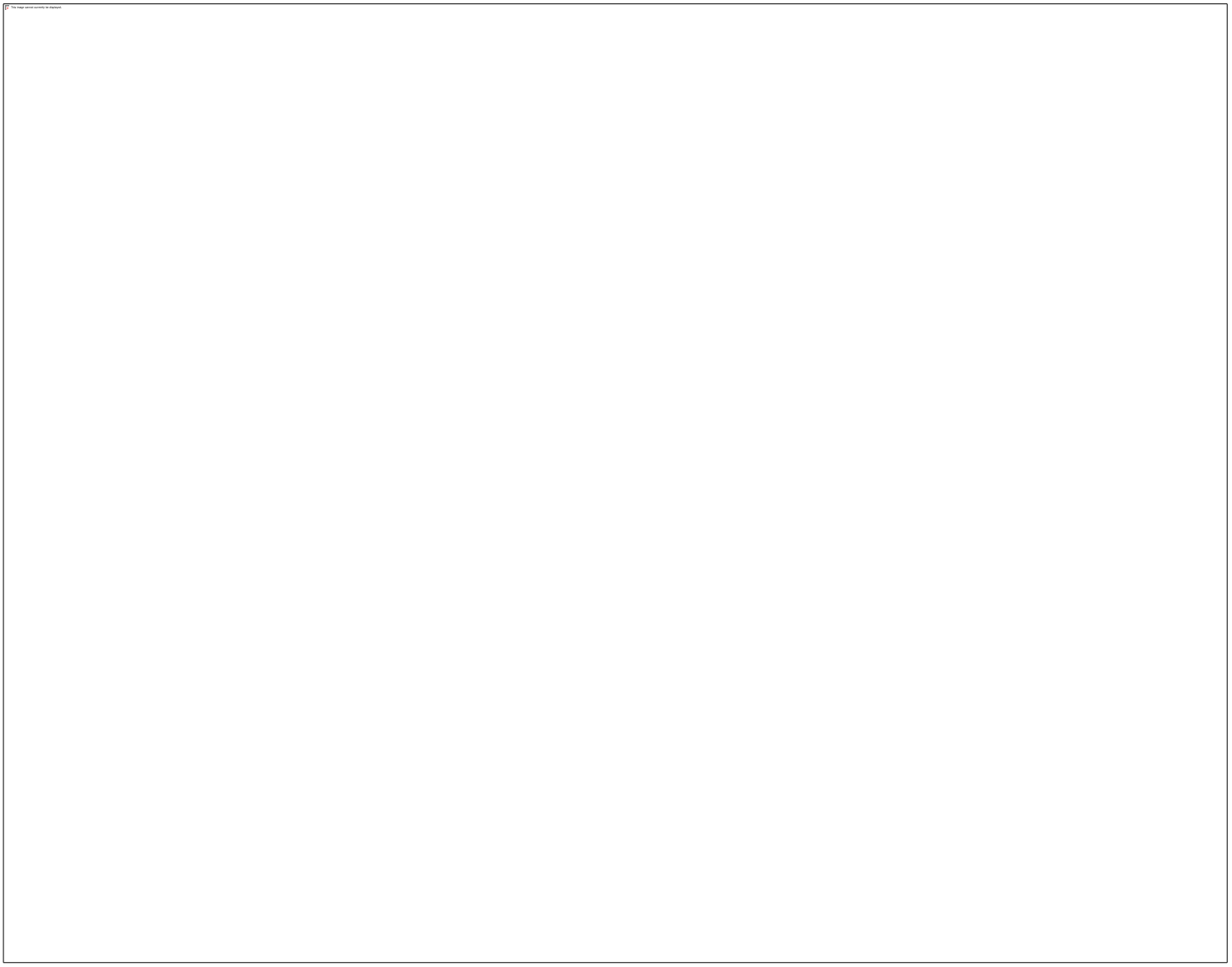
Consider:

- Uniqueness of the design.
- Use of imagination.
- Personal expression.
- Innovation in decoration.
- Use of local sources of inspiration.

g) Finishing

Check:

- Cleanliness.
- Surface quality.
- Firing results.
- Absence of avoidable defects.
- Overall presentation.





15.4 Steps in appraising own work

1. Place the completed vase in a suitable display area.
2. Observe the overall form.
3. Examine the construction.
4. Study the decorative techniques.
5. Check colour and texture.
6. Identify the most successful features.
7. Identify areas that need improvement.
8. Compare the finished item with the original design.
9. Explain the challenges experienced.
10. Suggest improvements for future work.

15.5 Steps in appraising the work of others

- Observe the work carefully.
- Listen to the artist's explanation.
- Identify the strengths of the work.
- Comment on the use of materials and techniques.
- Respect different creative ideas.
- Give helpful suggestions.
- Avoid discouraging or insulting comments.
- Appreciate originality and effort.

Examples of constructive feedback:

- "The vase has a balanced form and a stable-looking base."
- "The sgraffito patterns are clearly defined."
- "The engobe has been applied evenly."
- "The slip-trailing lines create an attractive raised texture."
- "The vase could be improved by making the slab thickness more uniform."
- "The decorative patterns could be arranged to create stronger visual rhythm."

16.0 Texture and Aesthetic Appeal in Slab-Built Vases

16.1 Meaning of texture in pottery

Texture refers to the surface quality or character of a pottery object. It may be experienced through touch or observed visually.

Texture can be:

- Actual texture.
- Visual texture.

a) Actual texture

Actual texture is the physical surface quality that can be felt by touching an object.

Examples:

- Rough raised slip lines.
- Smooth engobe surfaces.
- Incised sgraffito grooves.
- Pressed patterns.
- Embossed clay decorations.

b) Visual texture

Visual texture is the appearance of a surface that suggests a particular texture without necessarily having that physical quality.

Examples:

- Painted patterns that appear woven.
- Painted dots that suggest roughness.
- Drawn lines that suggest wood grain.
- Decorative patterns that suggest woven baskets.





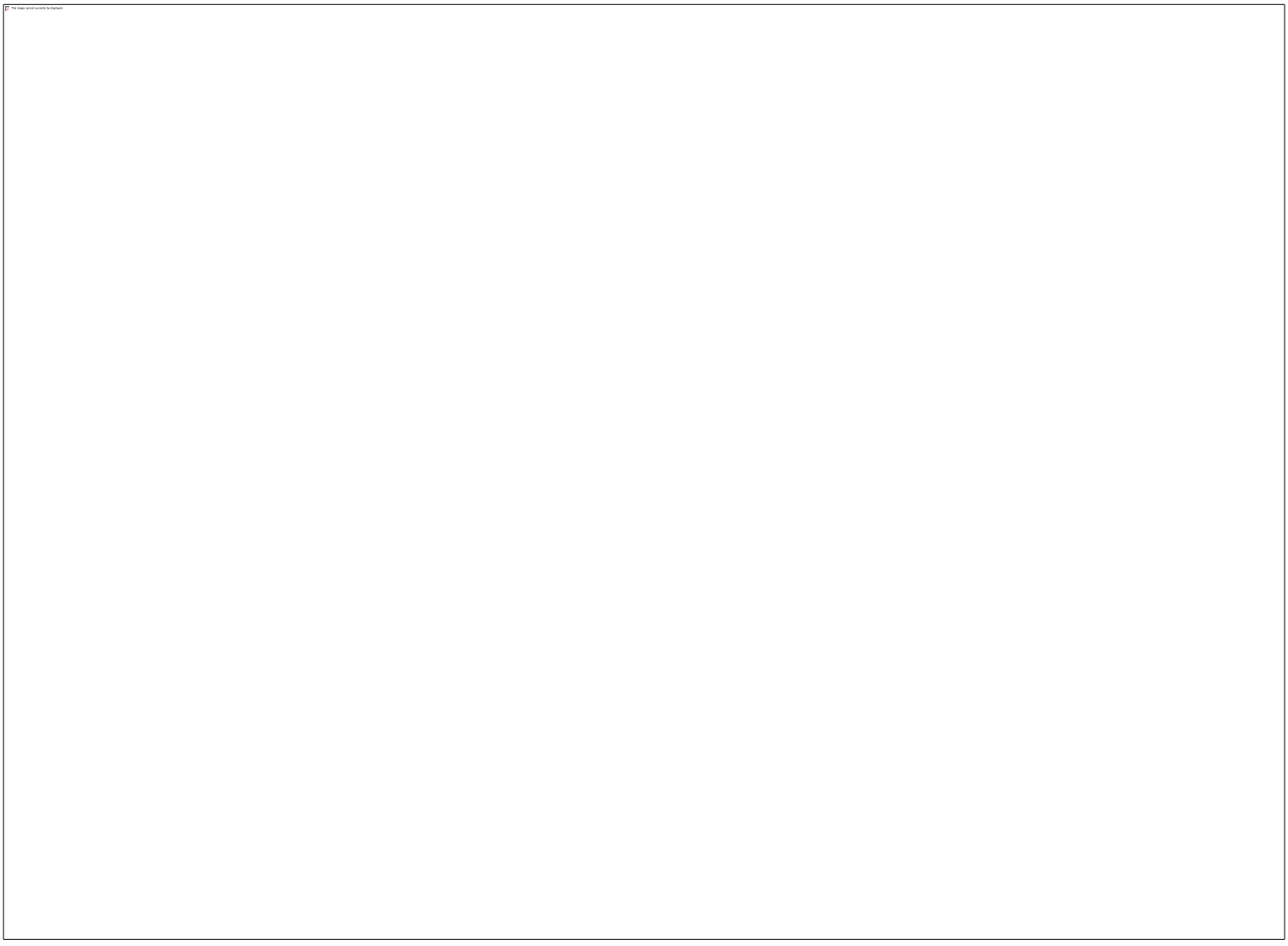
16.2 How texture enhances the aesthetic appeal of a slab-built vase

1. **Creates visual interest:** Different surface qualities make the vase more attractive.
2. **Adds depth:** Raised and recessed areas create visual variation.
3. **Emphasises patterns:** Texture makes decorative motifs more noticeable.
4. **Creates contrast:** Smooth and rough surfaces can be combined.
5. **Expresses creativity:** Artists can experiment with different surface effects.
6. **Enhances individuality:** Unique textures distinguish one vase from another.
7. **Communicates ideas:** Textures may suggest natural materials or cultural patterns.
8. **Encourages interaction:** Actual texture invites viewers to examine the object more closely, although fragile pottery should be handled carefully.
9. **Improves craftsmanship:** Well-controlled textures demonstrate technical skill.
10. **Supports cultural expression:** Patterns and textures can be inspired by traditional crafts and natural forms.

17.0 Current Trends in Pottery Decoration

Pottery decoration continues to develop as artists experiment with materials, technologies, forms and cultural influences.

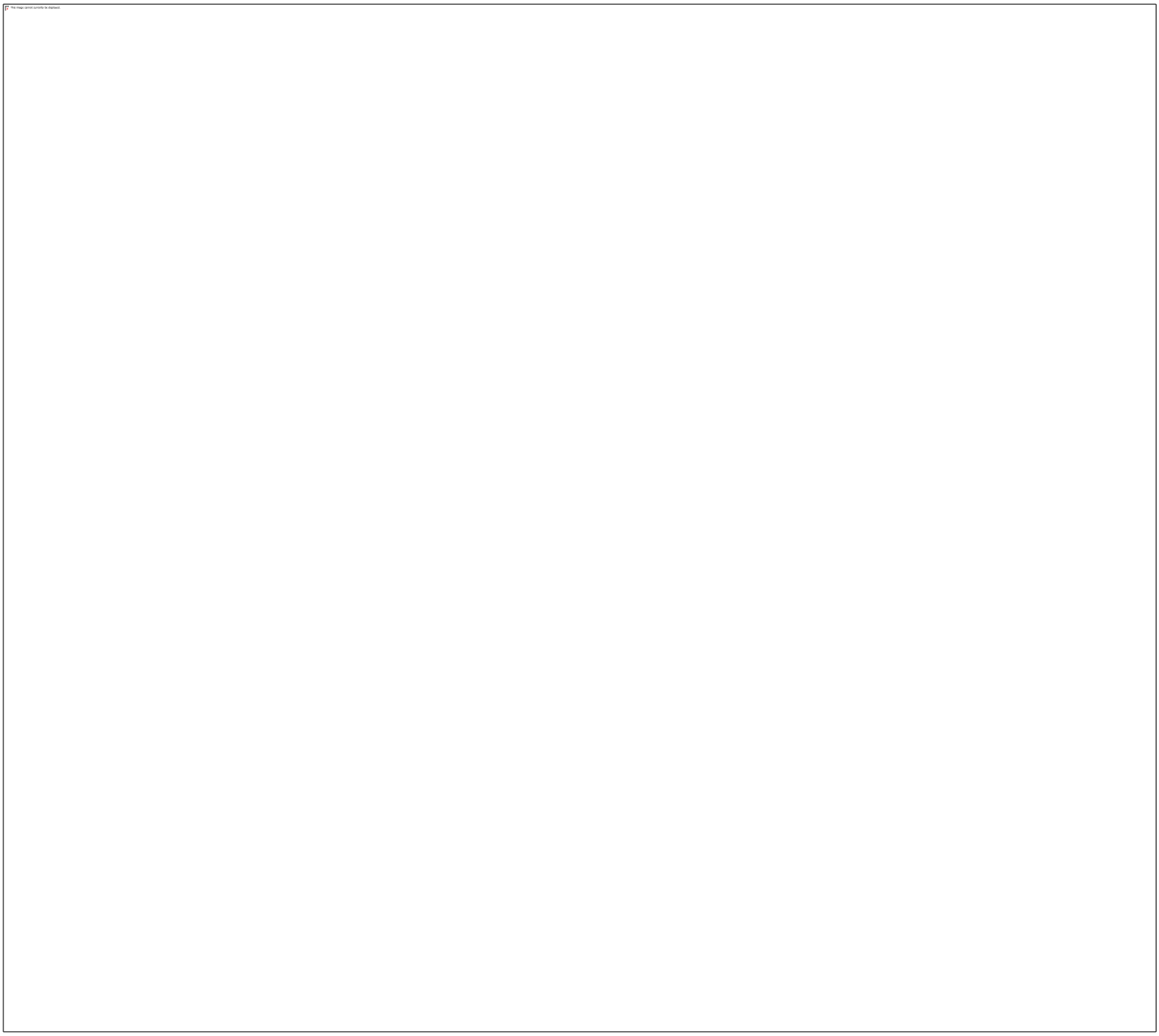
17.1 Nature-inspired decoration



Artists use:

- Leaves.
- Flowers.
- Trees.
- Animals.
- Water patterns.
- Natural textures.

17.2 Minimalist pottery decoration

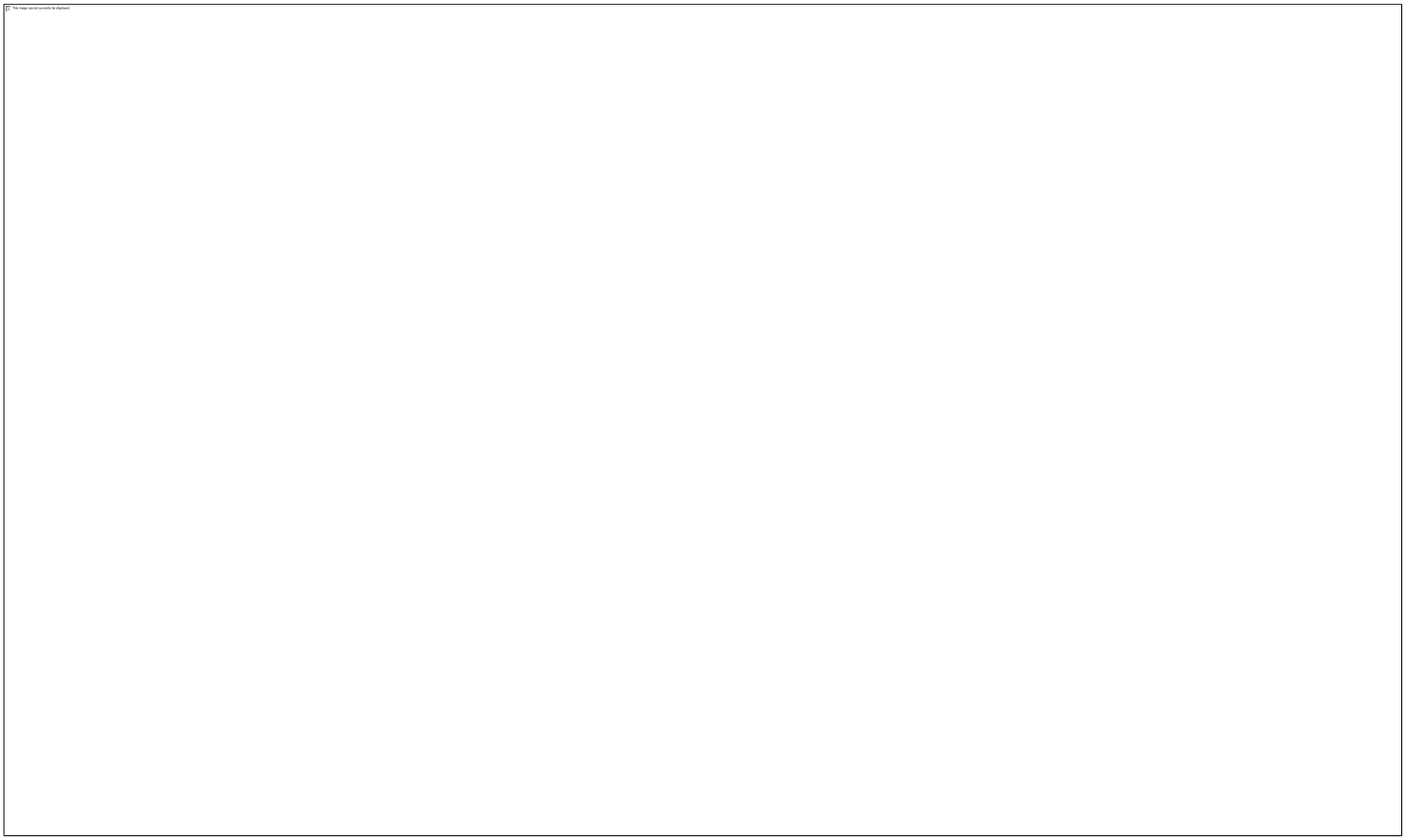


Characteristics:

1. Simple forms.
2. Limited colour palettes.
3. Clean lines.
4. Minimal patterns.

5. Emphasis on shape and surface quality.

17.3 Geometric decoration



Characteristics:

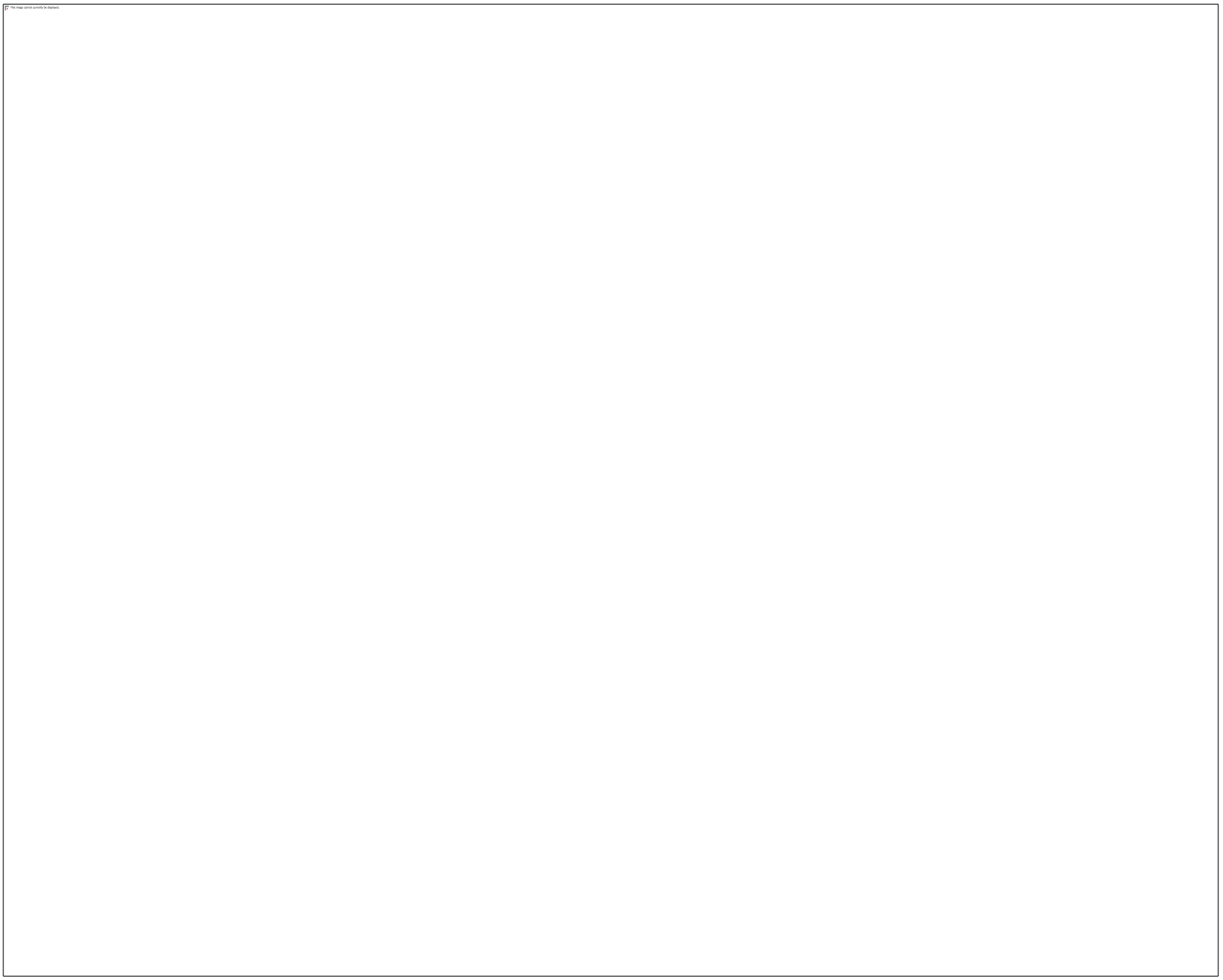
- Repeated geometric forms.
- Angular lines.
- Symmetrical patterns.
- Contrasting shapes.
- Organised surface decoration.

17.4 Textured pottery

Artists create texture using:

- Carving.
- Incising.
- Pressing.
- Stamping.
- Slip trailing.
- Scratching.
- Adding clay elements.

17.5 Cultural and heritage-inspired pottery



Artists draw inspiration from:

- Traditional pottery.
- Basketry.
- Beadwork.
- Traditional architecture.
- Local plants and animals.
- Community histories.

The designs should be developed respectfully, with appropriate understanding of their cultural meanings.

17.6 Digital design and technology

Digital technology is increasingly useful in the planning and presentation of pottery.

Applications include:

- Researching pottery traditions.

- Developing preliminary designs.
- Creating digital pattern references.
- Recording construction stages.
- Photographing finished products.
- Promoting pottery products online.

Digital tools support the creative process but do not replace the practical skills required for constructing and decorating clay objects.

17.7 Sustainable pottery practices

Artists can promote sustainability by:

1. Using locally available suitable clay.
2. Minimising clay wastage.
3. Reclaiming clean unfired clay scraps.
4. Reusing suitable tools and materials.
5. Using energy efficiently during firing.
6. Avoiding harmful disposal of ceramic chemicals.
7. Producing durable objects.
8. Promoting responsible sourcing of raw materials.

18.0 Common Defects in Slab-Built Pottery and Their Solutions

Defect	Possible cause	Suggested solution
Cracks along joints	Poor scoring and slipping	Score properly and apply suitable slip
Warped walls	Uneven slab thickness or drying	Maintain uniform thickness and dry gradually
Collapsing vase	Clay too wet or insufficient support	Allow slabs to firm and support the structure
Weak joints	Poor joining	Strengthen joints using correct joining methods
Cracked base	Uneven thickness or drying	Make the base uniform and dry slowly
Peeling engobe	Incompatibility or poor application	Use compatible engobe and prepare the surface properly
Blurred sgraffito	Poor control of scratching or unsuitable coating	Use appropriate clay consistency and tools
Slip trailing runs	Slip too thin	Adjust the consistency

Blocked slip-trailing nozzle	Slip too thick or contains lumps	Mix thoroughly and remove lumps
Firing cracks	Incomplete drying or uneven heating	Ensure complete drying and follow an appropriate firing schedule
Surface bubbling	Trapped gases, material issues or firing problems	Prepare materials properly and use suitable firing conditions

19.0 Practical Projects for Grade 11 Learners

PROJECT 1: Constructing and Decorating a Slab-Built Vase



Task: Construct a functional or decorative vase using the slab technique and decorate it using sgraffito.

Requirements:

1. Research examples of indigenous pottery.
2. Select a suitable clay body.
3. Sketch a vase design.
4. Prepare the clay.

5. Roll slabs of uniform thickness.
6. Cut the base and walls.
7. Join the slabs using scoring and slipping.
8. Refine the shape.
9. Allow the vase to reach leather-hard stage.
10. Apply a coloured engobe.
11. Scratch a suitable design into the coating.
12. Dry gradually.
13. Fire appropriately.
14. Display and appraise the finished vase.

Expected learning outcome: The learner constructs a stable slab vase and decorates it using the sgraffito technique.

PROJECT 2: Engobe-Decorated Slab Vase



Task: Construct a slab-built vase and decorate it using engobe.

Requirements:

- Design a suitable vase.
- Prepare and roll the slabs.
- Join the slabs.
- Allow the vase to reach a suitable stage.
- Select two or more compatible engobe colours.
- Apply the engobe using a brush, sponge or another suitable method.

- Dry the vase gradually.
- Fire according to the material specifications.
- Display the finished item.

Expected learning outcome: The learner demonstrates the ability to apply engobe to a slab-built pottery object.

PROJECT 3: Slip-Trailed Decorative Vase



Task: Construct a slab-built vase and decorate it using slip trailing.

Requirements:

1. Develop an original design.

2. Prepare the clay.
3. Construct the vase.
4. Allow the vase to reach leather-hard stage.
5. Prepare suitable slip.
6. Fill a suitable applicator.
7. Apply raised decorative lines and patterns.
8. Refine the decoration.
9. Dry the vase gradually.
10. Fire appropriately.
11. Appraise the completed work.

Expected learning outcome: The learner demonstrates control of slip consistency and application to produce raised decorative patterns.

PROJECT 4: Combining the Three Decorative Techniques

Task: Construct a slab vase and combine sgraffito, engobe and slip trailing to produce one coordinated composition.

Suggested theme: Nature and cultural identity in Kenya.

Possible design:

- Engobe background inspired by local soil or vegetation.
- Sgraffito leaf, bird or geometric motifs.
- Slip-trailed borders and raised lines.

Expected learning outcome: The learner selects and combines suitable decorative techniques to produce a well-balanced pottery object.

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PART II: REVISION QUESTIONS

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer all the questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. What is pottery?

A. The art of weaving fibres into fabrics.

B. The process of making objects from clay through shaping, drying and usually firing.

C. The process of carving objects from wood.

D. The process of decorating leather using dyes.

2. Which of the following best describes indigenous pottery?

A. Pottery produced exclusively by machines.

B. Pottery based on traditional skills and knowledge of local communities.

C. Pottery made only from imported materials.

D. Pottery that has no cultural significance.

3. Which of the following is a common use of traditional pottery?

A. Producing electrical cables.

B. Making household storage and cooking vessels.

C. Manufacturing plastic containers.

D. Producing metal roofing sheets.

4. Which of the following communities is associated with pottery traditions in western Kenya?

A. Luo

B. Inuit

C. Maori

D. Sami

5. Which of the following is an example of a property of clay?

A. Transparency

B. Plasticity

C. Electrical conductivity

D. Magnetism

6. What is plasticity in clay?

A. The ability of clay to conduct electricity.

B. The ability of clay to be shaped and retain its form.

C. The ability of clay to dissolve in oil.

D. The ability of clay to reflect light.

7. What is wedging in pottery?

A. Heating clay in a kiln.

B. Painting a clay object.

C. Kneading and compressing clay to make it uniform and remove trapped air.

D. Scratching a design on a fired pot.

8. Which of the following describes greenware?

A. Clay that has already been glazed and fired.

B. Pottery that has been shaped but has not yet been fired.

C. A finished metal sculpture.

D. Clay mixed with cement.

9. Which stage of greenware is particularly suitable for sgraffito decoration?

A. Leather hard

B. Fully fired

C. Molten

D. Glaze fired

10. What is bone-dry clay?

A. Clay containing a large amount of water.

B. Clay that has lost almost all its free moisture but has not been fired.

C. Clay that has been melted.

D. Clay that has already been glazed.

11. What is the meaning of sgraffito?

A. Applying raised clay lines using a nozzle.

B. Scratching through a surface coating to reveal the layer beneath.

C. Mixing clay with sand.

D. Painting a fired vase with ordinary poster paint.

12. Which material is commonly used as a coating in sgraffito?

A. Engine oil

B. Coloured engobe or slip

C. Cement

D. Plastic adhesive

13. Which tool is suitable for scratching designs in sgraffito?

A. Needle tool

B. Rolling pin

C. Wire cutter

D. Kiln shelf

14. What is engobe?

A. A metal coating applied to pottery.

B. A clay-based coating used to decorate pottery surfaces.

C. A tool used to cut slabs.

D. A method of firing pottery.

15. Which of the following is a method of applying engobe?

A. Brushing

B. Welding

C. Weaving

D. Knitting

16. What is the main purpose of engobe in pottery decoration?

A. To increase the weight of clay.

B. To add colour and improve surface appearance.

C. To cut the clay into slabs.

D. To remove all moisture from clay.

17. Which technique produces raised decorative lines on a pottery surface?

A. Sgraffito

B. Slip trailing

C. Wedging

D. Bisque firing

18. Which tool is suitable for applying slip trailing?

A. Squeeze bottle with a nozzle

B. Hacksaw

C. Wood plane

D. Metal hammer

19. What is slip in pottery?

A. A mixture of clay and water.

B. A type of metal powder.

C. A woven fabric.

D. A type of wood varnish.

20. Which statement correctly distinguishes engobe from slip?

A. Engobe is a clay-based decorative coating, while slip is a general liquid clay mixture used for joining or decoration.

B. Engobe is a carving tool, while slip is a kiln.

C. Engobe is always dry clay, while slip is always fired clay.

D. There is no possible difference in their purposes.

21. What is the slab technique in pottery?

A. Shaping clay by throwing it on a potter's wheel only.

B. Constructing pottery objects using flat sheets of clay.

C. Carving objects from solid stone.

D. Making objects by weaving clay fibres.

22. What are flat sheets of clay used in slab construction called?

A. Coils

B. Slabs

C. Grooves

D. Glazes

23. Which tool is commonly used to roll clay into slabs?

A. Rolling pin

B. Pliers

C. Chisel

D. Saw

24. Why are wooden battens used when rolling clay slabs?

A. To add colour to clay.

B. To guide the rolling pin and help maintain uniform thickness.

C. To fire the clay.

D. To remove the clay's natural colour.

25. What is scoring in pottery?

A. Scratching or roughening clay surfaces before joining them.

B. Painting the vase after firing.

C. Heating clay in a kiln.

D. Cutting fabric into patterns.

26. What is the purpose of slip when joining clay slabs?

A. To decorate the kiln.

B. To help bond the prepared joining surfaces.

C. To make the clay waterproof immediately.

D. To remove all clay particles.

27. Why should slab thickness be uniform?

A. To make the vase heavier on one side.

B. To promote more even drying and reduce cracking and warping.

C. To prevent the clay from being decorated.

D. To make the vase difficult to handle.

28. Why should a slab-built vase be dried gradually under shade?

A. To encourage uneven shrinkage.

B. To reduce the risk of cracking and warping caused by rapid drying.

C. To make the vase absorb more water.

D. To prevent the vase from becoming firm.

29. What is firing in pottery?

A. Mixing clay with water.

B. Heating dried clay in a kiln to produce ceramic material.

C. Scratching a pattern on clay.

D. Rolling clay into flat sheets.

30. Which of the following is the most appropriate way to appraise a fellow learner's decorated slab vase?

A. Ignore the construction process.

B. Focus only on the mistakes.

C. Give respectful feedback about form, decoration, texture and finishing.

D. Dismiss the learner's ideas without examining the work.

SECTION A: ANSWER KEY

Question	Answer	Question	Answer	Question	Answer
1	B	11	B	21	B
2	B	12	B	22	B
3	B	13	A	23	A
4	A	14	B	24	B
5	B	15	A	25	A
6	B	16	B	26	B
7	C	17	B	27	B
8	B	18	A	28	B
9	A	19	A	29	B
10	B	20	A	30	C

SECTION B: STRUCTURED QUESTIONS

Instructions: Answer all the questions. The section carries 50 marks.

QUESTION 1: Indigenous Pottery and Clay (8 marks)

a) Define the term indigenous pottery. (2 marks)

b) State three uses of pottery in Kenyan communities. (3 marks)

c) Explain three properties of clay that make it suitable for pottery. (3 marks)

QUESTION 2: Greenware and Decorative Techniques (8 marks)

a) Define the term greenware. (2 marks)

b) Identify the three decorative techniques studied in this sub-strand. (3 marks)

c) State three characteristics of leather-hard clay that make it suitable for pottery decoration. (3 marks)

QUESTION 3: Sgraffito, Engobe and Slip Trailing (8 marks)

a) Explain the meaning of sgraffito. (2 marks)

b) State three methods of applying engobe to pottery. (3 marks)

c) Give three characteristics of slip trailing as a pottery decorative technique. (3 marks)

QUESTION 4: Slab Construction of a Vase (10 marks)

a) Define the slab technique in pottery. (2 marks)

b) Outline four stages involved in constructing a slab-built vase. (4 marks)

c) Explain two reasons why uniform slab thickness is important when constructing a vase. (2 marks)

d) State two precautions to observe when joining clay slabs. (2 marks)

QUESTION 5: Decoration and Firing of a Slab Vase (8 marks)

A Grade 11 learner has constructed a slab-built vase and wishes to decorate it using sgraffito, engobe and slip trailing.

a) State two preparations required before decorating the vase. (2 marks)

b) Explain three steps involved in applying sgraffito to the vase. (3 marks)

c) State three precautions to observe when drying and firing the decorated vase. (3 marks)

QUESTION 6: Appraisal and Application of Pottery (8 marks)

a) Identify three aspects to consider when appraising a decorated slab-built vase. (3 marks)

b) Explain two ways in which texture enhances the aesthetic appeal of a vase. (2 marks)

c) State three ways in which pottery can support income generation in Kenya. (3 marks)

Total: 50 marks

PART III: SUGGESTED MARKING SCHEME

QUESTION 1: Indigenous Pottery and Clay (8 marks)

a) Define indigenous pottery. (2 marks)

- Pottery refers to the art and process of making objects from clay through shaping, drying and usually firing. (1)
- Indigenous pottery refers to pottery made using traditional knowledge, skills and practices developed by local communities. (1)

b) State three uses of pottery in Kenyan communities. (3 marks)

Award 1 mark each for any three:

1. Making cooking pots.
2. Producing water-storage containers.
3. Making food-storage vessels.
4. Producing serving bowls.
5. Making decorative vases.
6. Producing flower pots.
7. Making household utensils.
8. Producing ceremonial or cultural objects.

c) Explain three properties of clay that make it suitable for pottery. (3 marks)

Award 1 mark each for any three well-explained points:

1. **Plasticity:** Allows clay to be shaped into different forms.
2. **Cohesion:** Enables clay particles to hold together during construction.
3. **Workability:** Makes clay easy to manipulate and model.
4. **Hardening:** Clay becomes firm when dried and undergoes permanent changes when fired.
5. **Colour:** Natural clay colours can contribute to the appearance of pottery.
6. **Fusibility:** Clay minerals can soften or partially melt under suitable firing conditions.

QUESTION 2: Greenware and Decorative Techniques (8 marks)

a) Define greenware. (2 marks)

- Greenware is pottery that has been shaped from clay but has not yet been fired. (2)

b) Identify the three decorative techniques. (3 marks)

Award 1 mark each:

1. Sgraffito.
2. Engobe.
3. Slip trailing.

c) State three characteristics of leather-hard clay. (3 marks)

Award 1 mark each for any three:

1. It is firm and holds its shape.
2. It has lost some moisture.
3. It can be carved or incised.

4. It can receive suitable engobe decoration.
5. It can receive slip-trailing decoration.
6. It is easier to handle than wet clay.
7. It can still shrink slightly.
8. It may crack if handled roughly.

QUESTION 3: Sgraffito, Engobe and Slip Trailing (8 marks)

a) Explain sgraffito. (2 marks)

- Sgraffito is a pottery decoration technique involving scratching or incising a coating applied to the clay surface. (1)
- The scratching reveals the underlying clay body or another coloured layer to create decorative patterns. (1)

b) State three methods of applying engobe. (3 marks)

Award 1 mark each:

1. Brushing.
2. Dipping.
3. Pouring.
4. Sponging.
5. Layering.

c) Give three characteristics of slip trailing. (3 marks)

Award 1 mark each for any three:

1. Uses liquid or creamy clay slip.
2. Uses an applicator such as a nozzle or squeeze bottle.
3. Produces raised decorative lines.
4. Can create dots, curves and patterns.
5. Adds actual texture to pottery.
6. Requires controlled application.
7. Can use coloured slip.
8. Can be applied to a suitable leather-hard surface.

QUESTION 4: Slab Construction of a Vase (10 marks)

a) Define the slab technique. (2 marks)

- It is a pottery hand-building method in which clay is rolled or pressed into flat sheets. (1)
- The sheets are cut and joined to construct three-dimensional objects. (1)

b) Outline four stages involved in constructing a slab-built vase. (4 marks)

Award 1 mark each for any four stages in the correct practical sequence:

1. Develop a design and determine dimensions.
2. Prepare and wedge the clay.

3. Roll clay into slabs of uniform thickness.
4. Cut the base and side-wall components.
5. Prepare the joining surfaces by scoring.
6. Apply slip to the joining surfaces.
7. Join the base and walls.
8. Refine and smooth the joints.
9. Check the shape and balance.
10. Allow the vase to firm before further work.

c) Explain two reasons why uniform slab thickness is important. (2 marks)

Award 1 mark each for any two:

1. It promotes even drying.
2. It reduces cracking.
3. It reduces warping.
4. It supports structural stability.
5. It helps achieve consistent shrinkage.
6. It improves the appearance of the finished vase.
7. It makes joining easier.

d) State two precautions when joining clay slabs. (2 marks)

Award 1 mark each for any two:

1. Score the joining surfaces properly.
2. Apply suitable clay slip.
3. Ensure the slabs have compatible moisture levels.
4. Avoid excessive pressure that may distort the form.
5. Smooth and reinforce the joints where necessary.
6. Support the vase during construction.

QUESTION 5: Decoration and Firing of a Slab Vase (8 marks)

a) State two preparations before decorating. (2 marks)

Award 1 mark each for any two:

1. Allow the vase to reach a suitable leather-hard stage.
2. Remove dust and loose particles.
3. Inspect the joints.
4. Prepare the required decorative materials.
5. Plan the design.
6. Ensure the surface is suitable for decoration.

b) Explain three steps involved in applying sgraffito. (3 marks)

Award 1 mark each for any three correctly explained steps:

1. Apply an even layer of suitable engobe or coloured slip to the leather-hard vase.
2. Allow the coating to reach a suitable condition for scratching.
3. Sketch or plan the decorative motif.
4. Use a stylus or needle tool to scratch through the coating.
5. Reveal the underlying clay or another coloured layer.
6. Refine the design and remove loose particles.

c) State three precautions when drying and firing the vase. (3 marks)

Award 1 mark each for any three:

1. Dry the vase gradually under shade.
2. Avoid exposing the vase to excessive heat or strong sunlight during early drying.
3. Ensure that the vase is completely bone dry before firing.
4. Follow the recommended firing schedule.
5. Do not overload the kiln.
6. Use appropriate kiln safety procedures.
7. Allow the kiln to cool safely before removing the pottery.
8. Ensure that the clay body and decorative materials are compatible.

QUESTION 6: Appraisal and Application of Pottery (8 marks)

a) Identify three aspects to consider when appraising a slab-built vase. (3 marks)

Award 1 mark each for any three:

1. Shape and form.
2. Balance and proportion.
3. Construction quality.
4. Uniformity of slab thickness.
5. Strength of joints.
6. Quality of sgraffito.
7. Engobe application.
8. Slip-trailing quality.
9. Colour harmony.
10. Texture.
11. Creativity and originality.
12. Finishing and firing quality.

b) Explain two ways texture enhances the aesthetic appeal of a vase. (2 marks)

Award 1 mark each for any two well-explained points:

1. **Creates visual interest:** Different surface qualities make the vase more attractive.

2. **Adds depth:** Raised and recessed areas create visual variation.
3. **Emphasises patterns:** Textured surfaces make motifs more noticeable.
4. **Creates contrast:** Smooth and rough areas can be combined.
5. **Expresses creativity:** Different textures allow artists to experiment with surface decoration.
6. **Creates individuality:** Unique textures distinguish one vase from another.

c) State three ways pottery can support income generation in Kenya. (3 marks)

Award 1 mark each for any three:

1. Selling decorative vases.
2. Producing and selling flower pots.
3. Making and selling cooking pots.
4. Producing household storage containers.
5. Making decorative ceramic gifts.
6. Selling pottery through craft markets.
7. Supplying pottery products to shops.
8. Offering commissioned pottery services.
9. Selling pottery through online platforms.
10. Conducting pottery workshops.

PART IV: SUMMARY OF KEY LEARNING POINTS

By the end of Sub-Strand 3.1, the learner should be able to:

1. Explain the meaning and significance of indigenous pottery.
2. Identify examples of Kenyan and African pottery traditions.
3. Describe the properties of clay used in pottery.
4. Explain the meaning and stages of greenware.
5. Distinguish between wet clay, leather-hard clay and bone-dry clay.
6. Analyse sgraffito, engobe and slip-trailing techniques.
7. Select suitable tools and materials for pottery decoration.
8. Construct functional and decorative pottery items using the slab technique.
9. Maintain uniformity in slab thickness.
10. Join clay slabs using scoring and slipping.
11. Decorate leather-hard slab-built vases.
12. Dry decorated pottery appropriately.
13. Observe safety precautions when firing pottery.
14. Appraise own and others' decorated slab vases.
15. Explain how texture enhances the aesthetic appeal of pottery.
16. Identify contemporary trends in pottery decoration.

17. Explain the contribution of pottery to cultural heritage and entrepreneurship in Kenya.

CBE Practical Assessment Rubric

The following rubric can guide assessment of the learner's practical work.

Assessment area	Evidence of achievement
Research	Explores Kenyan and African indigenous pottery
Design	Produces an original slab-vase design
Clay preparation	Prepares workable clay properly
Slab production	Produces slabs of approximately uniform thickness
Construction	Joins slabs securely using scoring and slipping
Form	Produces a balanced and stable vase
Sgraffito	Creates clear scratched decorative patterns
Engobe	Applies a suitable and even decorative coating
Slip trailing	Produces controlled raised decorative patterns
Drying	Dries the vase gradually and appropriately
Firing	Observes appropriate firing and safety procedures
Creativity	Demonstrates originality in form and decoration
Appraisal	Evaluates own and others' work constructively

STRAND 3.0: INDIGENOUS CRAFTS (3D ART)

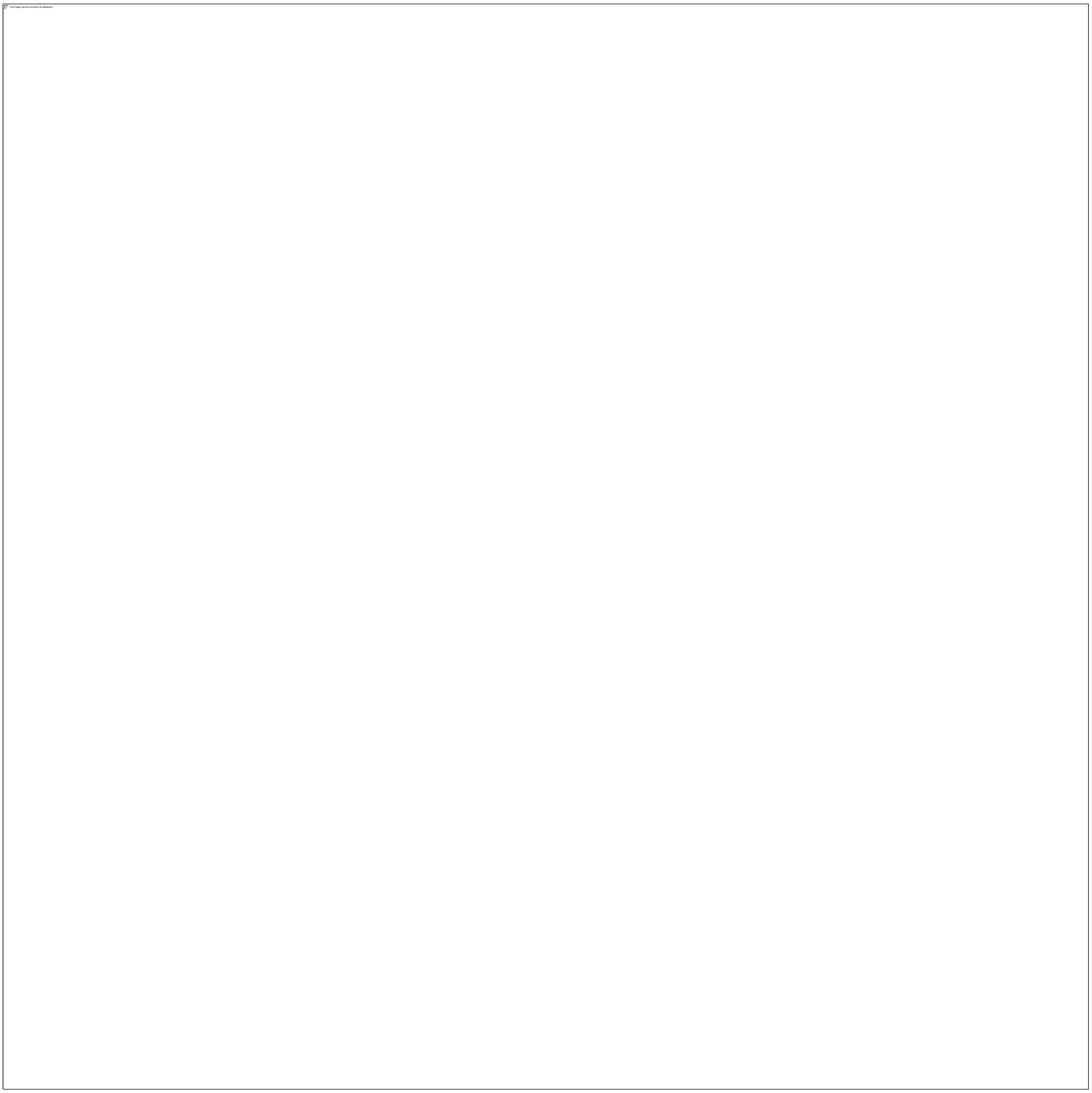
SUB-STRAND 3.2: SCULPTURE IN THE ROUND

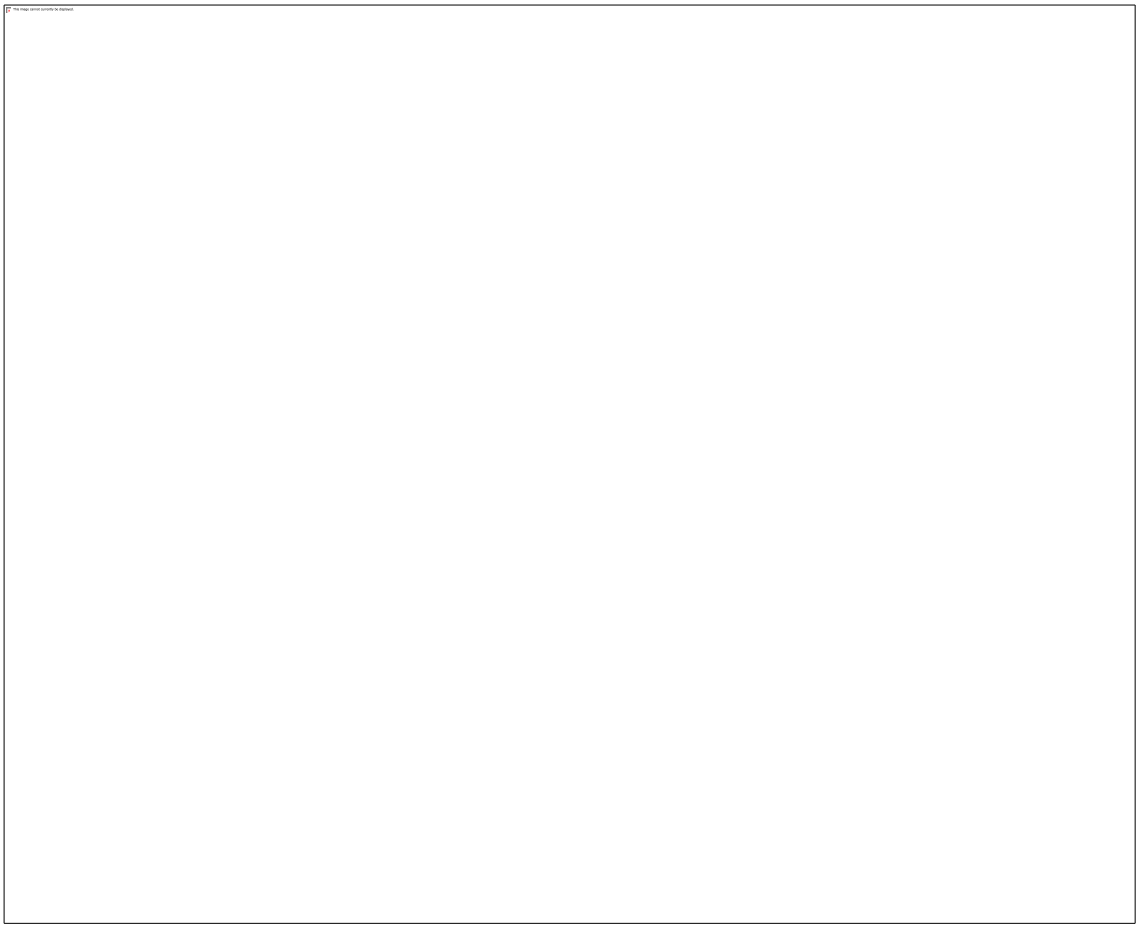
1.0 Introduction to sculpture in the round

Sculpture is a branch of three-dimensional art that involves creating forms and objects by shaping, modelling, assembling, carving or constructing materials. A sculpture has height, width and depth, unlike a drawing or painting, which is mainly two-dimensional.

Sculpture in the round refers to a three-dimensional artwork that is made to be viewed from all sides. The viewer can walk around it and observe its front, back, sides and other angles.

Unlike a relief sculpture, which is attached to a background surface, sculpture in the round stands independently or is supported by a base.





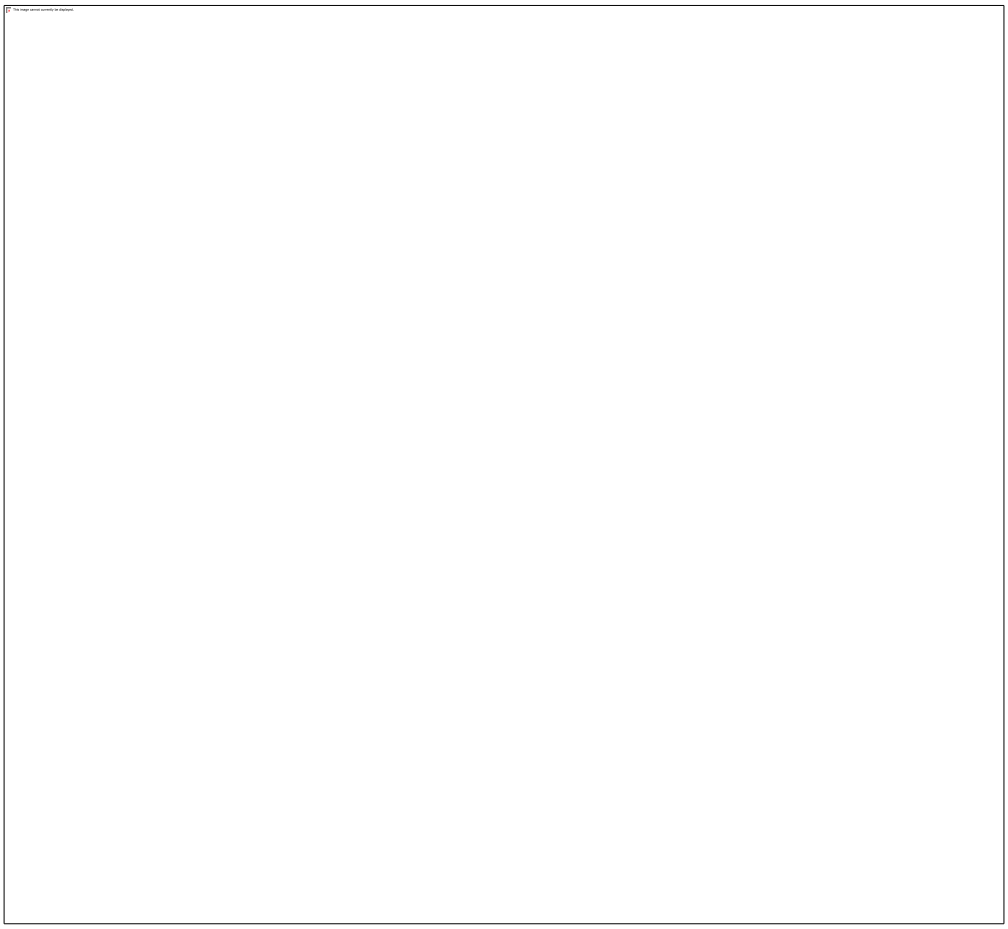
1.1 Characteristics of sculpture in the round

1. **Three-dimensional form:** It has height, width and depth.
2. **Viewed from all sides:** It is designed to be appreciated from the front, back, sides and other viewpoints.
3. **Occupies physical space:** It takes up space and may be placed on a pedestal, table, floor or outdoor setting.
4. **Has volume:** It possesses mass and occupies a measurable amount of space.
5. **May be freestanding:** It can stand independently when properly balanced and supported.
6. **May represent different subjects:** It can depict people, animals, plants, objects, abstract forms or imaginary creatures.
7. **Uses different materials:** Common materials include wood, stone, clay, papier mâché, metal, bones, rubber and coconut shells.
8. **Requires structural stability:** Its parts must be properly joined or shaped to prevent it from falling apart.
9. **Can have varied textures:** The surface may be rough, smooth, polished, patterned or uneven.
10. **Can be functional or decorative:** Some sculptures are made for aesthetic appreciation, while others serve cultural, commemorative or practical purposes.

1.2 Examples of sculpture in the round

- A carved wooden human figure displayed on a pedestal.
- A clay model of a cow.
- A stone-carved bust of a community leader.

- A papier mâché elephant.
- A carved wooden bird.
- A sculpture made from coconut shells.
- An abstract sculpture made from recycled materials.
- A freestanding sculpture of a traditional African dancer.



2.0 Artists and examples of sculpture

Studying established sculptors helps learners understand how artists develop ideas, select materials and communicate meaning through three-dimensional forms.

2.1 Michelangelo

Michelangelo (1475–1564)

Michelangelo was an Italian Renaissance artist recognised for his outstanding sculptures, paintings and architectural work. His sculptures demonstrate careful observation of the human body, proportion, anatomy and balance.

Examples of his sculptural works:

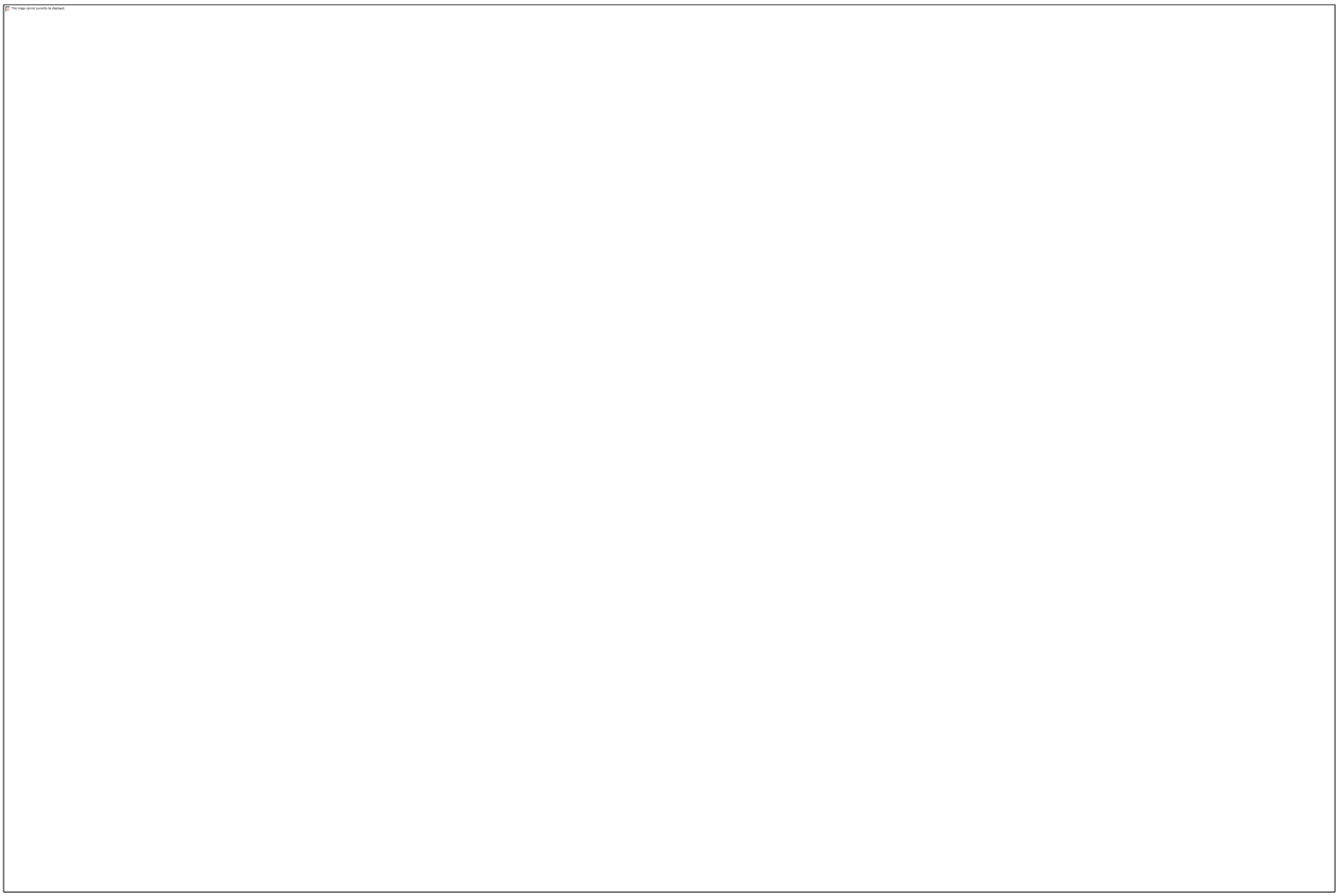
- **David:** A marble sculpture representing the biblical hero David.

- **Pietà:** A marble sculpture depicting Mary holding the body of Jesus.
- **Moses:** A marble sculpture representing the biblical figure Moses.

Lessons learners can draw from Michelangelo's work:

1. Careful observation of the subject before sculpting.
2. Proper understanding of human anatomy.
3. Attention to proportion and balance.
4. Skill in subtractive carving of marble.
5. Effective use of surface details to communicate expression and character.

2.2 Elkana Ong'esa



Elkana Ong'esa

Elkana Ong'esa is a Kenyan sculptor associated with the Kisii soapstone carving tradition. His work provides an important example of how locally available stone can be transformed into expressive sculptural forms.

Lessons learners can draw from his work:

- Use of locally available materials.
- Transformation of stone into meaningful forms.
- Development of cultural identity through sculpture.
- Importance of carving skills and surface finishing.

- Creative use of natural stone colour and texture.

2.3 Motondi Gerald



Gerald Motondi

Gerald Motondi is among the Kenyan sculptors identified in the learning area for study and artistic inspiration. Learners should investigate available examples of his work, the materials he uses, the subjects he explores and the techniques evident in his sculptures.

Areas of study when examining his work:

1. Subject matter and message.
2. Materials and tools used.
3. Method of construction or carving.
4. Use of shape, form, texture and space.
5. Balance, proportion and overall presentation.

2.4 Other sources of inspiration

Learners can also study:

- Traditional African wooden masks and figures.
- Kenyan soapstone carvings from Kisii.
- Traditional carved objects from different Kenyan communities.
- Contemporary sculptures made from metal, wood and recycled materials.
- Sculptural forms found in public spaces, museums and cultural centres.

Important: A learner should study an artwork to understand its techniques and ideas, not simply copy it. The learner should develop an original sculpture based on personal observation, imagination and cultural inspiration.

3.0 Subject matter in sculpture

Subject matter refers to the person, animal, object, event, idea or theme represented in an artwork.

The subject matter determines what the sculpture communicates to the viewer.

3.1 Common subject matter in sculpture

1. **Human figures:** Sculptures representing men, women, children, elders or community leaders.
2. **Animals:** Sculptures of cattle, goats, sheep, elephants, lions, birds and fish.
3. **Plants:** Sculptures representing trees, flowers, leaves and fruits.
4. **Cultural activities:** Sculptures showing dancing, farming, hunting, ceremonies and traditional occupations.
5. **Historical events:** Sculptures commemorating important people or events.
6. **Religious subjects:** Sculptures representing spiritual themes and religious stories.
7. **Abstract subjects:** Sculptures that communicate ideas through shapes and forms rather than realistic representation.
8. **Environmental themes:** Sculptures showing conservation, pollution, climate change and protection of wildlife.
9. **Everyday life:** Sculptures representing cooking, carrying water, trading, playing and working.
10. **Imaginary subjects:** Forms created from imagination, myths, stories and fantasy.



3.2 Selecting suitable subject matter

A learner should consider the following when selecting a subject:

- **Personal interest:** Choose a subject that the learner enjoys studying or representing.
- **Availability of materials:** Select a subject that can be made using available materials.
- **Purpose:** Determine whether the sculpture is decorative, commemorative, cultural or functional.
- **Level of skill:** Select a subject that matches the learner's ability and available working time.
- **Structural requirements:** Consider whether the subject can stand securely.
- **Cultural relevance:** Choose subjects that reflect local life, heritage and experiences.
- **Originality:** Develop an individual idea rather than reproducing another artist's work.

4.0 Elements of three-dimensional art

Elements of art are the basic visual components used to create and organise an artwork. In sculpture, they help the artist develop form, communicate meaning and create visual interest.

4.1 Form

Form refers to a three-dimensional object that has height, width and depth.

- It gives a sculpture its physical appearance.
- It may be geometric or organic.
- Examples of geometric forms include cubes, spheres, cylinders and cones.
- Organic forms are irregular shapes commonly found in nature, such as human bodies, trees and animals.

4.2 Shape

Shape refers to an enclosed two-dimensional area or outline that forms part of a sculpture.

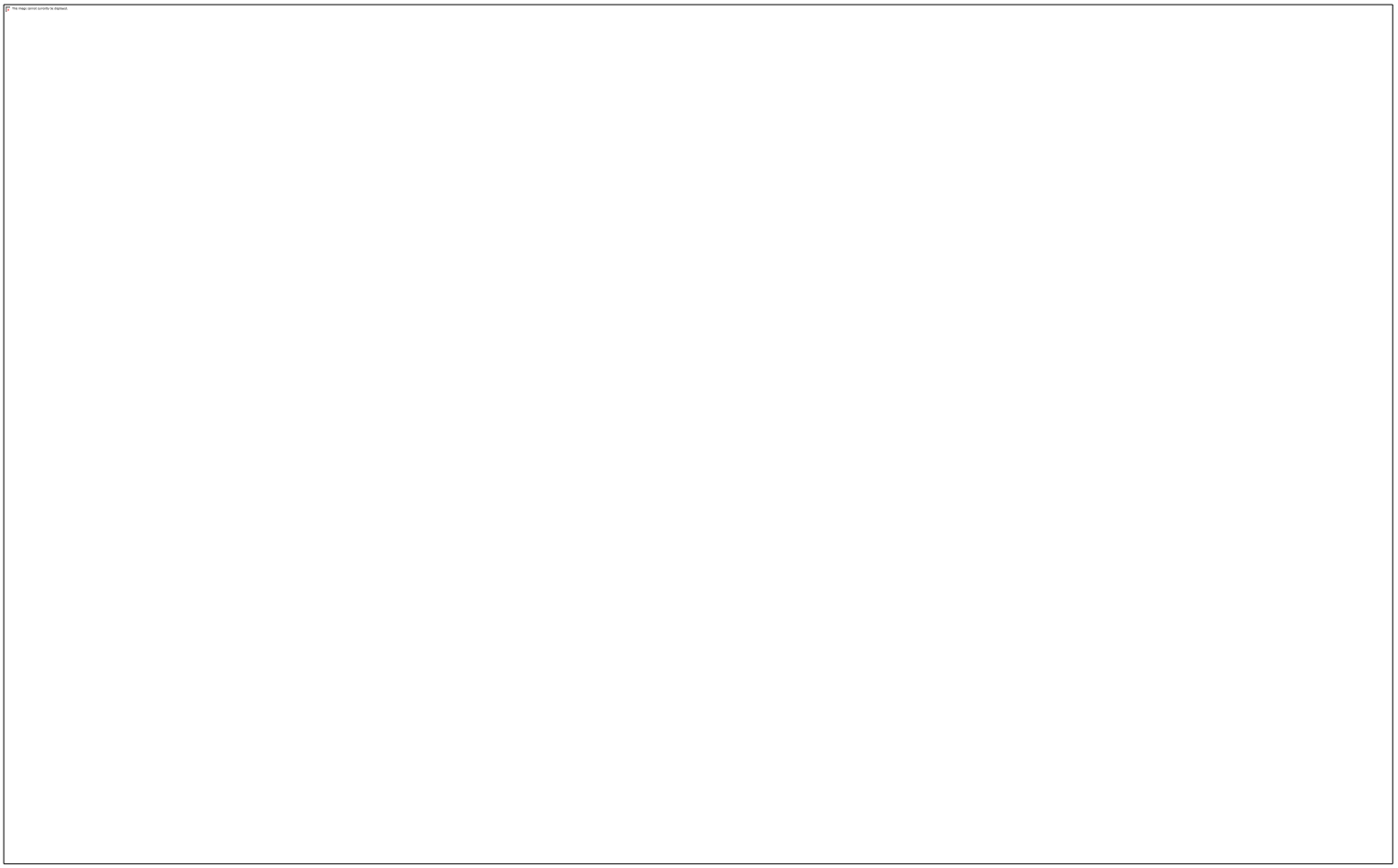
- It may be regular or irregular.
- It helps define the outline and parts of a sculptural object.
- Examples include circular heads, oval bodies and triangular ears.

4.3 Texture

Texture refers to the surface quality of a sculpture. It describes how a surface looks or feels.

Types of texture include:

1. **Actual texture:** A surface that can physically be felt, such as rough wood or smooth polished stone.
2. **Visual texture:** A surface that appears to have a particular texture when viewed but may feel smooth when touched.
3. **Rough texture:** Created through scratching, chipping, cutting or leaving natural material surfaces exposed.
4. **Smooth texture:** Achieved through sanding, polishing, burnishing or careful modelling.
5. **Patterned texture:** Produced by repeating lines, dots, shapes or marks.



4.4 Space

Space refers to the area occupied by a sculpture and the empty area surrounding or enclosed within it.

- Positive space is the space occupied by the sculpture.
- Negative space is the empty area around or within the sculpture.
- Open spaces can make a sculpture appear lighter.
- Proper use of space improves visual interest and balance.

4.5 Line

Line refers to a continuous mark or edge that guides the viewer's eye.

- Straight lines may communicate strength and stability.
- Curved lines may communicate movement and softness.
- Diagonal lines may create a sense of action.
- Carved lines may be used to show hair, clothing, feathers or decorative patterns.

4.6 Colour

Colour refers to the visual appearance created by pigments, paints, stains or the natural colour of materials.

- Natural wood may have brown, cream or reddish tones.
- Soapstone may have different natural shades.
- Clay may have red, brown, grey or cream colours.
- Paint can be used to create contrast and highlight details.

4.7 Value

Value refers to the lightness or darkness of a colour.

- Light and dark areas can make a sculpture appear more realistic.
- Shading may create an impression of depth.
- Darker areas may emphasise recesses, while lighter areas may highlight raised parts.

4.8 Mass and volume

- **Mass** refers to the physical bulk or quantity of material in a sculpture.
- **Volume** refers to the amount of three-dimensional space occupied by the sculpture.
- Both influence the weight, size and visual impact of an artwork.

5.0 Principles of three-dimensional art

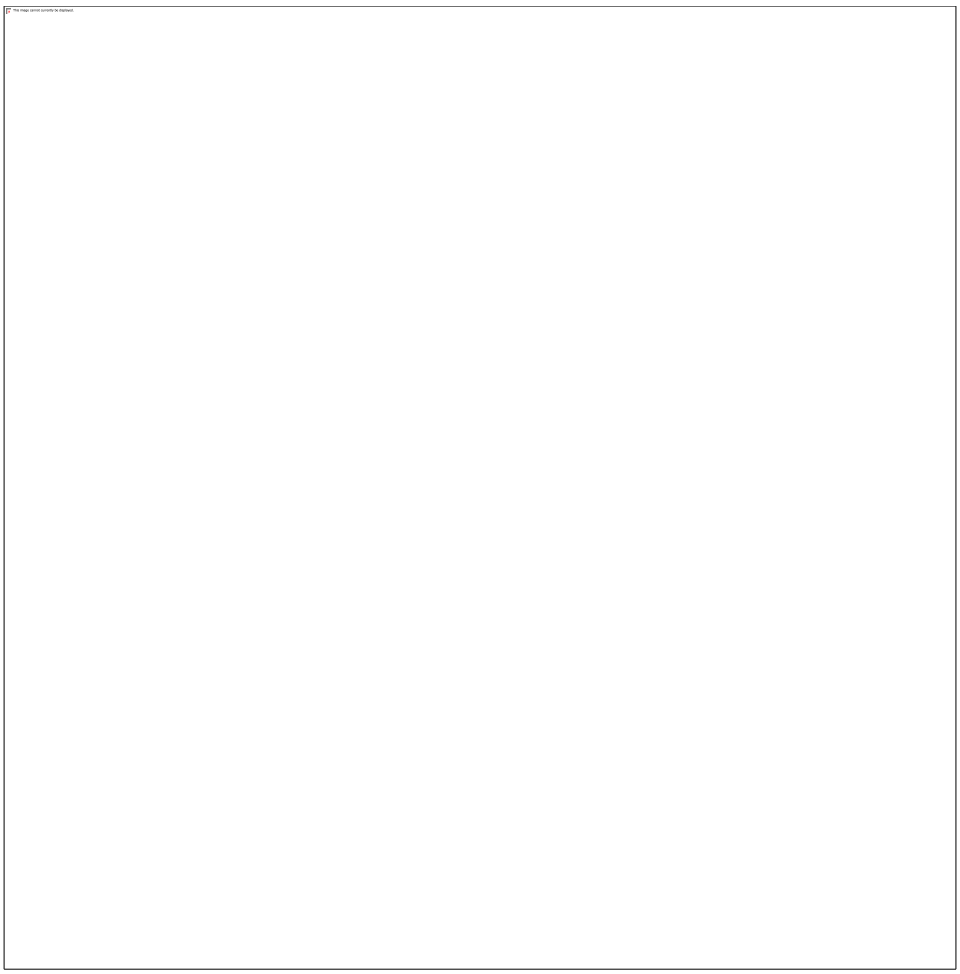
Principles of art are guidelines used to organise elements of art to create an effective sculpture.

5.1 Balance

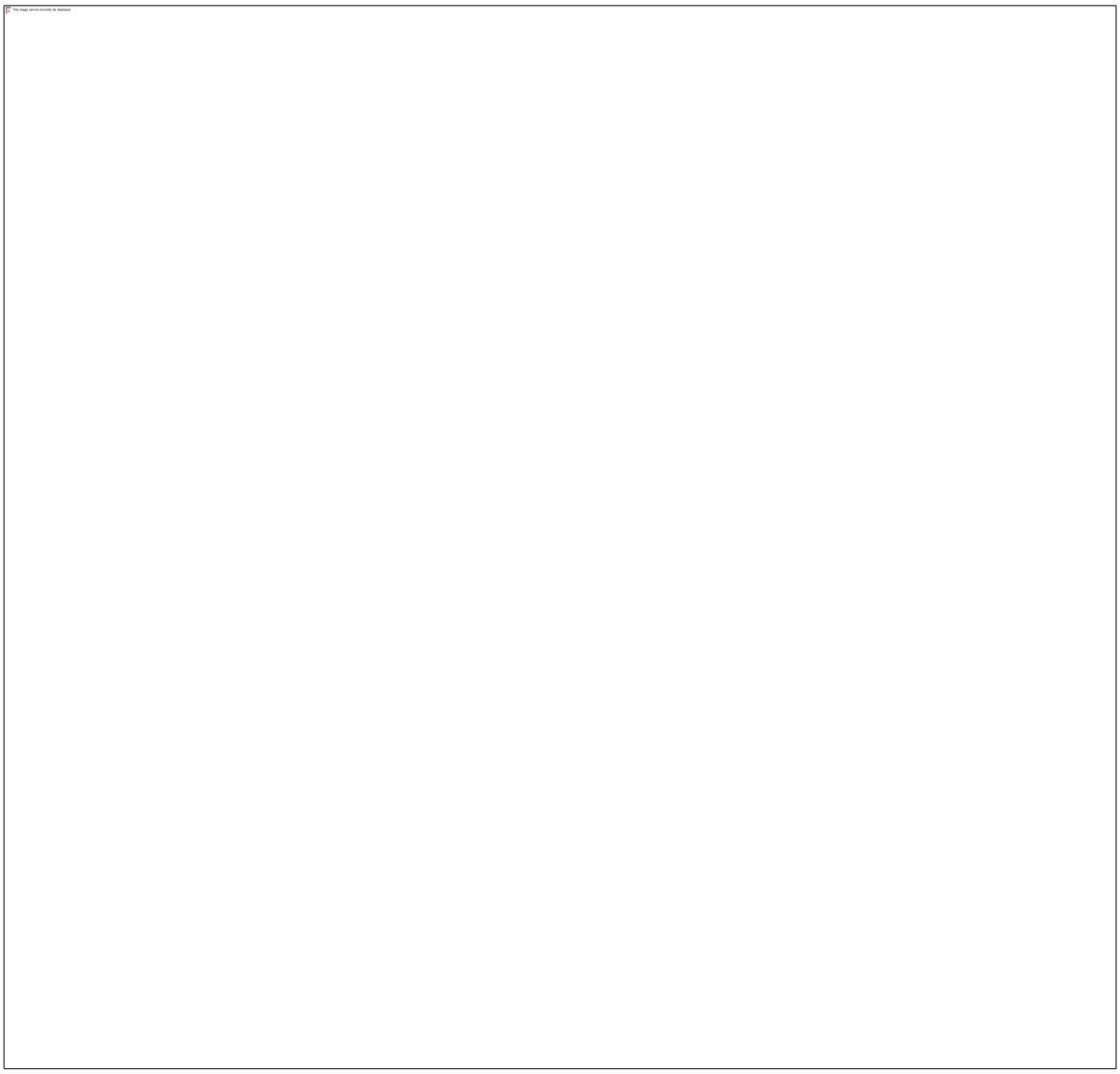
Balance refers to the distribution of visual weight in a sculpture.

Types of balance:

1. **Symmetrical balance:** Both sides of a sculpture are similar in appearance and visual weight.
2. **Asymmetrical balance:** Different forms are arranged to create equal visual weight without being identical.
3. **Radial balance:** Parts are arranged around a central point.







5.2 Proportion

Proportion refers to the relationship in size between different parts of a sculpture.

- A human figure should have appropriate relationships between the head, body, arms and legs.
- An animal sculpture should have suitable relationships between its head, body, legs and tail.
- Proportion may be realistic, exaggerated or deliberately distorted for artistic effect.

5.3 Unity

Unity refers to the way different parts of a sculpture work together to form a complete and harmonious artwork.

5.4 Harmony

Harmony is achieved when the elements of a sculpture complement one another.

For example, repeated curved shapes and natural textures may create harmony in a sculpture inspired by leaves.

5.5 Rhythm

Rhythm refers to the repetition or arrangement of elements to create visual movement.

Examples include repeated carved lines, patterns, dots or shapes.

5.6 Emphasis

Emphasis refers to making one part of a sculpture stand out.

An artist may emphasise the head, face, hands or another important feature by changing its size, texture, position or colour.

5.7 Movement

Movement refers to the visual impression of action or direction in a sculpture.

It can be created through:

- Twisted body positions.
- Diagonal arrangements.
- Extended limbs.
- Flowing lines.
- Curved forms.

5.8 Contrast

Contrast refers to the use of different elements to create visual interest.

Examples include:

- Rough and smooth surfaces.
- Light and dark colours.
- Large and small forms.
- Straight and curved lines.

6.0 Techniques used in making sculpture in the round

Sculptures can be created using different techniques depending on the material, subject matter, purpose and artistic intention.

The two major approaches are:

1. Additive techniques.
2. Subtractive techniques.

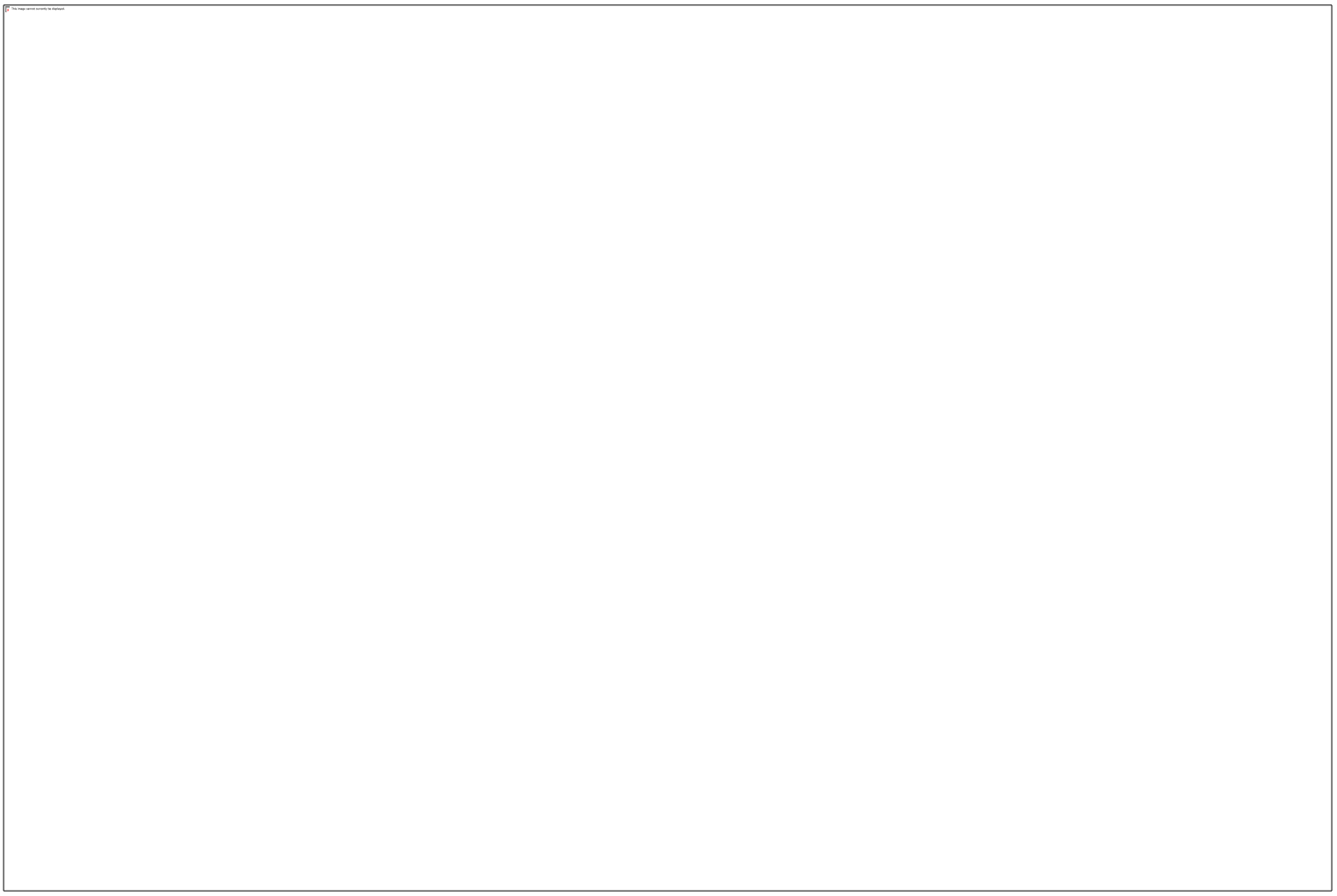
6.1 Additive techniques

Additive techniques involve creating a sculpture by adding, joining or building up material to form the desired shape.

The artist begins with a basic structure and gradually adds more material until the intended form is achieved.

Examples of additive techniques:

- Modelling with clay.
- Papier mâché construction.
- Assembling different materials.
- Building up a form around an armature.
- Joining pieces of wood, wire or other suitable materials.



Papier Mache

- **Rip** up strips of newspaper/ paper towels. (cutting the strips can cause edges to stick out)



- Dip the newspaper into the papier mache paste (flour and water, or glue and water)



- Add the strips over your armature until you have a couple layers.

Advantages of additive techniques

1. They allow easy modification of the sculpture during construction.
2. They are suitable for beginners and experienced artists.
3. They allow the artist to build complex forms gradually.
4. They can use locally available and recycled materials.
5. They allow the construction of large forms using an internal support.
6. They encourage experimentation and creativity.

Limitations of additive techniques

1. Some materials take a long time to dry.
2. Weak joints may cause parts to detach.
3. Thick clay forms may crack during drying or firing.
4. Some materials require an internal support.
5. Papier mâché may be damaged by moisture if not properly sealed.

6.2 Subtractive techniques

Subtractive techniques involve removing material from a solid mass to reveal the intended sculpture.

The artist begins with a block or solid material and removes unwanted sections through cutting, chiselling, scraping, carving or grinding.

Examples of subtractive techniques:

- Wood carving.
- Stone carving.
- Bone carving.
- Coconut shell carving.
- Rubber carving.





Advantages of subtractive techniques

1. They produce strong and durable sculptures when suitable materials are used.
2. They allow the artist to reveal forms hidden within a material.
3. They preserve the natural character and appearance of the material.
4. They can produce fine details and intricate patterns.
5. They are suitable for wood, stone, bone and coconut shells.

Limitations of subtractive techniques

1. Mistakes may be difficult or impossible to reverse.
2. Hard materials require specialised tools.
3. Some materials are expensive or difficult to obtain.
4. The process may produce dust, chips and noise.
5. It requires careful planning and control.
6. Some materials may crack or split during carving.

6.3 Differences between additive and subtractive techniques

Additive techniques	Subtractive techniques
Material is added to create a form.	Material is removed to reveal a form.
Construction begins with a basic support or small mass.	Construction begins with a solid mass or block.
The form is built gradually.	The form is revealed gradually.
Corrections can often be made by adding more material.	Corrections are difficult where too much material has been removed.
Examples include clay and papier mâché modelling.	Examples include wood, stone, bone and coconut shell carving.

7.0 Materials used in making sculpture in the round

A sculptor selects materials according to the intended subject, size, design, durability, availability, cost and finishing requirements.

The materials may be natural, manufactured or recycled.

7.1 Wood

Wood is a natural material obtained from trees. It is widely used in sculpture because it can be cut, shaped, carved, sanded and polished.





Examples of wood used in sculpture:

- Jacaranda.
- Cedar.
- Mahogany.
- Olive wood.
- Neem.
- Grevillea.
- Cypress.

Characteristics of wood:

1. It is available in different colours and grain patterns.
2. It can be carved using hand tools and power tools.
3. It is lighter than many types of stone.
4. It can be polished, painted, stained or varnished.
5. Some types are hard and durable, while others are soft and easy to carve.
6. It may shrink, expand, split or decay if not properly dried and stored.

Uses of wood in sculpture:

- Making human and animal figures.

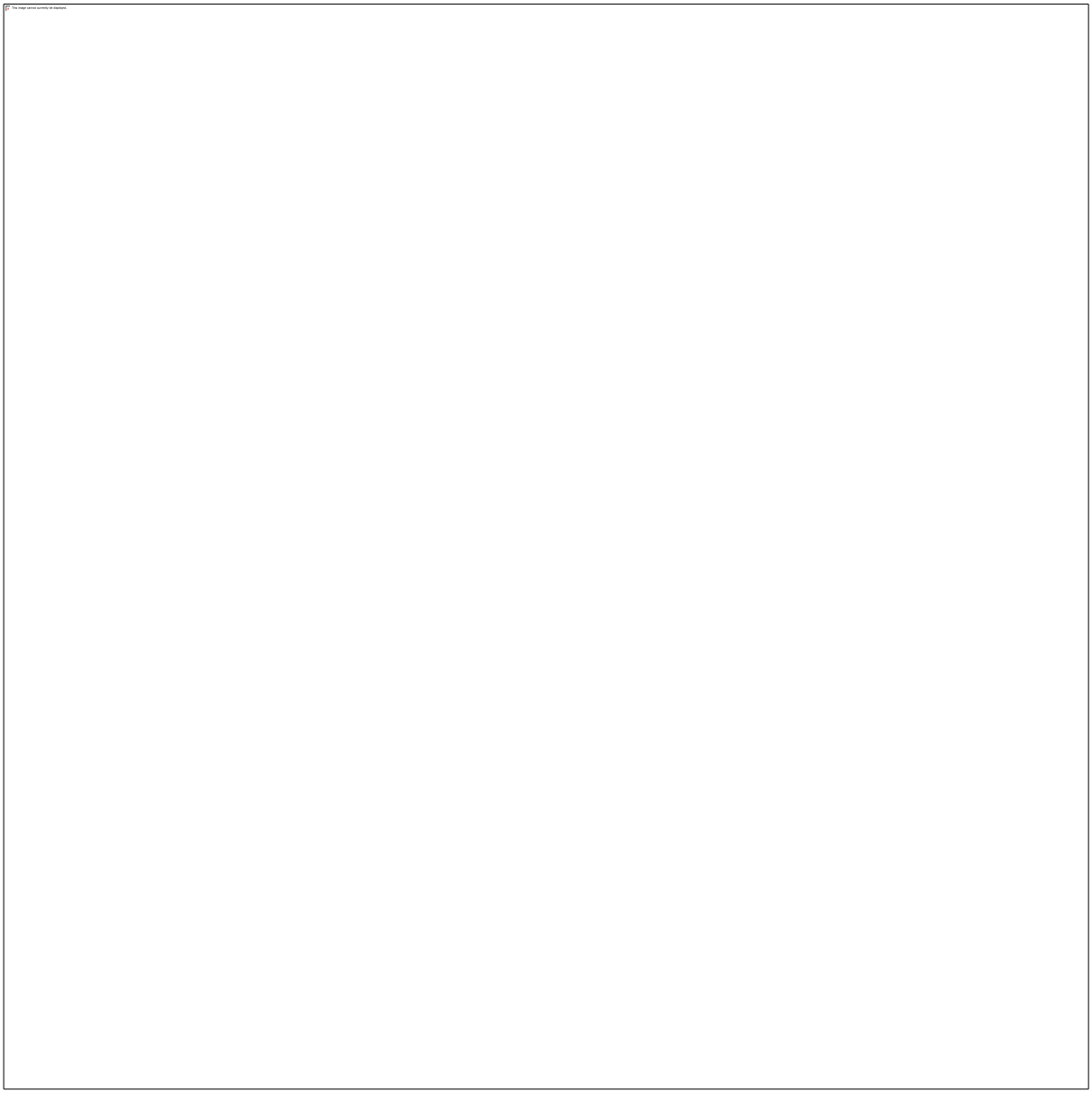
- Producing masks and decorative objects.
- Making abstract sculptures.
- Creating miniature models.
- Constructing sculpture bases and supports.

Factors to consider when selecting wood:

- Hardness and durability.
- Grain direction and appearance.
- Absence of cracks and insect damage.
- Size and thickness of the wood.
- Ease of carving.
- Availability and sustainability.

7.2 Stone

Stone is a naturally occurring solid material obtained from the earth. It is used in sculpture because of its strength, durability and varied textures.



Examples of stone used in sculpture:

- Soapstone.
- Marble.
- Granite.
- Limestone.
- Sandstone.

Characteristics of stone:

1. It is generally hard and durable.
2. It is available in different colours and textures.
3. It can be carved, chipped, ground and polished.
4. Some stones are soft and easy to shape, while others are very hard.
5. It may be heavy and difficult to transport.
6. Some stones can crack if struck incorrectly.

Soapstone in Kenya

Soapstone is particularly associated with the Kisii region of Kenya. It is used by local artisans to produce sculptures, ornaments, decorative objects and souvenirs.

Uses of stone in sculpture:

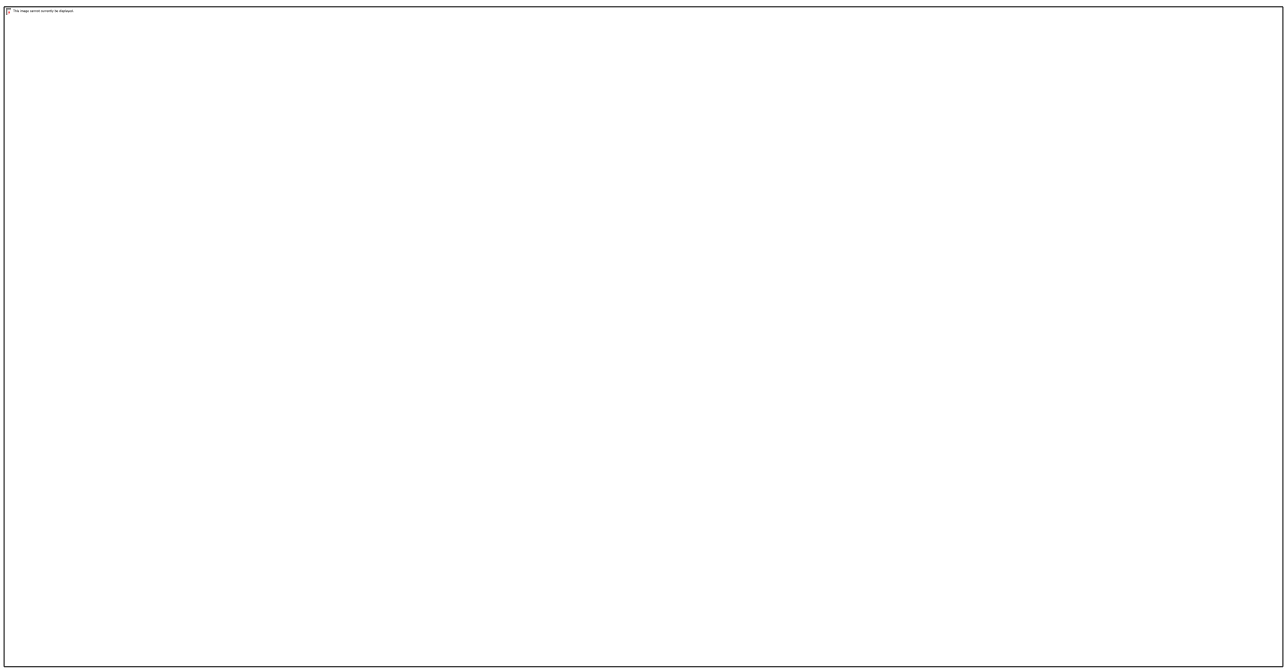
- Human figures.
- Animal sculptures.
- Abstract forms.
- Decorative objects.
- Commemorative sculptures.

Factors to consider when selecting stone:

- Hardness.
- Size and shape.
- Presence of cracks.
- Colour and natural patterns.
- Intended level of detail.
- Availability and ease of transportation.

7.3 Rubber

Rubber is a flexible material that may be natural or synthetic. It can be shaped, cut, carved or used in combination with other materials.



Characteristics of rubber:

1. It is flexible and elastic.
2. It can be cut into different shapes.
3. Some types are waterproof.
4. It can be combined with wood, wire and other materials.
5. It is available in different thicknesses and forms.
6. Some rubber products may be difficult to carve precisely.

Sources of rubber for sculpture:

- Reclaimed rubber sheets.
- Discarded rubber mats.
- Suitable clean rubber offcuts.
- Recycled rubber objects.

Uses of rubber in sculpture:

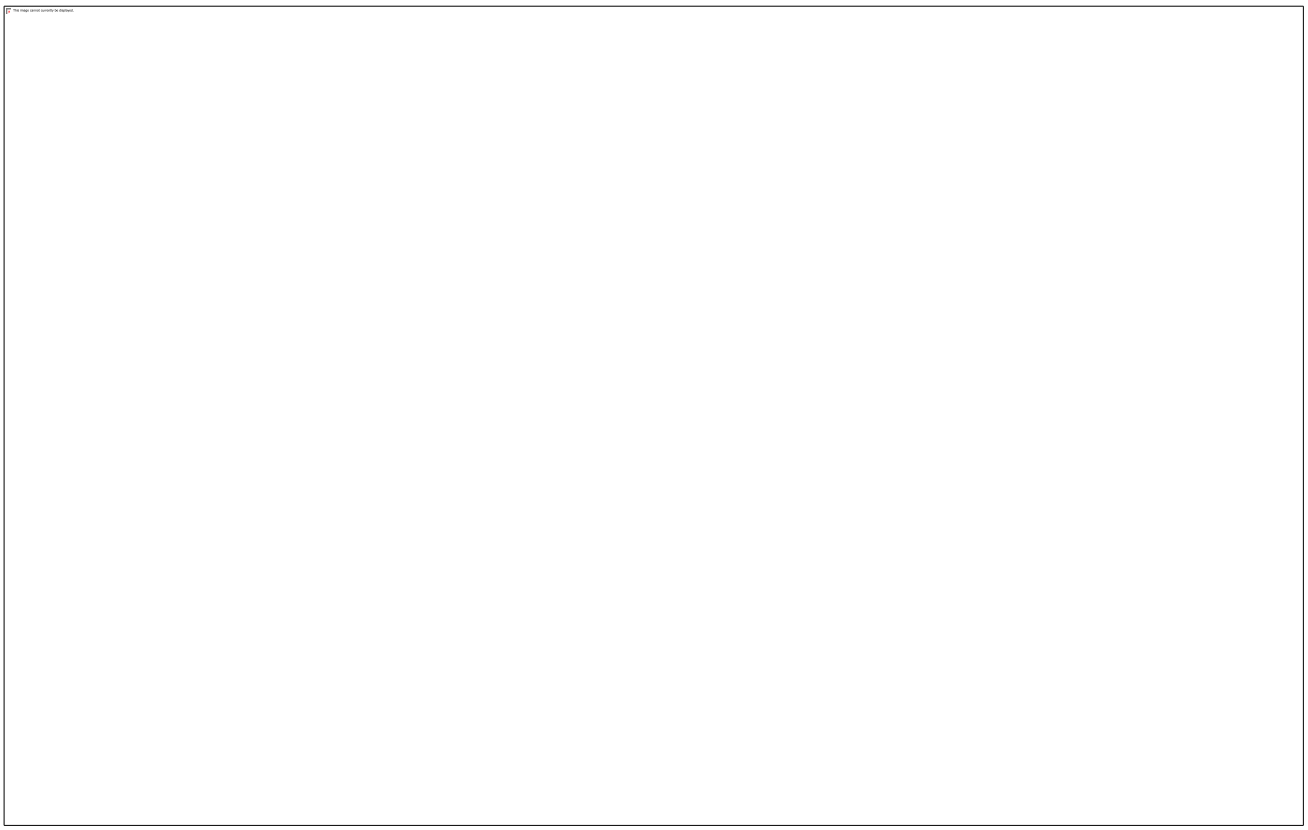
- Making flexible sculptural parts.
- Creating abstract forms.
- Producing recycled-material sculptures.
- Making animal figures and decorative objects.
- Constructing mixed-media artworks.

Precautions when working with rubber:

- Use clean, safe and suitable rubber.
- Avoid burning rubber because it releases harmful fumes.
- Do not use rubber contaminated with oil or dangerous chemicals.
- Use appropriate cutting tools under supervision.
- Avoid heating unknown rubber materials.

7.4 Bones

Bones are hard natural materials obtained from animals. They can be cleaned, shaped, carved and polished to create small sculptural objects.



Characteristics of bones:

1. They are hard and relatively lightweight.

2. They can be carved into small decorative forms.
3. They may have a natural cream or off-white colour.
4. They can be polished to achieve a smooth surface.
5. They are suitable for detailed work.
6. They may crack or break if handled carelessly.

Uses of bones in sculpture:

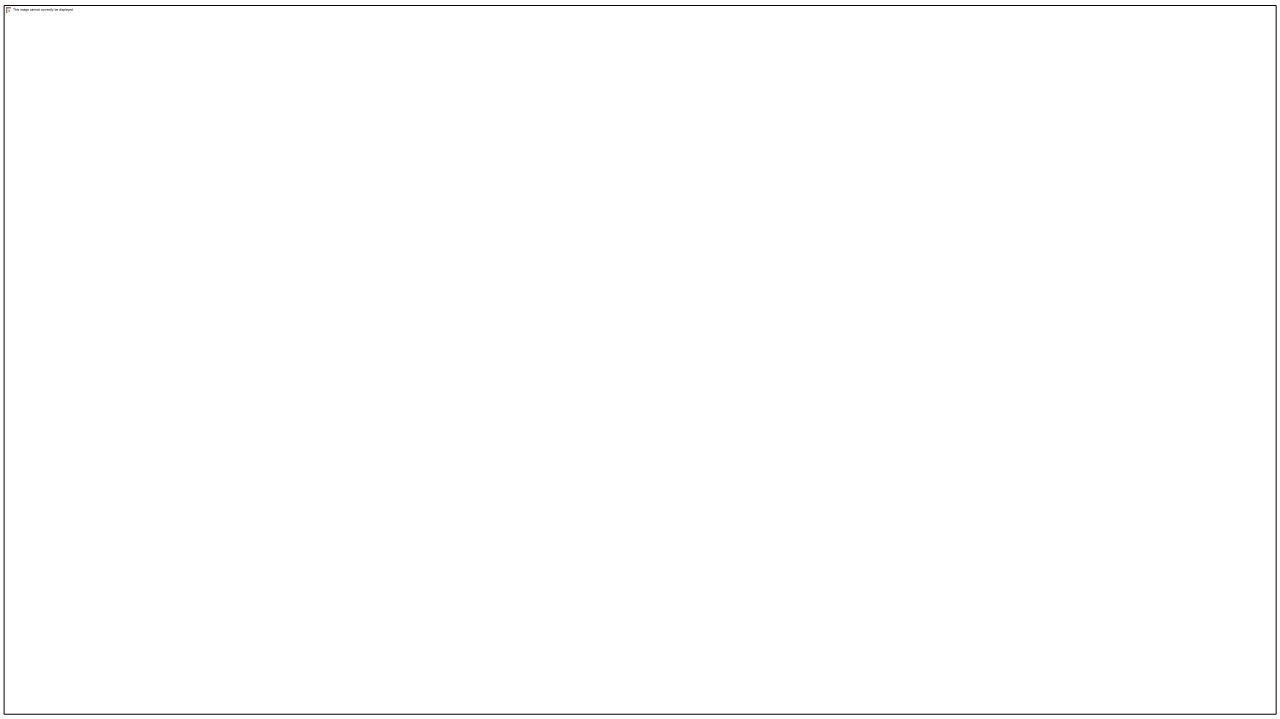
- Small animal figures.
- Decorative pendants.
- Miniature carvings.
- Beads and ornaments.
- Small abstract forms.

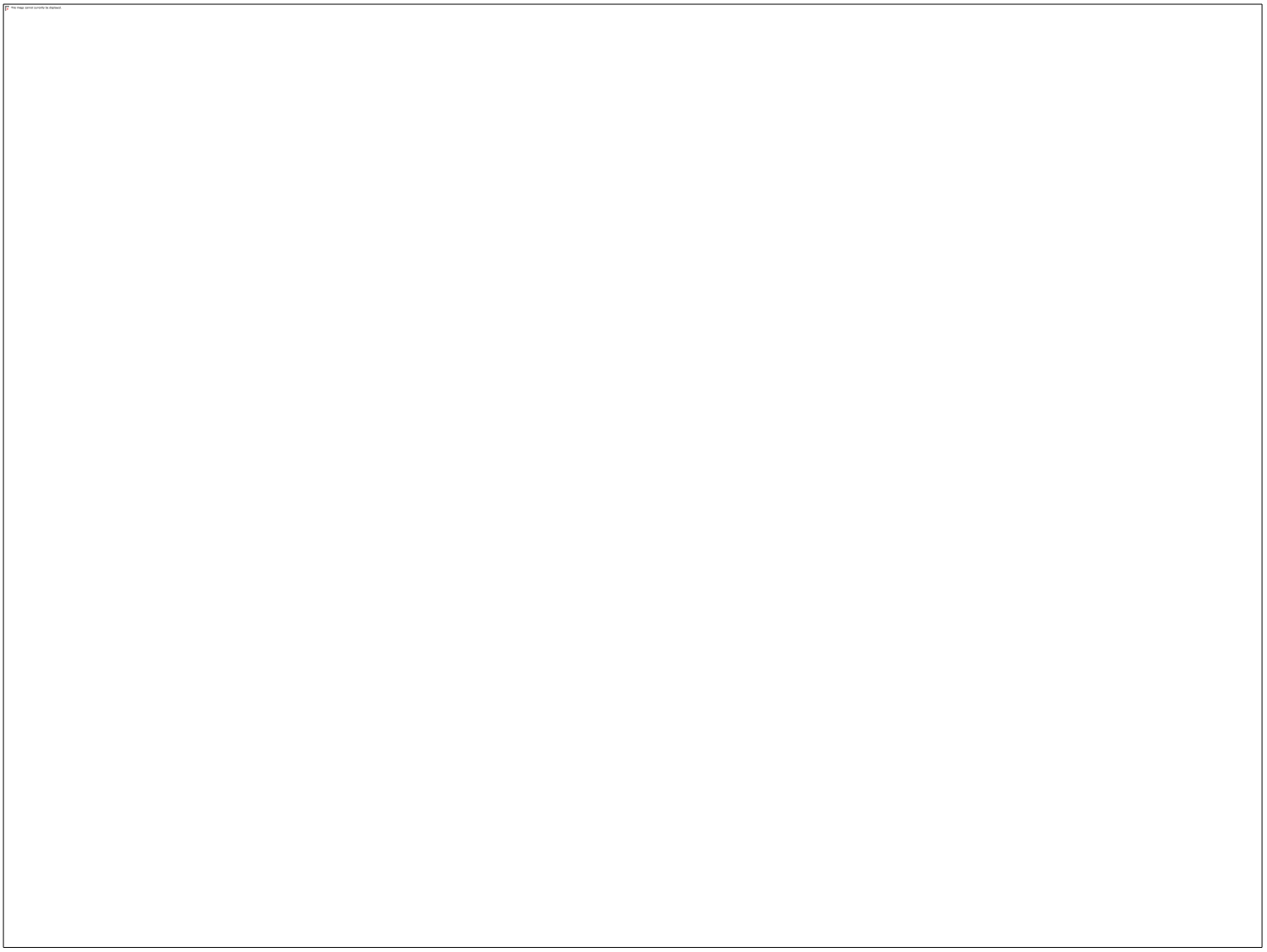
Precautions:

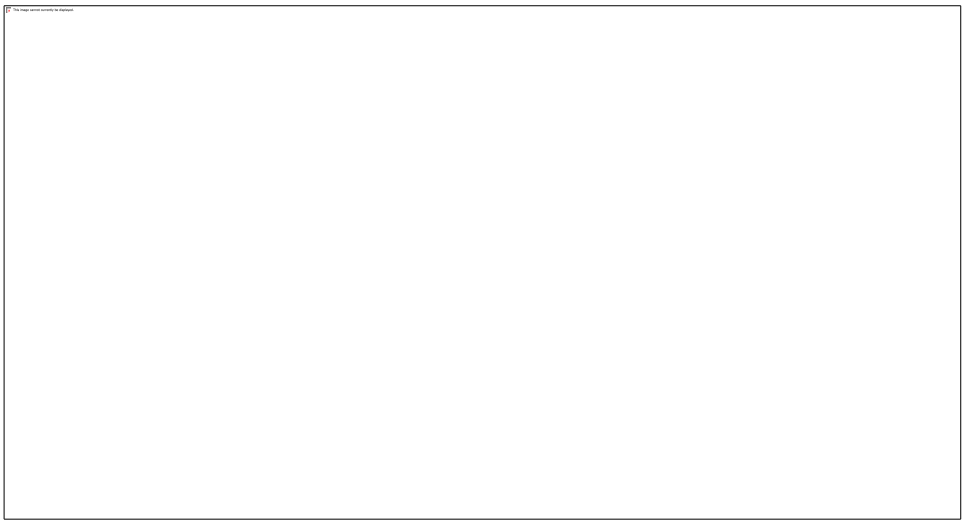
- Use legally and ethically sourced animal bones.
- Do not collect bones from protected wildlife.
- Clean and prepare materials hygienically.
- Avoid inhaling bone dust.
- Wear suitable protective equipment when cutting or sanding.
- Use only materials approved for the learning activity.

7.5 Coconut shells

Coconut shells are hard outer coverings of coconuts. They are useful in sculpture because they can be cut, shaped, carved, polished and assembled.







Characteristics of coconut shells:

1. They are hard and durable.
2. They have a naturally curved surface.
3. They are brown and may have attractive natural patterns.
4. They can be cut into different shapes.
5. They are lightweight compared with many stones.

6. They can be polished to produce a smooth finish.

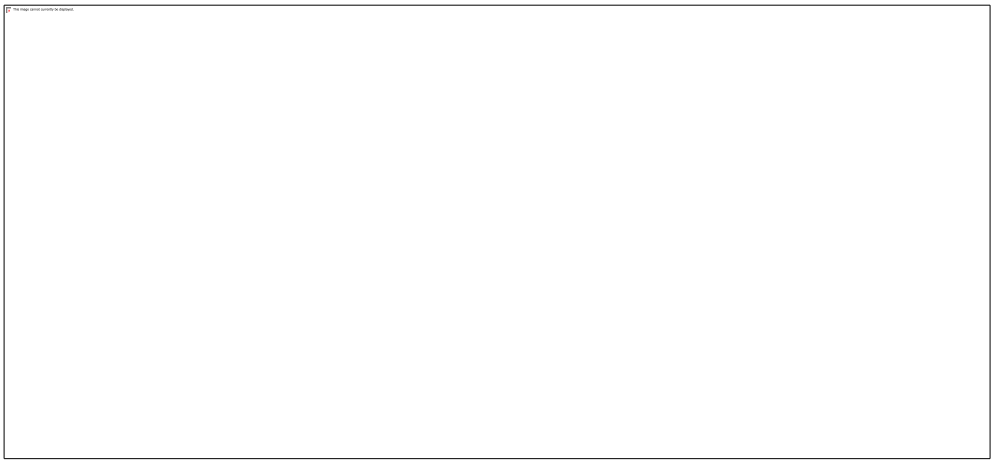
Uses of coconut shells:

- Animal figures.
- Decorative masks.
- Miniature human figures.
- Abstract sculptures.
- Decorative household objects.
- Mixed-media sculptures.

7.6 Clay

Clay is a natural fine-grained earth material that becomes plastic when mixed with water. It can be modelled, shaped, joined and fired to produce a hard object.





Characteristics of clay:

1. It is plastic when properly moistened.
2. It can be shaped by hand or with modelling tools.
3. It can be joined using scoring and slipping.
4. It shrinks as it dries.
5. It can crack if dried too quickly or unevenly.
6. It becomes more durable after appropriate firing.

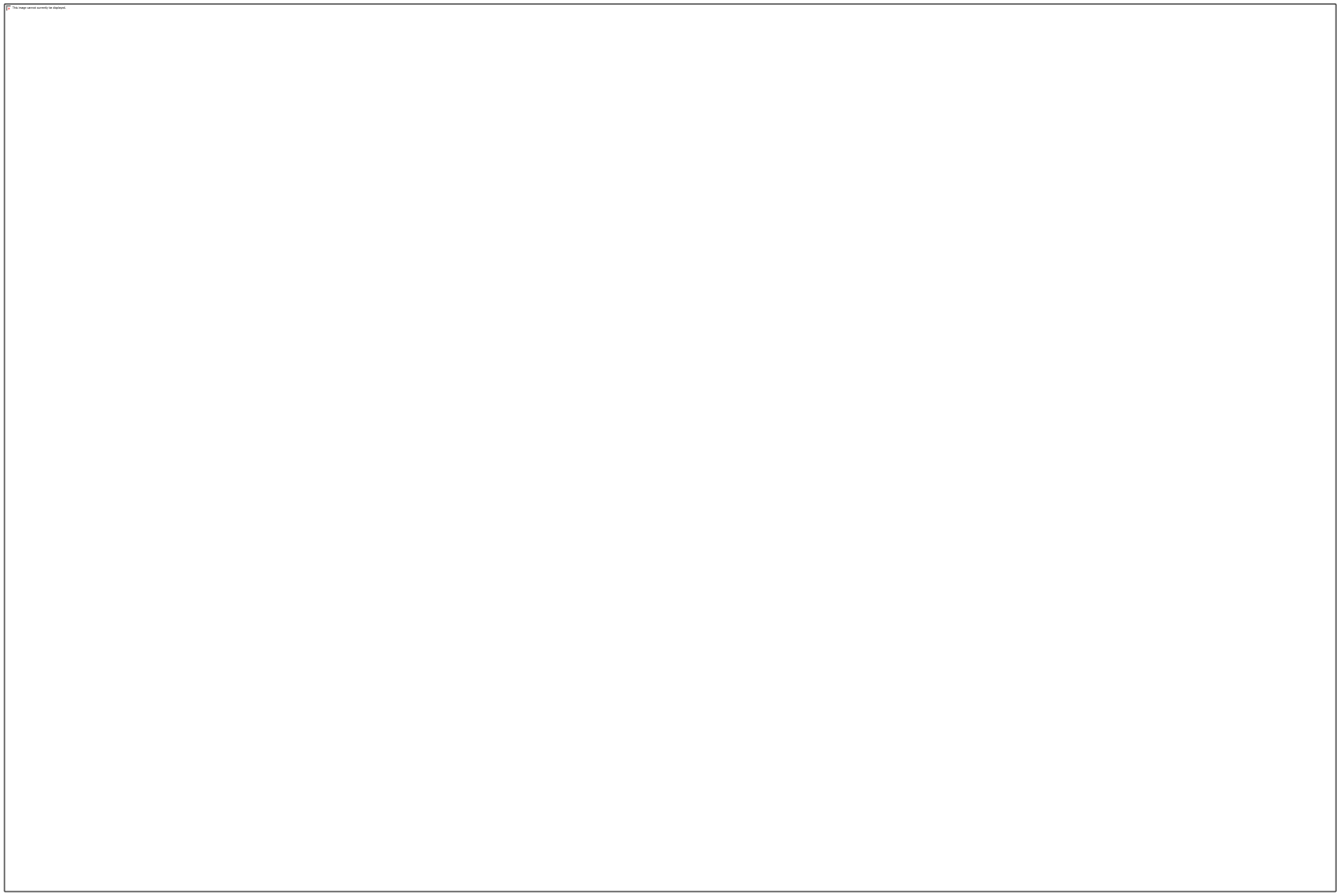
Uses of clay in sculpture:

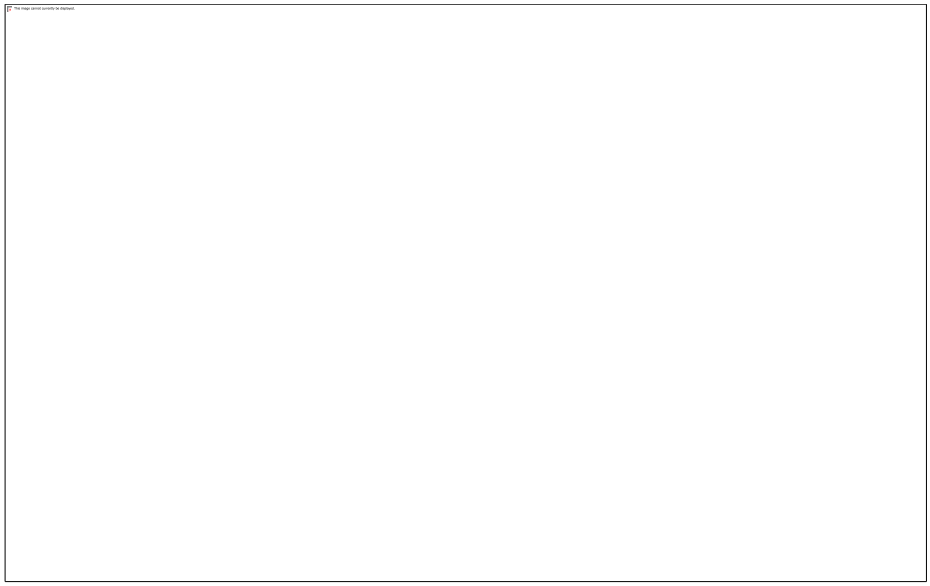
- Human figures.

- Animal forms.
- Decorative objects.
- Abstract sculptures.
- Models for larger sculptures.

7.7 Papier mâché

Papier mâché is a modelling material made from paper pulp or pieces of paper combined with an adhesive mixture. It is used to create lightweight three-dimensional forms.





Materials used in preparing papier mâché:

- Waste paper or newspaper.
- Water.
- Flour paste or suitable craft adhesive.
- A bowl or mixing container.
- Wire, cardboard or other suitable armature materials.
- Paint and finishing materials.

Characteristics of papier mâché:

1. It is lightweight when dry.
2. It can be shaped into different forms.
3. It uses readily available paper materials.
4. It can be painted after drying.
5. It is relatively inexpensive.
6. It is not naturally waterproof.
7. It requires proper drying to prevent mould growth.

Uses of papier mâché:

- Animal sculptures.
- Human figures.
- Masks.
- Decorative objects.
- Large lightweight sculptures.
- School exhibition pieces.

7.8 Comparing sculpture materials

Material	Main characteristics	Common uses
Wood	Carvable, grainy, varied hardness	Figures, masks, animals
Stone	Strong, durable, varied hardness	Figures, abstract forms
Rubber	Flexible, elastic, reusable	Recycled and mixed-media sculptures
Bone	Hard, detailed carving possible	Small carvings and ornaments
Coconut shell	Hard, curved, lightweight	Decorative and miniature forms
Clay	Plastic when wet, hardens on firing	Modelling figures and animals

Papier mâché	Lightweight, mouldable	Large decorative forms

8.0 Tools and equipment used in sculpture

Tools are instruments used to shape, cut, join, smooth, texture and finish sculptural materials.

8.1 Tools for modelling clay





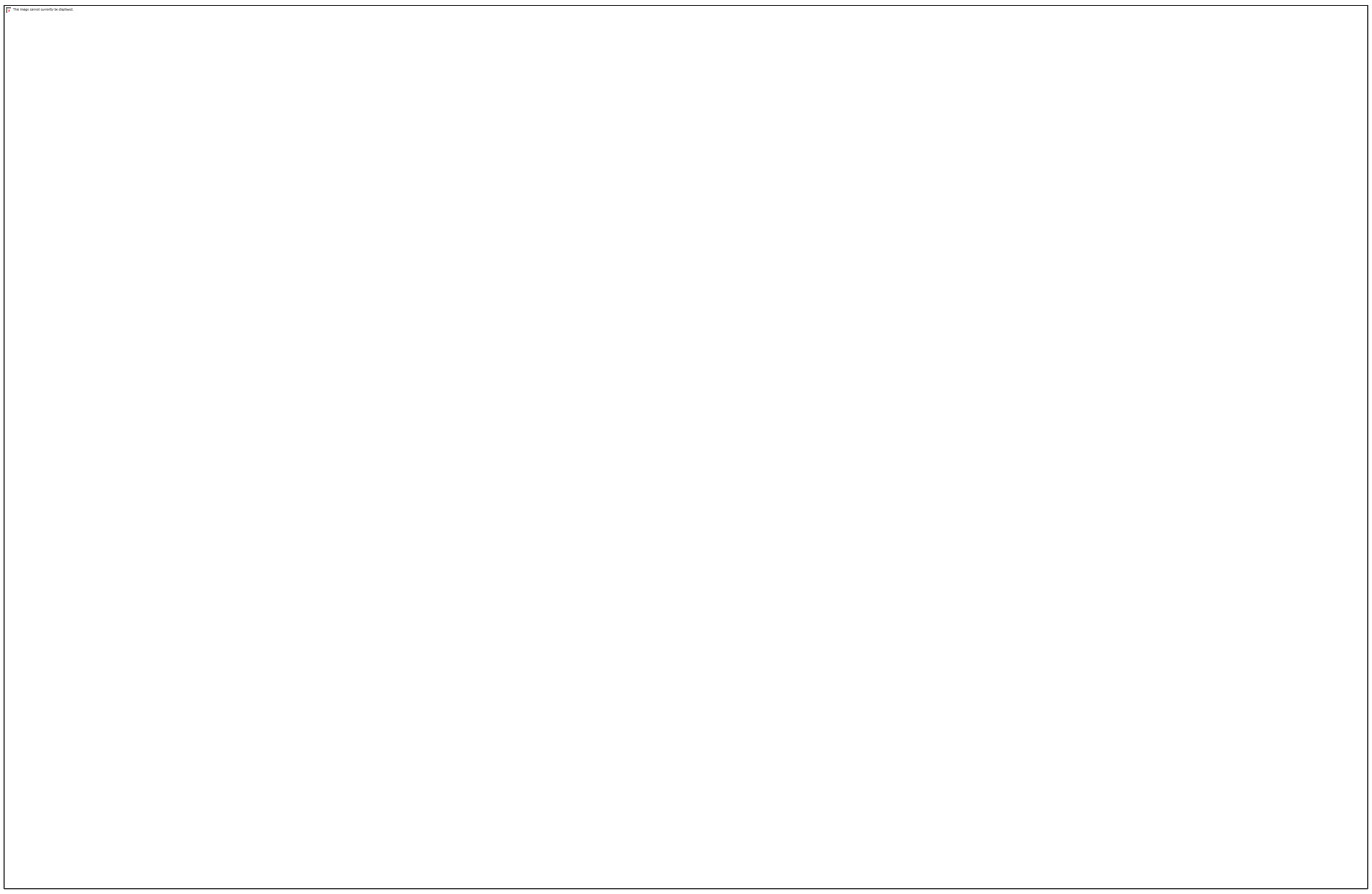
1. **Modelling tools:** Used to shape, smooth and form details on clay.
2. **Wire cutter:** Used to cut blocks of clay.
3. **Needle tool:** Used to make fine lines, holes and details.
4. **Loop tools:** Used to remove excess clay and create recesses.
5. **Wooden modelling tools:** Used to shape and smooth clay surfaces.
6. **Sponge:** Used to moisten and smooth clay.
7. **Rolling pin:** Used to roll clay into slabs.
8. **Calipers:** Used to compare and measure dimensions.

8.2 Tools for papier mâché

- Scissors for cutting paper.
- Mixing bowls for preparing paste.
- Brushes for applying adhesive.
- Measuring containers for water and paste.
- Pliers for shaping wire.
- Masking tape for holding temporary structures.
- Craft knives for controlled cutting under supervision.

8.3 Tools for wood carving





1. **Carving knife:** Used to cut and shape small areas.
2. **Chisel:** Used to remove wood and create flat surfaces.
3. **Gouge:** Used to carve curved grooves and hollow areas.
4. **Mallet:** Used to strike a chisel when removing wood.
5. **Rasp:** Used to shape and reduce rough surfaces.
6. **File:** Used to refine small areas.
7. **Sandpaper:** Used to smooth the surface.
8. **Saw:** Used to cut wood into suitable sizes.
9. **Pencil:** Used to draw the design on the wood.
10. **Measuring tape or ruler:** Used to measure the wood and sculpture.

8.4 Tools for stone carving

- Stone chisels.
- Carving hammer.
- Mallet.
- Files.
- Rasps.
- Abrasive papers.

- Polishing pads.
- Measuring tools.
- Suitable clamps or supports.

8.5 Tools for coconut shell and bone carving

- Small hand saw.
- Carving knife.
- Fine files.
- Small chisels.
- Sandpaper.
- Polishing cloth.
- Measuring tools.
- Appropriate clamps.

8.6 Personal protective equipment (PPE)

PPE refers to equipment worn to reduce the risk of injury when carrying out practical activities.

Examples include:

- Safety goggles to protect the eyes from flying particles.
- Dust masks or suitable respirators to reduce inhalation of dust.
- Protective gloves where appropriate.
- Closed shoes to protect the feet.
- Aprons or overalls to protect clothing and the body.
- Ear protection when using noisy machinery.

Important: Gloves should not be worn near rotating machinery where they may become entangled. Learners should follow the teacher's safety instructions and use machinery only under competent supervision.

9.0 Additive modelling techniques

Modelling is an additive process in which a sculptor shapes a material, such as clay or papier mâché, to create a three-dimensional form.

The artist may work directly with the material or construct a support structure called an armature.

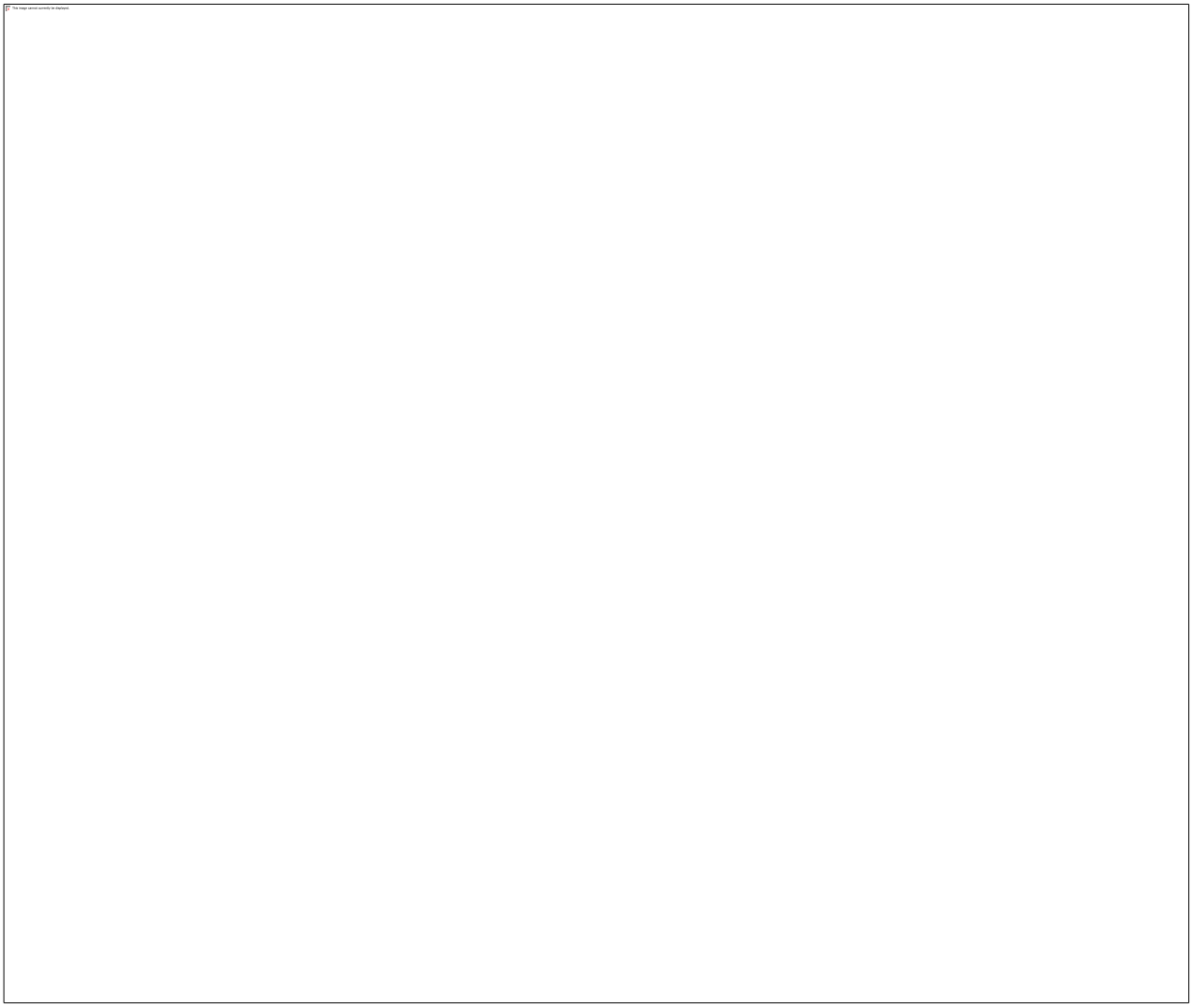
9.1 Modelling using clay

Clay modelling involves shaping moist clay by hand or using modelling tools to create a desired form.

Materials required:

- Prepared clay.
- Modelling tools.
- Water.
- A working board.
- Wire cutter.

- Sponge.
- Calipers or ruler.
- Base material where necessary.







Procedure for modelling a clay sculpture in the round:

1. **Select the subject:** Choose a suitable subject such as a human figure, bird, cow, goat or abstract form.
2. **Research the subject:** Observe photographs, real objects or natural forms to understand their structure.
3. **Make preliminary sketches:** Draw the sculpture from different viewpoints.
4. **Prepare the clay:** Knead the clay to make it uniform and remove trapped air where possible.
5. **Prepare the base:** Use a stable working board or suitable supporting base.
6. **Construct an armature if necessary:** Build a support for tall or complex sculptures.
7. **Create the main mass:** Begin with the largest forms, such as the body, head or torso.
8. **Add smaller parts:** Attach limbs, ears, tails, wings and other features.
9. **Join parts securely:** Score the surfaces, apply slip and press the parts together firmly.
10. **Refine the form:** Adjust proportion, shape and balance.
11. **Add details:** Use modelling tools to create facial features, folds, patterns and other details.
12. **Finish the surface:** Smooth, texture or polish the clay as required.
13. **Dry carefully:** Allow the sculpture to dry slowly and evenly.

14. **Fire where appropriate:** Fire the completely dry clay sculpture in a suitable kiln following safety procedures.

9.2 Preparing clay for modelling

Proper clay preparation improves workability and reduces defects.

Steps:

1. Remove stones, roots and other unwanted materials.
2. Break large lumps into smaller pieces.
3. Add clean water gradually if the clay is too dry.
4. Mix thoroughly until the clay has a uniform consistency.
5. Wedge or knead the clay to improve its plasticity and reduce trapped air.
6. Keep prepared clay covered when not in use to prevent it from drying.
7. Test a small piece to determine whether it can hold the intended shape.

Characteristics of well-prepared clay:

- It is workable and plastic.
- It is not excessively wet or sticky.
- It can hold its shape during modelling.
- It has a reasonably uniform texture.
- It contains minimal unwanted impurities.

9.3 Modelling using papier mâché

Papier mâché modelling involves building a three-dimensional form using paper and adhesive.

Methods of papier mâché construction:

1. **Paper-strip method:** Pieces of paper are dipped in adhesive and layered over a form or armature.
2. **Paper-pulp method:** Soaked paper is broken down into pulp and mixed with adhesive to form a modelling material.





Preparing papier mâché materials

A. Paper-strip method

1. Collect clean waste paper or newspaper.
2. Tear the paper into strips rather than cutting every strip into identical pieces.
3. Prepare a suitable adhesive mixture.
4. Arrange the strips ready for application.
5. Prepare a mould or armature.
6. Apply the adhesive and layer the paper strips over the support.

B. Paper-pulp method

1. Tear clean waste paper into small pieces.
2. Soak the paper in water until it softens.
3. Break down the softened paper into pulp.
4. Remove excess water.
5. Mix the pulp with suitable adhesive.
6. Knead the mixture until it becomes workable.
7. Use the pulp to model the required form.

Procedure for making a papier mâché sculpture

1. Select a suitable subject.
2. Draw sketches showing the front, side and back views.
3. Prepare the armature using cardboard, wire or other suitable materials.
4. Build the basic shape of the sculpture.
5. Apply paper strips or pulp gradually.
6. Build up the form while maintaining proportion.
7. Allow each layer to dry sufficiently before adding more where necessary.
8. Refine the surface and correct uneven areas.
9. Allow the sculpture to dry completely.
10. Apply a suitable finishing coat or primer if needed.
11. Paint or decorate the sculpture.
12. Seal with a suitable protective coating where appropriate.

Advantages of papier mâché:

- It is affordable.
- It uses recyclable paper.
- It is lightweight.
- It can produce large sculptures without excessive weight.
- It encourages environmental awareness.
- It is suitable for school projects and exhibitions.

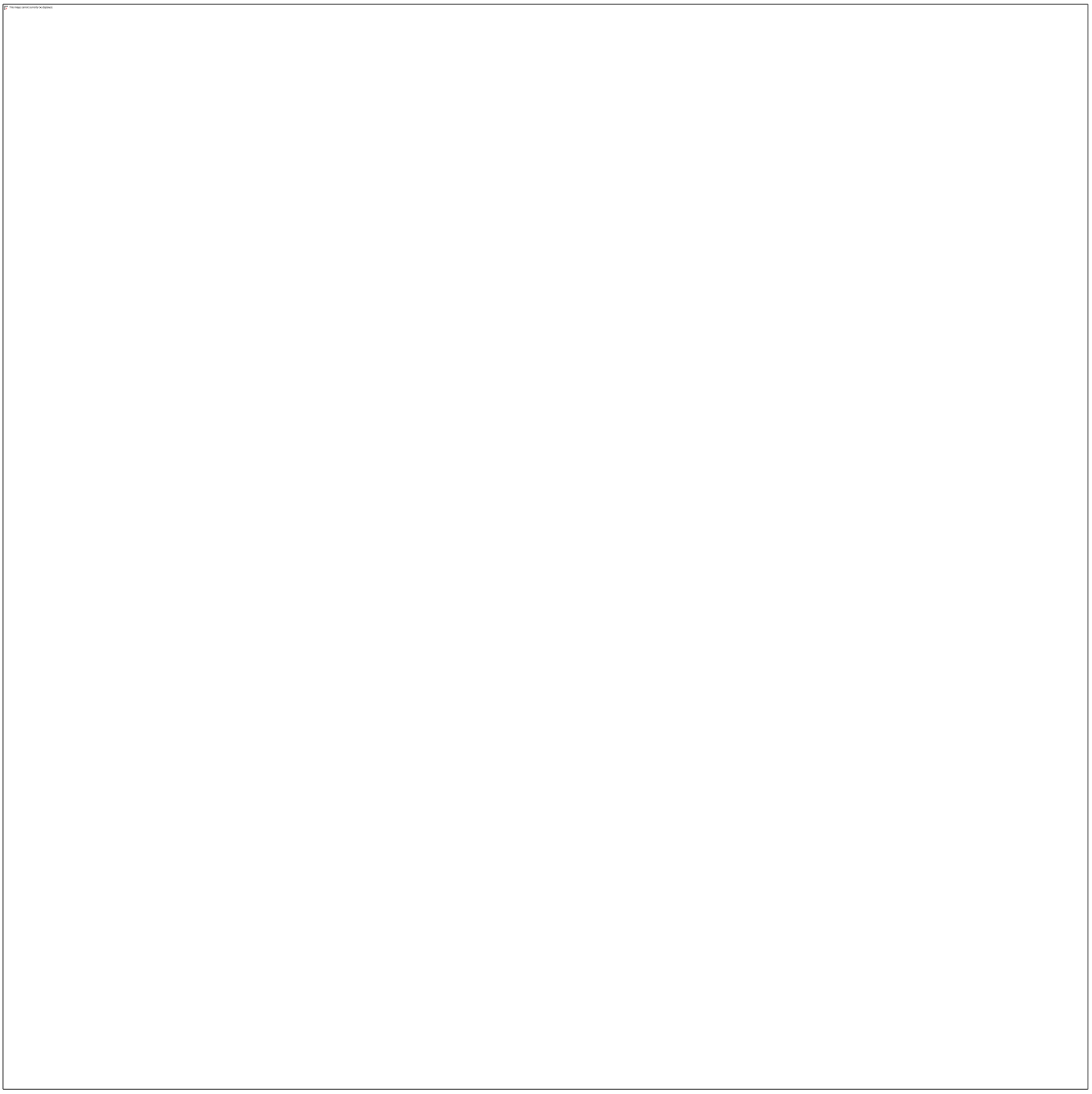
Limitations of papier mâché:

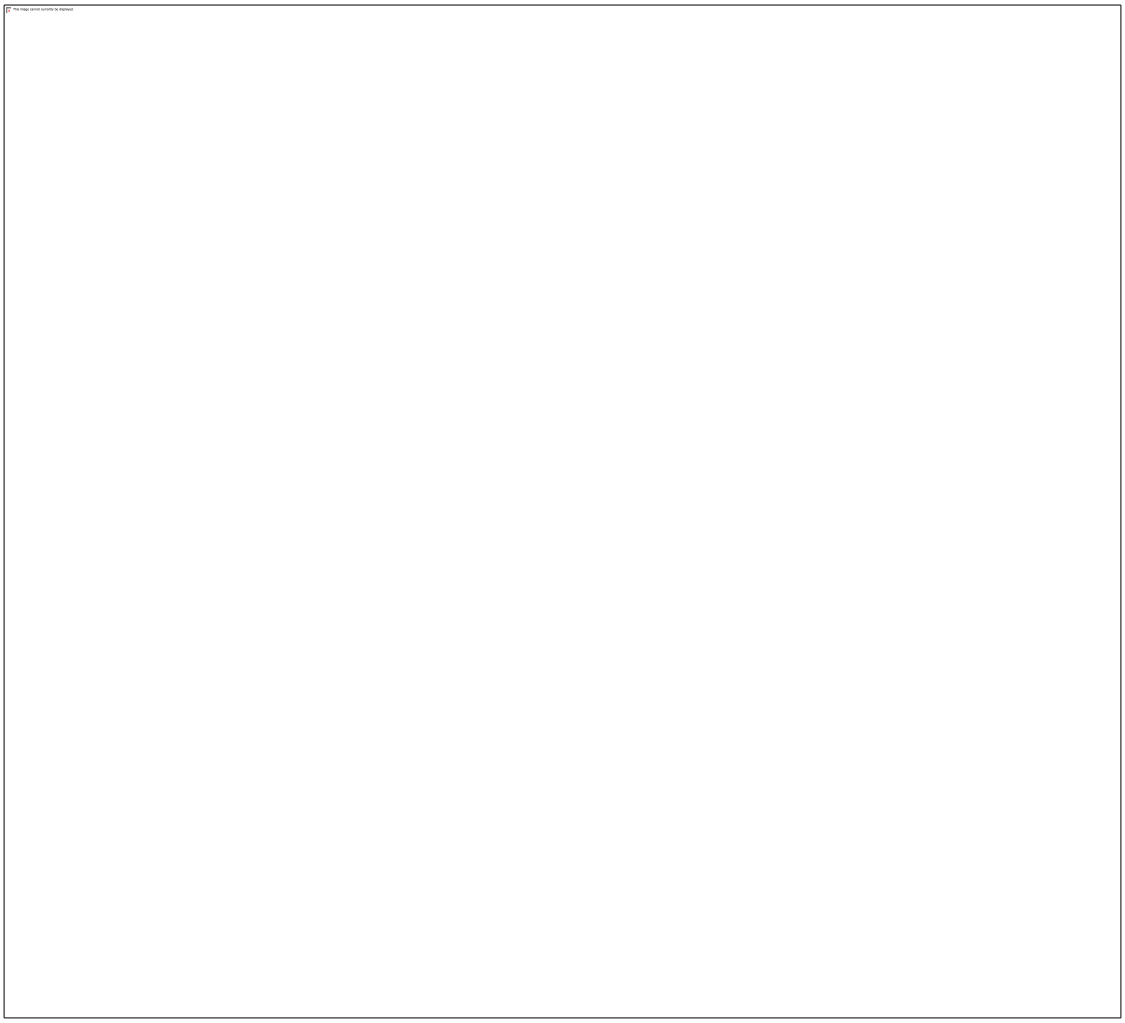
- It is vulnerable to moisture.
- It can take time to dry.
- Poorly dried work may develop mould.
- Weak armatures may cause the sculpture to collapse.
- Excessive adhesive may make the sculpture heavy or uneven.

10.0 Armature construction

An armature is an internal supporting framework used to hold and strengthen a sculpture during modelling.

It helps the sculptor maintain the intended shape, especially when making tall, extended or complex forms.





10.1 Materials used in making an armature

- Strong wire.
- Cardboard.
- Wooden sticks.
- Metal rods.
- Pliers.
- Binding wire.
- Masking tape.
- String.
- Suitable support board.
- Reusable construction materials.

10.2 Importance of an armature

1. **Provides support:** It holds the sculpture in the required position.
2. **Maintains proportion:** It helps the artist establish the relative sizes of body parts.
3. **Prevents collapse:** It reduces the risk of weak or extended parts bending or falling.
4. **Reduces material use:** It may reduce the quantity of modelling material needed.
5. **Supports complex forms:** It makes it easier to model raised arms, long necks, tails and extended limbs.

6. **Maintains stability:** It helps the sculpture remain balanced during construction.
7. **Guides construction:** It provides a framework around which the material is added.

10.3 Procedure for constructing an armature

1. Study the subject and identify its main structural parts.
2. Make a drawing showing the main proportions.
3. Select suitable armature materials according to the size and weight of the sculpture.
4. Construct the main supporting framework.
5. Form the central structure or body.
6. Add supporting sections for the head, limbs, tail or other parts.
7. Join the sections securely using suitable methods.
8. Attach the armature firmly to a stable base where necessary.
9. Check the balance and proportions from different viewpoints.
10. Cover sharp wire ends and protrusions.
11. Ensure the framework is strong enough to support the modelling material.
12. Begin building up the sculpture around the armature.

Safety considerations:

- Use pliers when bending wire.
- Avoid leaving sharp wire ends exposed.
- Do not use rusty, contaminated or unsuitable metal.
- Ensure the armature is securely fixed.
- Avoid making the framework unnecessarily heavy.

11.0 Building a sculpture in the round using additive techniques

The construction process involves developing a sculpture from an idea to a finished three-dimensional form.

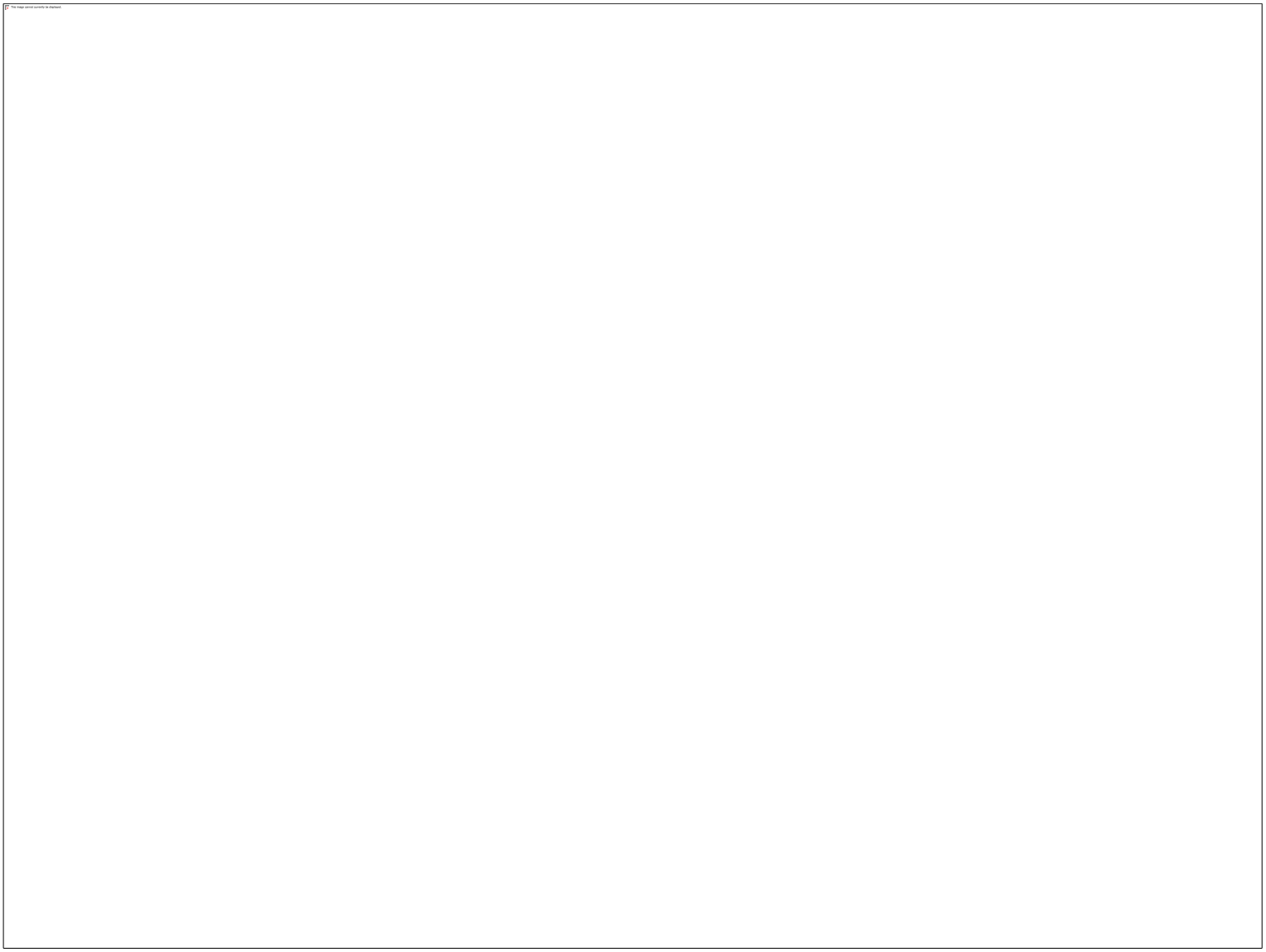
11.1 Planning the sculpture

Before modelling, the learner should consider:

- Subject matter.
- Purpose of the sculpture.
- Intended size.
- Materials available.
- Construction method.
- Position and placement.
- Balance and proportion.
- Surface finish.
- Safety requirements.

11.2 Formation of the base

The base is the lower supporting part of a sculpture or the platform on which it is displayed.



Importance of the base:

1. Supports the sculpture.
2. Improves stability.
3. Reduces the risk of the sculpture falling.
4. Provides a suitable display surface.
5. Can enhance the overall appearance.
6. Helps distribute the weight of the sculpture.

Characteristics of a suitable base:

- Strong enough to support the sculpture.
- Stable and level.
- Appropriate in size and shape.
- Suitable for the weight of the artwork.
- Properly attached where necessary.

- Neatly finished.

Steps in preparing a base:

1. Determine the size and weight of the intended sculpture.
2. Select a suitable material such as wood, clay or another stable support.
3. Cut or shape the base to the required dimensions.
4. Smooth rough edges where appropriate.
5. Check that the base rests evenly on the working surface.
6. Attach or position the sculpture securely.

11.3 Building up the form

Building up the form refers to adding material gradually to develop the main body and details of the sculpture.

Procedure:

1. Establish the main body mass.
2. Add the largest structural parts.
3. Develop the secondary forms.
4. Add smaller features.
5. Check the sculpture from all sides.
6. Correct proportion and balance.
7. Strengthen weak joints.
8. Refine the surface.
9. Add the intended textures and patterns.
10. Prepare the sculpture for finishing.

12.0 Subtractive sculpture: carving techniques

Carving is a subtractive sculptural technique in which unwanted material is removed from a solid mass to create a desired form.

Carving is commonly carried out on wood, stone, rubber, bones and coconut shells.

12.1 General stages of carving





1. **Selection of material:** Choose material suitable for the intended subject.
2. **Observation and research:** Study the subject to understand its shape, structure and details.
3. **Sketching:** Draw the intended sculpture from different viewpoints.
4. **Marking out:** Transfer the main outlines onto the material.
5. **Roughing out:** Remove large unwanted sections to establish the basic form.
6. **Shaping:** Develop the main features and proportions.
7. **Detailing:** Carve smaller features, patterns and textures.
8. **Refining:** Correct uneven areas and improve the form.
9. **Smoothing:** Use files, rasps or abrasive papers as appropriate.

10. **Finishing:** Polish, stain, paint, seal or varnish the sculpture as suitable for the material.

12.2 Wood carving

Wood carving is the process of removing unwanted wood using cutting and shaping tools to produce a three-dimensional form.



Procedure for carving a wooden sculpture:

1. Select suitable, properly seasoned wood.
2. Examine the wood for cracks, knots and defects.
3. Identify the grain direction.
4. Draw the subject on paper.
5. Transfer the design onto the wood.
6. Secure the wood firmly on a suitable work surface.
7. Remove large unwanted sections using appropriate tools.
8. Establish the main form.

9. Develop the head, body, limbs and other features.
10. Refine the proportions and balance.
11. Carve details and textures.
12. Smooth the surface using suitable abrasives.
13. Apply an appropriate finish such as oil, stain, paint or varnish.

Importance of observing wood grain:

- It helps prevent unnecessary splitting.
- It guides the direction of carving.
- It improves the appearance of the finished sculpture.
- It helps the artist produce cleaner cuts.

12.3 Stone carving

Stone carving is the process of shaping a stone block by removing unwanted sections using chisels, hammers, files and other suitable tools.





Procedure for carving a stone sculpture:

1. Select a stone with suitable hardness, size and texture.
2. Examine it for cracks and weaknesses.
3. Study the subject and prepare sketches.
4. Mark the main outlines on the stone.
5. Secure the stone using suitable supports.
6. Remove large unwanted sections carefully.
7. Establish the main shape.
8. Develop the important features.
9. Refine the surface using suitable files and abrasives.
10. Create the required textures and details.
11. Polish the surface where appropriate.
12. Clean and display the finished sculpture.

Special consideration when carving stone:

- Avoid striking the stone excessively hard.
- Work gradually to reduce accidental breakage.
- Use appropriate eye and respiratory protection.
- Control stone dust and dispose of waste safely.
- Select tools suitable for the hardness of the stone.

12.4 Coconut shell carving

Coconut shell carving involves cutting, shaping and refining coconut shells to produce decorative or functional sculptural forms.

Procedure:

1. Select clean, dry and undamaged coconut shells.
2. Wash and dry the shells thoroughly.
3. Study their natural shape and identify possible forms.
4. Sketch the intended design.
5. Mark the cutting and carving areas.
6. Cut the shell carefully using suitable tools.
7. Shape the main parts.
8. Join separate parts if necessary using a suitable adhesive or mechanical fixing.
9. Smooth the edges.
10. Carve decorative patterns.
11. Polish the surface.
12. Apply an appropriate protective finish.

Possible products:

- Bird sculptures.
- Fish sculptures.
- Miniature animal figures.
- Abstract sculptures.
- Decorative masks.
- Small human figures.

12.5 Bone carving

Bone carving involves shaping and decorating suitable animal bones to produce small sculptural forms.

Procedure:

1. Obtain ethically and legally sourced material.
2. Clean and prepare it hygienically.
3. Examine the bone for cracks and weaknesses.
4. Sketch the intended design.
5. Mark the shape on the bone.
6. Secure it safely before working.
7. Remove unwanted material gradually.
8. Shape the main form.
9. Add details and decorative patterns.
10. Smooth and polish the surface.
11. Clean the finished object and display it appropriately.

12.6 Rubber carving

Rubber carving involves cutting and shaping suitable rubber material to create sculptural forms.

Procedure:

1. Select clean and safe rubber.
2. Examine its thickness and flexibility.
3. Draw the intended design.
4. Mark the outline on the rubber.
5. Secure the material appropriately.
6. Cut out the main shape using suitable tools.
7. Remove unwanted sections carefully.
8. Refine the shape and details.
9. Join parts if required.
10. Finish and display the sculpture.

Note: Avoid burning, melting or heating unknown rubber. Some rubber products release toxic fumes when heated.

13.0 Finishing techniques in sculpture

Finishing refers to the final processes used to improve the appearance, texture, durability and presentation of a sculpture.

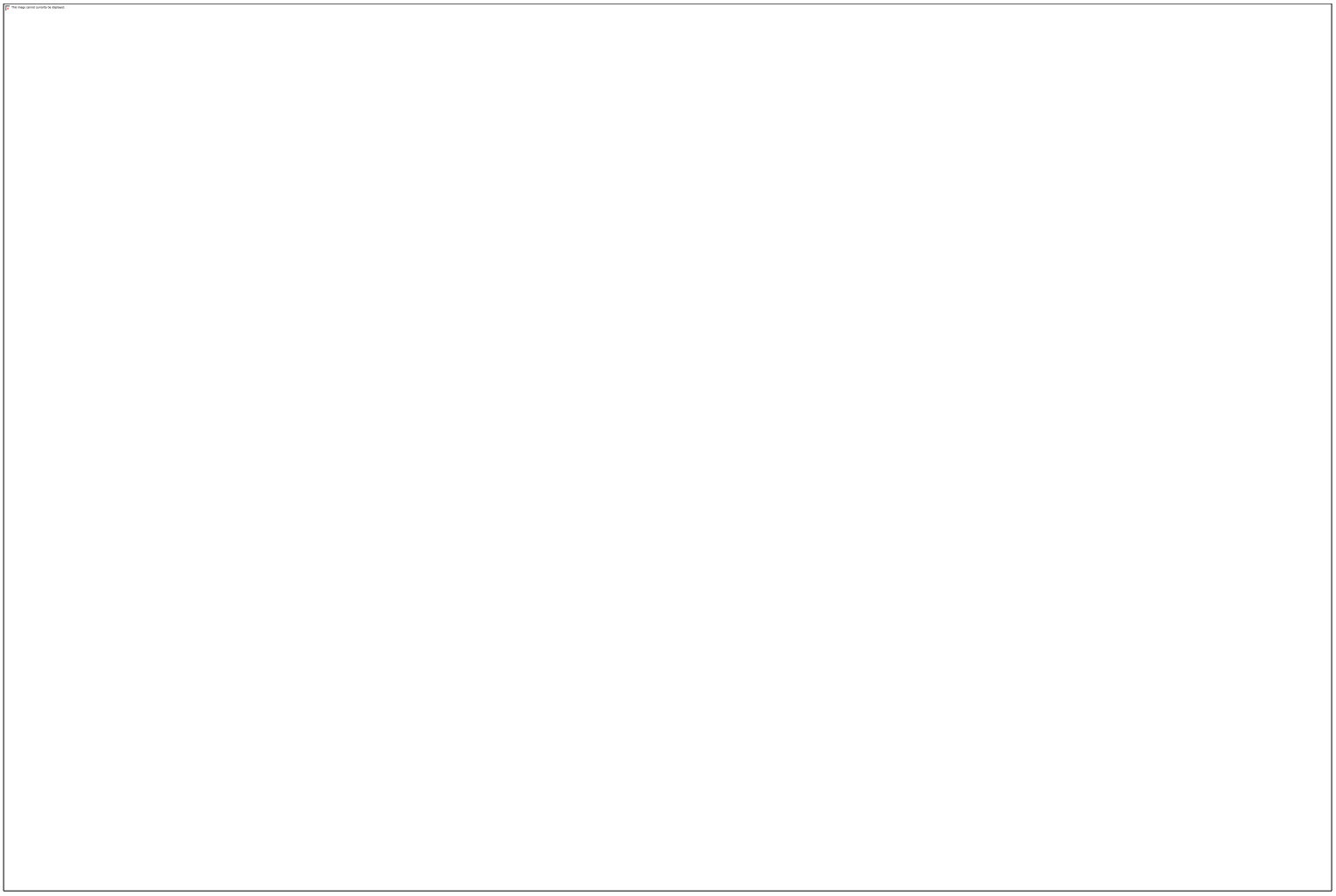
The appropriate finishing technique depends on the material used and the intended effect.

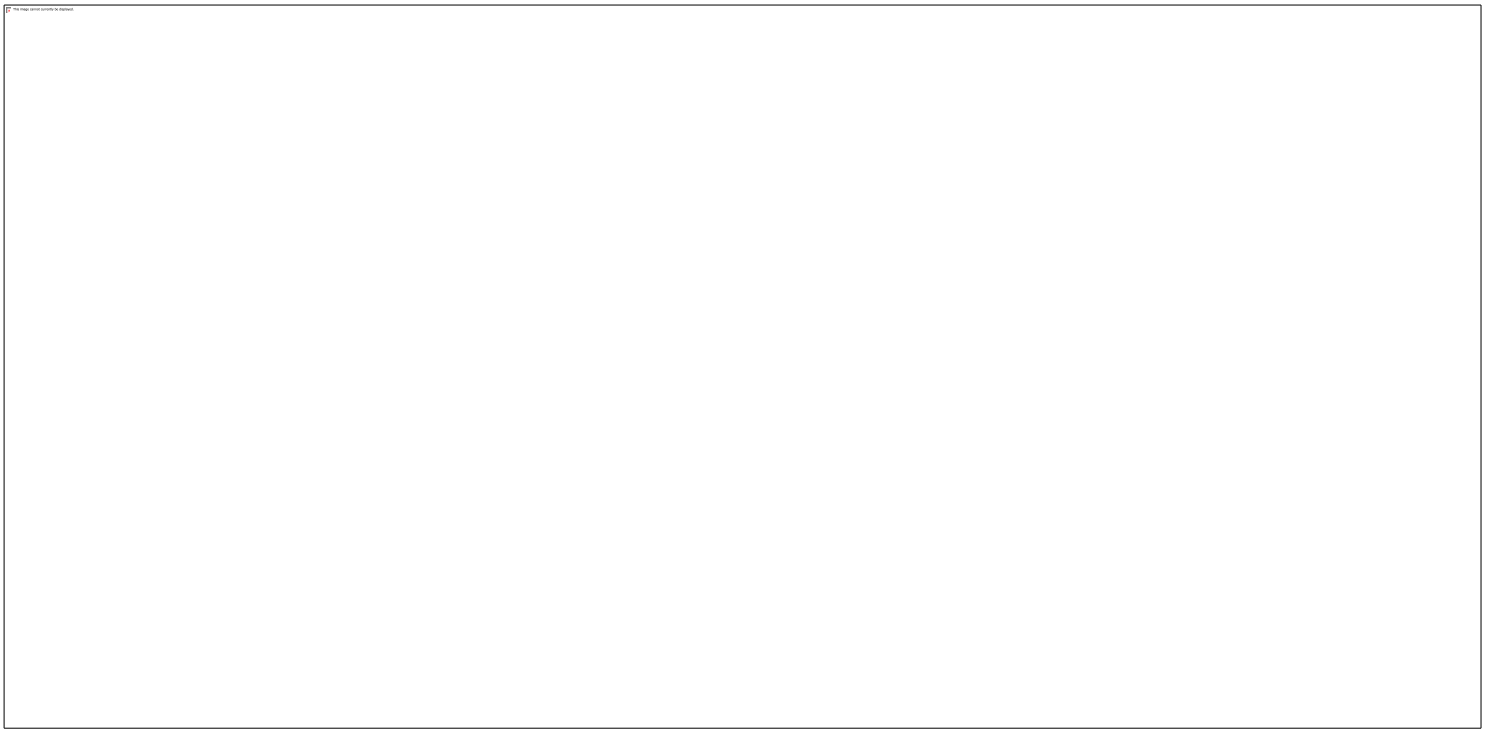
The main finishing techniques in this sub-strand include:

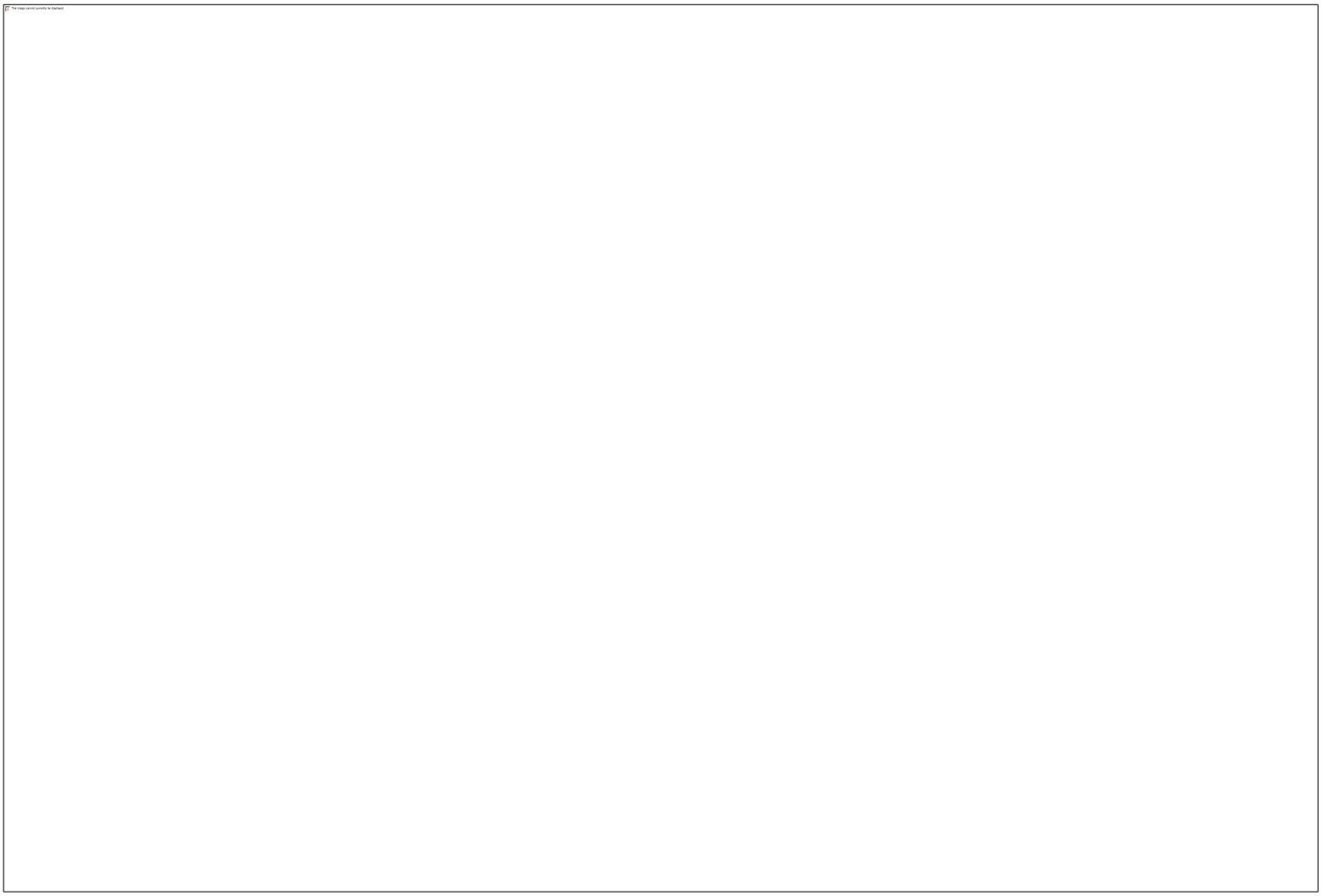
1. Texturing.
2. Polishing.
3. Modelling and surface refinement.
4. Painting.
5. Firing.
6. Varnishing or sealing.

13.1 Texturing

Texturing is the process of creating or enhancing surface qualities on a sculpture to make it visually or physically interesting.







Types of sculptural texture:

- Rough texture.
- Smooth texture.
- Grainy texture.
- Patterned texture.

- Ridged texture.
- Dotted texture.
- Grooved texture.
- Natural texture.

Methods of creating texture:

1. **Incising:** Making lines or grooves on a surface using a pointed tool.
2. **Stippling:** Creating texture through repeated dots or small marks.
3. **Scratching:** Making repeated marks on a surface using a sharp tool.
4. **Impressing:** Pressing objects into a soft material to create patterns.
5. **Carving:** Removing material to produce raised and recessed areas.
6. **Stamping:** Pressing a patterned object onto a surface.
7. **Adding material:** Attaching small pieces of material to create a raised texture.
8. **Natural texturing:** Preserving the natural grain, pores or irregularities of the material.

Materials and tools used for texturing:

- Modelling tools.
- Carving tools.
- Combs.
- Brushes.
- Stamps.
- Fabric.
- Leaves.
- String.
- Sponges.
- Textured stones.
- Sandpaper.

Importance of texturing:

1. Enhances the aesthetic appeal of a sculpture.
2. Communicates the nature of the subject.
3. Creates visual and tactile interest.
4. Helps distinguish different parts of the sculpture.
5. Produces contrast between surfaces.
6. Creates an impression of movement and energy.
7. Makes a sculpture appear more realistic.
8. Expresses the artist's creativity and personal style.

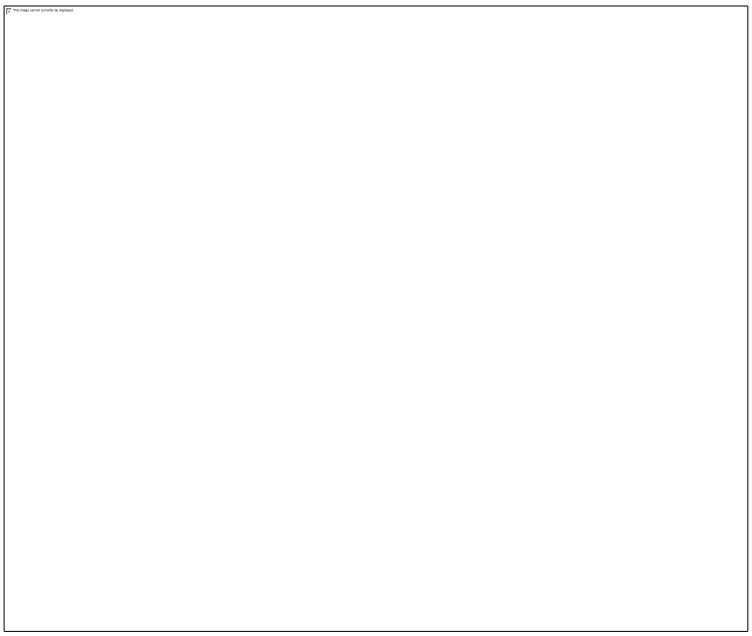
Examples of texturing in sculpture:

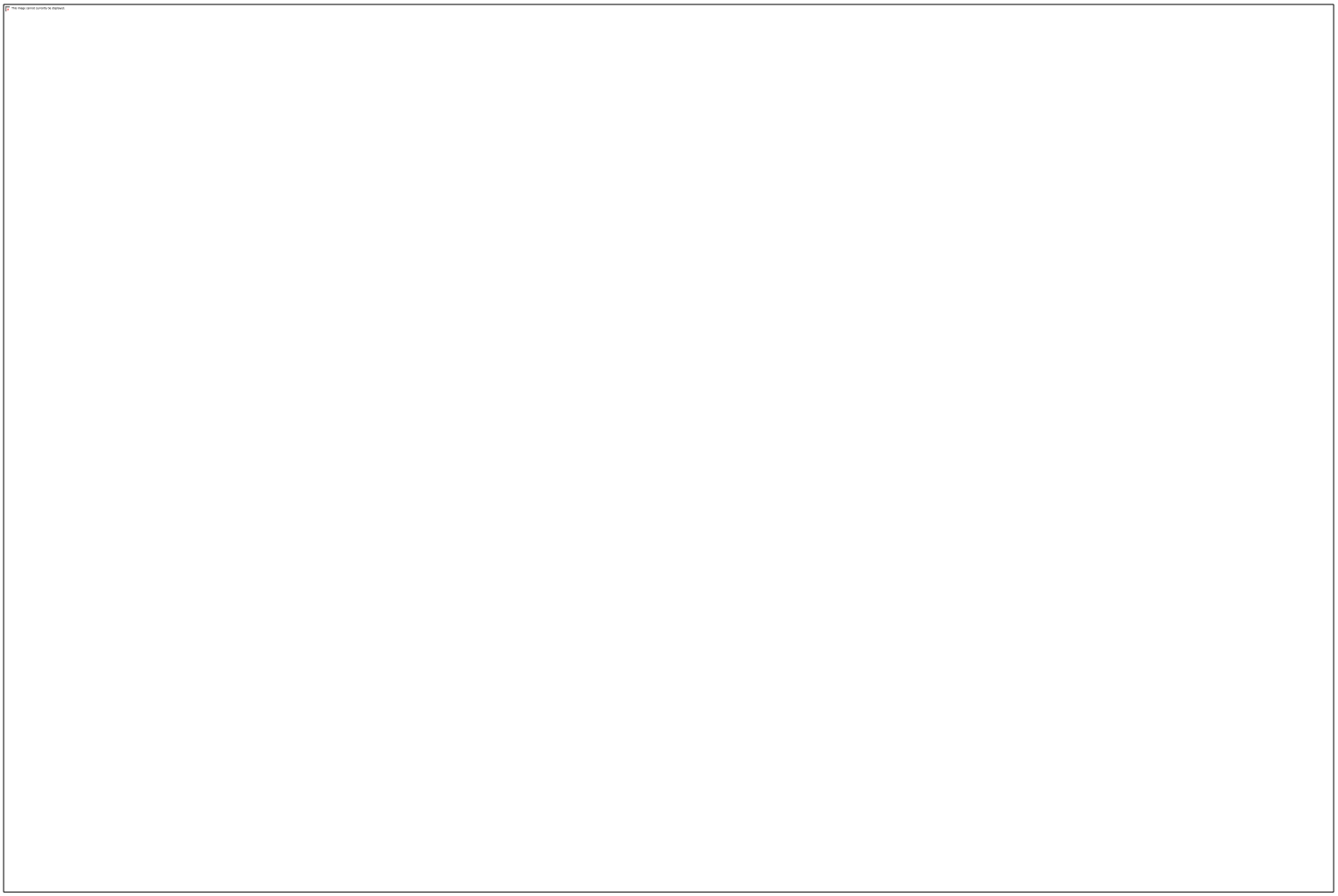
- Creating fur on a carved lion.
- Making feathers on a bird sculpture.
- Creating wrinkles on a human figure.
- Producing bark texture on a tree sculpture.
- Making scales on a fish sculpture.
- Creating patterned surfaces on an abstract sculpture.

13.2 Polishing

Polishing is the process of improving a sculpture's surface by rubbing or treating it to achieve a smoother, cleaner or more lustrous appearance.







Materials and tools used in polishing:

- Sandpaper.
- Abrasive pads.
- Files.
- Polishing cloth.
- Suitable polishing compounds.
- Fine brushes.
- Appropriate protective finishes.

Procedure for polishing a wooden sculpture:

1. Ensure the carving is complete.
2. Remove loose dust and chips.
3. Smooth rough areas with suitable coarse sandpaper.
4. Progress to finer sandpaper.
5. Follow the wood grain when sanding.
6. Remove sanding dust.
7. Apply an appropriate wood finish if required.
8. Allow the finish to dry.

9. Rub gently with a clean cloth where suitable.

Procedure for polishing a stone sculpture:

1. Ensure the carving is complete.
2. Remove loose stone particles.
3. Smooth rough areas using appropriate abrasives.
4. Progress through finer abrasive grades.
5. Clean the surface between stages.
6. Apply a suitable stone polishing compound if appropriate.
7. Buff the surface with a suitable cloth or pad.
8. Clean and inspect the finished work.

Procedure for refining a clay sculpture:

- Smooth the surface while the clay is still workable.
- Use a damp sponge or suitable modelling tool.
- Remove unwanted fingerprints and uneven marks.
- Create the intended surface texture.
- Allow the sculpture to dry slowly.
- Fire it if it is intended to be a fired ceramic sculpture.

13.3 Painting

Painting involves applying pigments or paint to a sculpture to introduce colour, create contrast, highlight details or improve its visual appeal.



Examples of paints and colourants:

- Acrylic paint.
- Water-based craft paint.
- Suitable wood stains.

- Ceramic underglazes and glazes for appropriate fired clay work.
- Other material-compatible finishes.

Procedure:

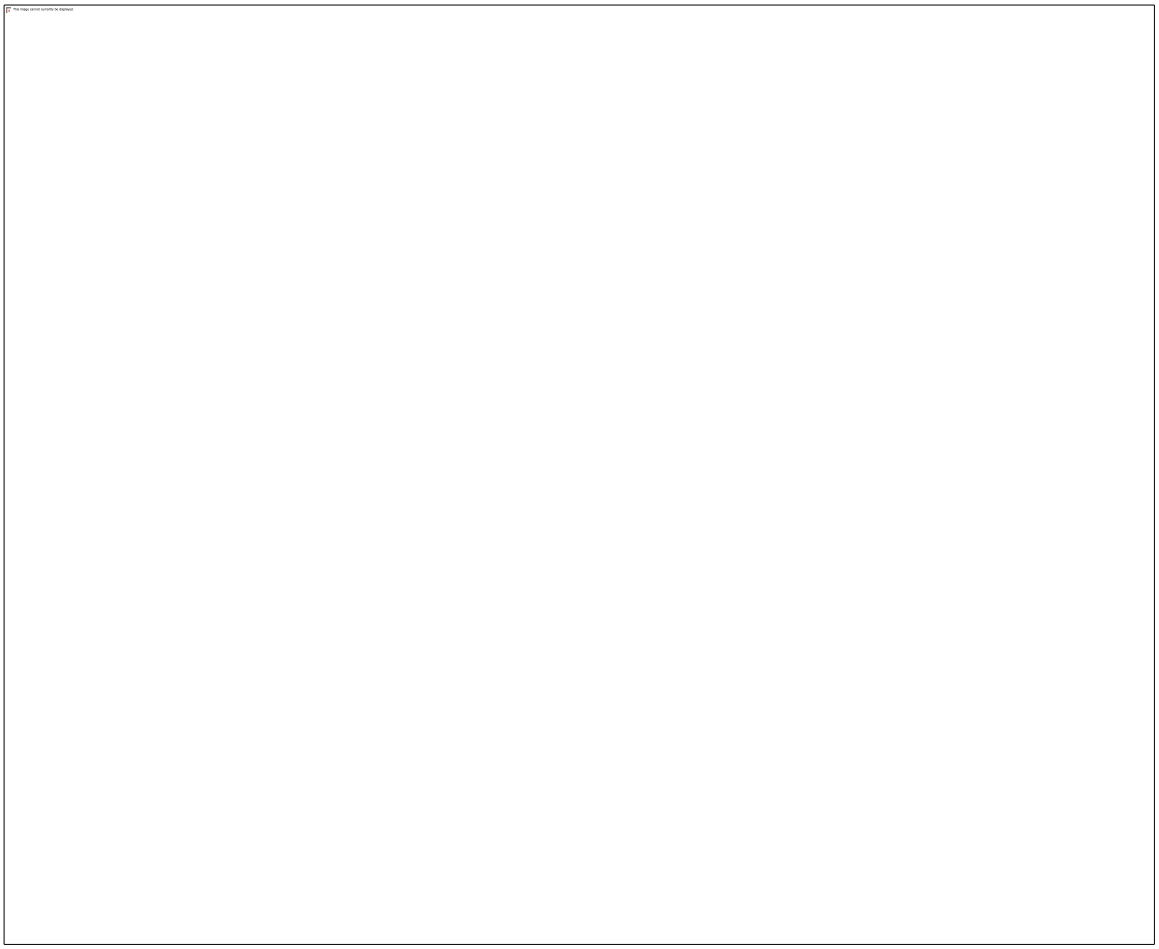
1. Ensure the sculpture is properly prepared.
2. Remove dust, grease and loose particles.
3. Select paint suitable for the material.
4. Apply a primer where required.
5. Apply the base colour.
6. Allow the paint to dry.
7. Add details and decorative patterns.
8. Apply additional coats where necessary.
9. Allow the work to dry thoroughly.
10. Apply a compatible protective finish if required.

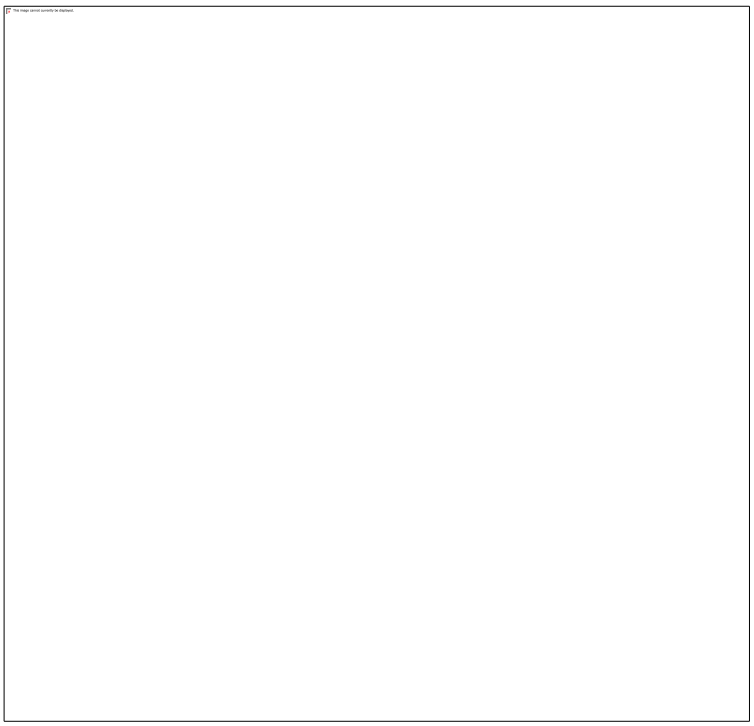
Importance of painting:

- Enhances visual appeal.
- Communicates mood and meaning.
- Highlights important features.
- Creates contrast.
- Protects some surfaces when suitable coatings are used.
- Allows the artist to express personal creativity.

13.4 Firing

Firing is the process of heating a dried clay sculpture in a suitable kiln to produce a hard ceramic object.







Importance of firing:

1. Converts dried clay into a more durable ceramic material.
2. Improves the strength of the sculpture.
3. Makes the object more resistant to ordinary handling.
4. Prepares the sculpture for suitable ceramic surface treatments.
5. Can produce changes in colour and surface appearance depending on the clay and firing conditions.

Basic firing procedure:

1. Ensure the clay sculpture is completely dry.
2. Inspect it for cracks and structural weaknesses.
3. Prepare the kiln according to its operating instructions.
4. Arrange the sculpture safely with enough space around it.
5. Use a suitable firing programme for the clay body.
6. Monitor the firing process.
7. Allow the kiln to cool according to safety instructions.
8. Remove the sculpture only when it is safe to do so.
9. Inspect the fired sculpture for defects.

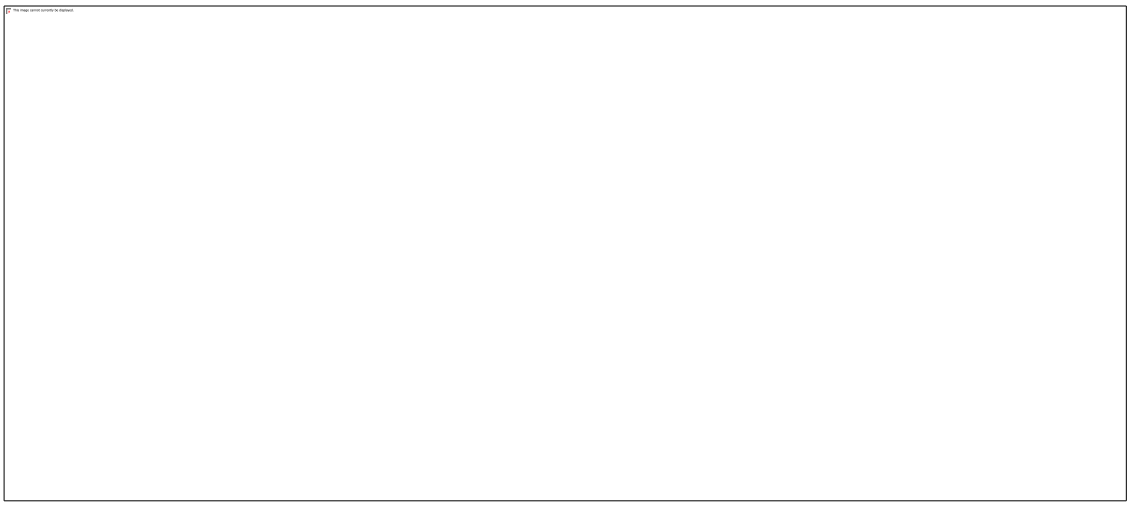
Important safety considerations:

- Never place wet clay directly into a high-temperature firing process.
- Do not open a hot kiln.
- Use suitable heat-resistant protective equipment.
- Follow the kiln manufacturer's instructions.
- Firing should be conducted by a trained person or under competent supervision.

13.5 Varnishing and sealing

Varnishing is the application of a suitable protective coating to a sculpture to improve its appearance and protect its surface.

Sealing involves applying a protective material that reduces the effect of moisture, dirt or other environmental conditions.



Examples of finishes:

- Clear varnish.
- Suitable wood oil.
- Water-based protective coating.
- Compatible sealant.
- Material-specific protective finish.

Procedure for varnishing a wooden sculpture:

1. Complete carving and sanding.
2. Remove dust from the surface.
3. Ensure the wood is dry.
4. Select a compatible varnish.
5. Apply a thin, even coat.
6. Allow the first coat to dry.
7. Sand lightly if recommended by the product instructions.
8. Remove dust.
9. Apply another coat if necessary.
10. Allow the sculpture to cure before handling or displaying it.

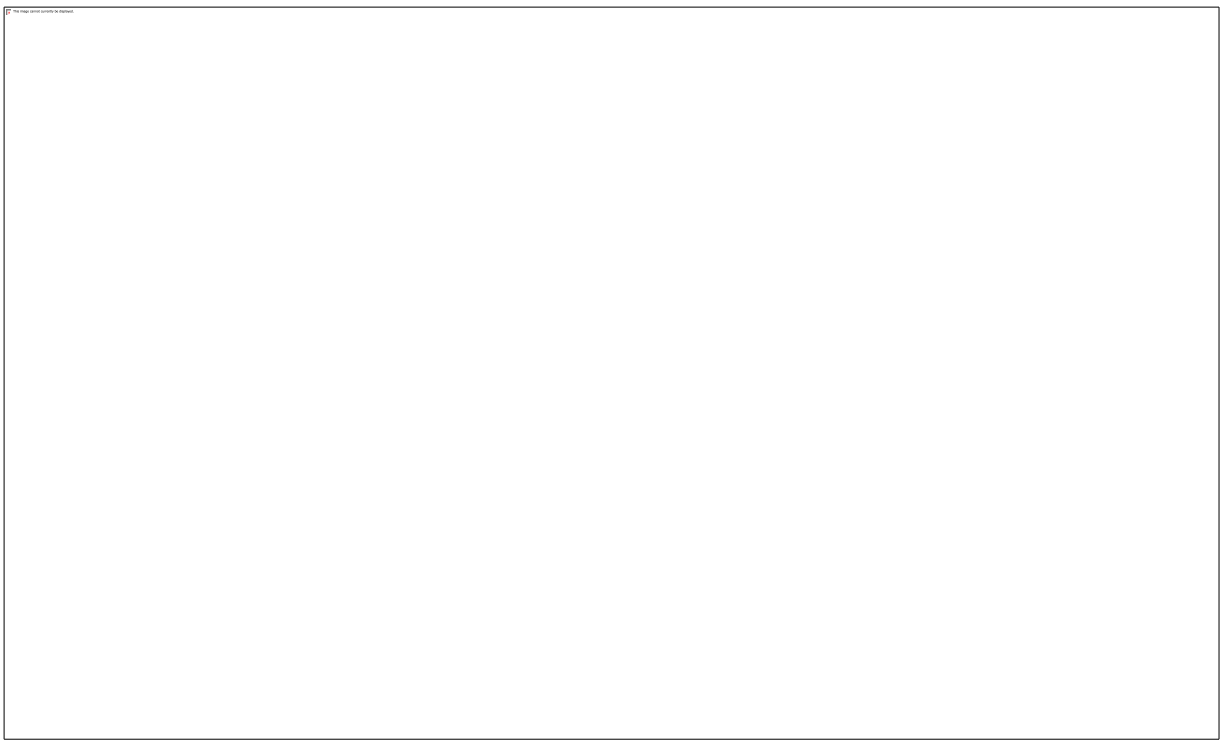
Precautions:

- Work in a well-ventilated area.
- Keep varnishes away from flames.
- Avoid skin and eye contact.
- Follow product instructions.
- Do not apply varnish to a surface where it is unsuitable, such as clay intended for further kiln firing.

14.0 Achieving textural variation in sculpture

Textural variation refers to the use of different surface qualities within one sculpture.

An artist may combine rough, smooth, ridged, dotted and patterned surfaces to make an artwork more interesting.



14.1 Ways of achieving textural variation

1. **Combining tools:** Use different tools to produce different surface marks.
2. **Combining materials:** Use wood, wire, paper, clay or other suitable materials together.
3. **Contrasting surfaces:** Leave some areas rough and polish other areas.
4. **Impressing patterns:** Press leaves, fabric or textured objects into soft clay.
5. **Carving details:** Create grooves, lines and raised areas.
6. **Adding materials:** Attach suitable materials to create raised surface features.
7. **Using paint effects:** Apply colour variations to suggest different textures.
8. **Preserving natural surfaces:** Retain the natural grain of wood or texture of stone.
9. **Applying repeated patterns:** Use dots, lines and shapes to establish rhythm.
10. **Combining modelling and carving:** Build up some areas and carve others to create contrasting forms.

14.2 Importance of textural variation

- Makes a sculpture visually attractive.
- Helps represent different materials and body parts.
- Creates contrast and emphasis.
- Enhances realism.

- Communicates the artist's ideas.
- Encourages the viewer to explore the sculpture from different viewpoints.

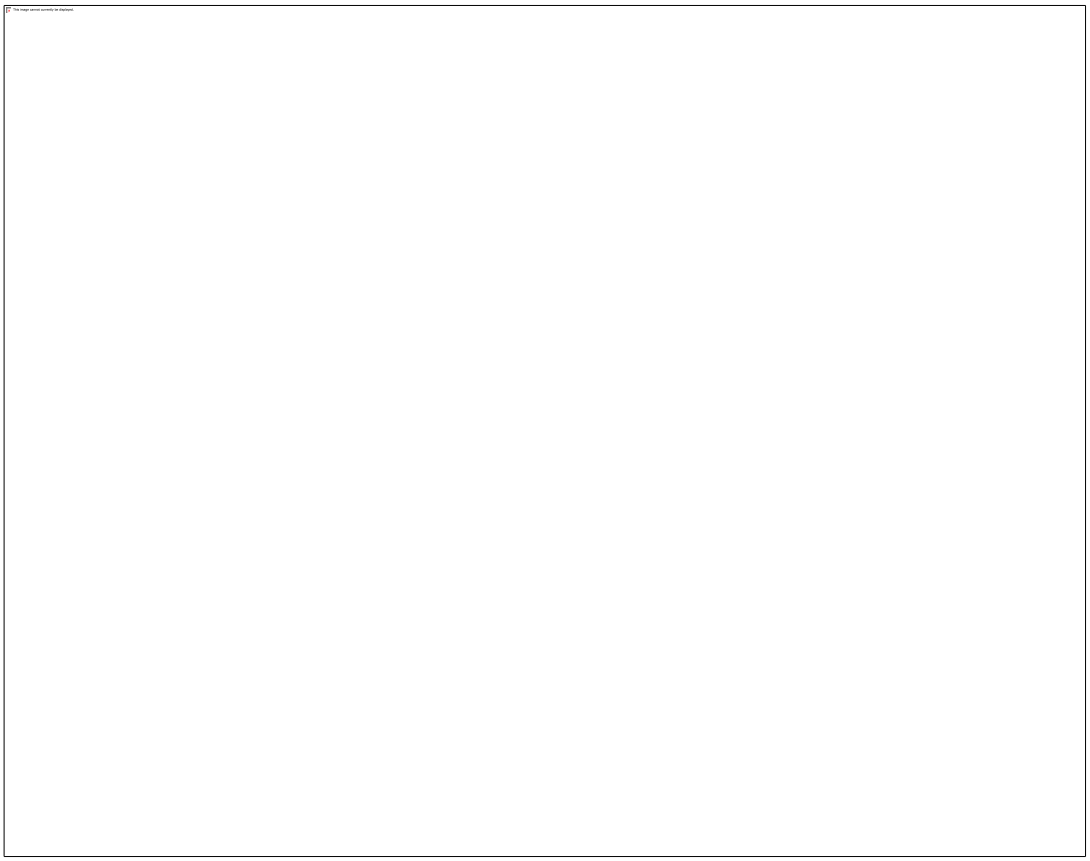
15.0 Achieving balance and proportion in sculpture in the round

Balance and proportion are important because a sculpture should be visually pleasing and structurally stable.

15.1 Achieving balance

1. Distribute the weight evenly.
2. Provide a stable base where necessary.
3. Position large and small forms carefully.
4. Ensure extended parts do not make the sculpture unstable.
5. Check the sculpture from different viewpoints.
6. Use an armature for tall or complex forms.
7. Consider the weight and strength of the materials.
8. Position the centre of gravity appropriately.

Centre of gravity: This is the point at which the weight of an object can be considered to act. A sculpture is more stable when its centre of gravity is appropriately positioned over its supporting area.



15.2 Achieving proportion

1. Study the subject carefully.
2. Make preliminary sketches from different angles.
3. Identify the main parts of the subject.
4. Compare the sizes of the different parts.

5. Use measuring tools where necessary.
6. Construct the main forms before adding small details.
7. Check the sculpture regularly during modelling or carving.
8. Make adjustments before completing the work.

Example: proportion in a human figure

When modelling a human figure, the learner should observe the relationship between the head, torso, arms, legs and feet. The proportions may be realistic or deliberately exaggerated for artistic expression.

Example: proportion in an animal sculpture

When making a cow sculpture, the learner should consider the size of the head in relation to the body, the length of the legs, the position of the tail and the shape of the neck.

15.3 Factors that influence balance and proportion

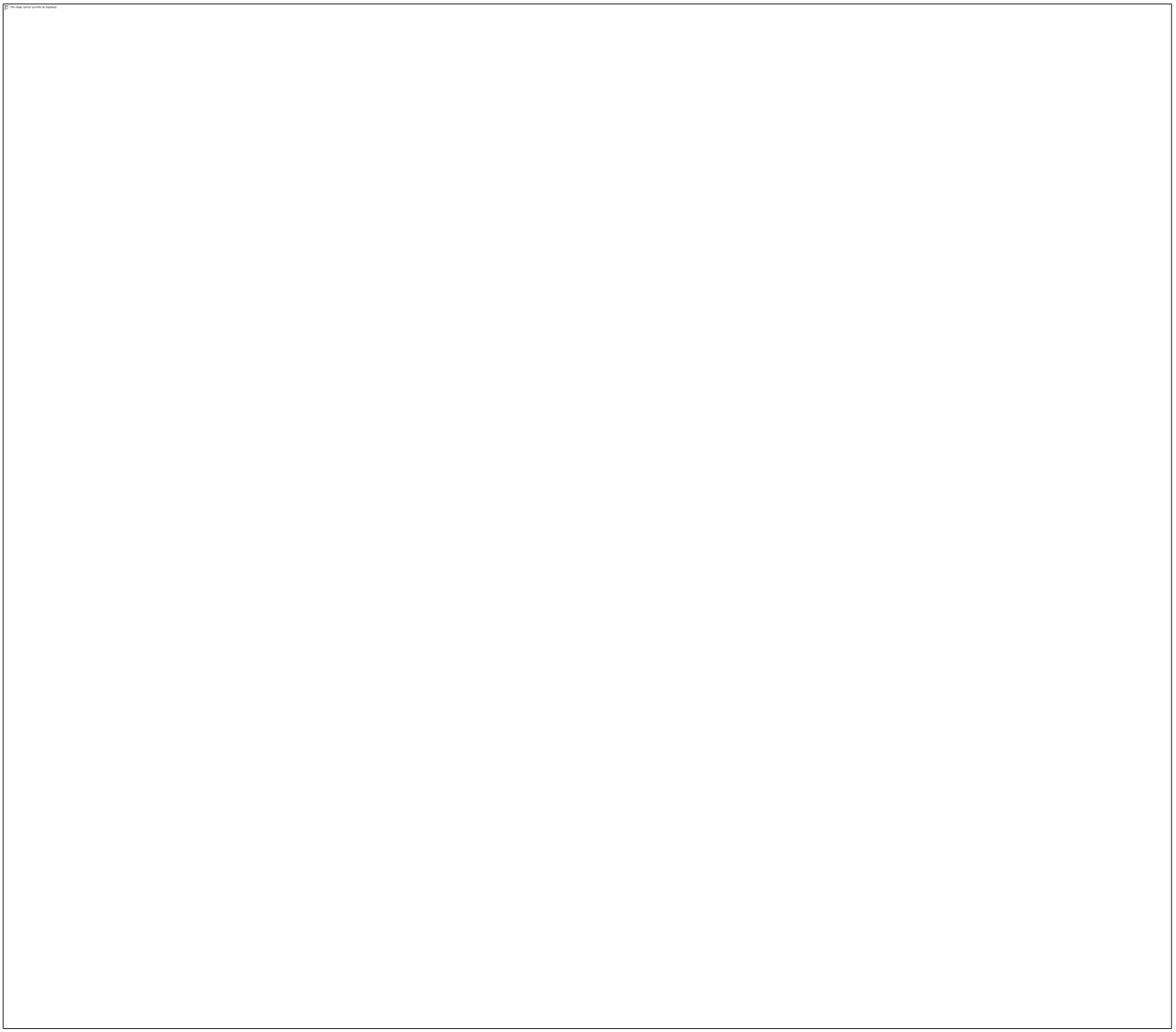
- Subject matter.
- Intended size.
- Material used.
- Shape and arrangement of forms.
- Position of the base.
- Construction technique.
- Weight distribution.
- Artistic intention.

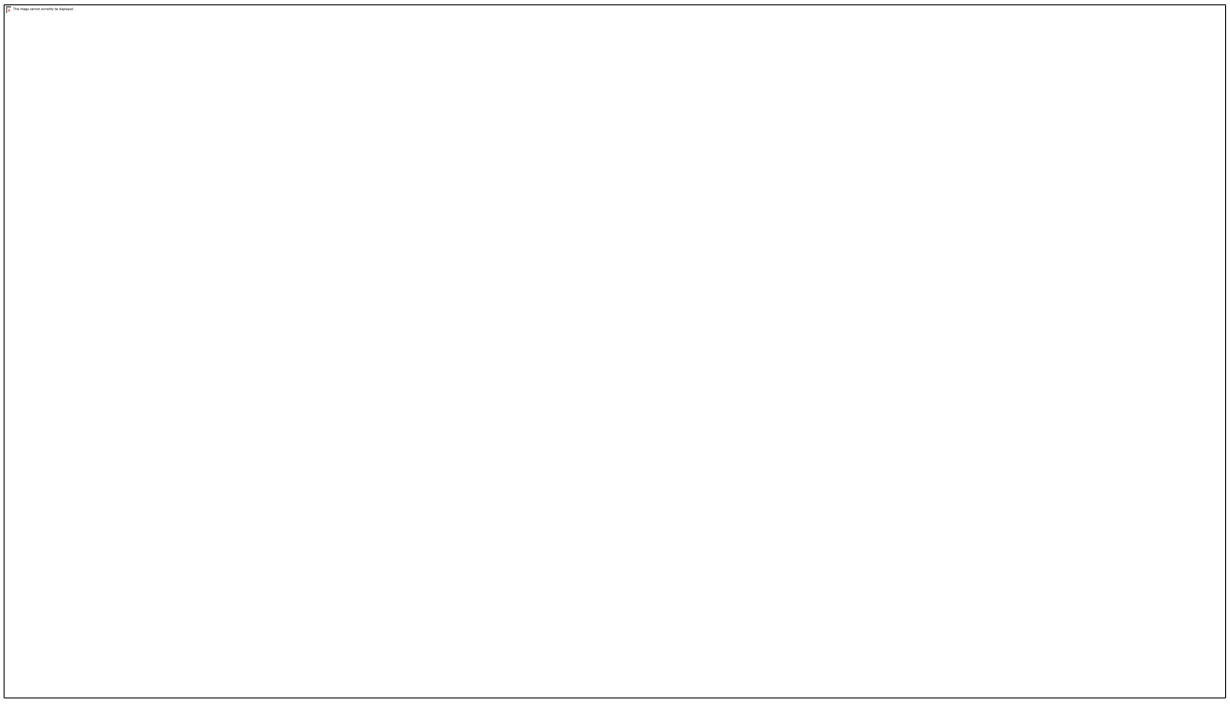
16.0 Placement and display of sculptures

Placement refers to the position or location where a sculpture is installed or displayed.

The choice of placement affects how the sculpture is seen, understood and appreciated.







16.1 Factors to consider when placing a sculpture

1. **Size:** Large sculptures require sufficient space.
2. **Weight:** Heavy sculptures need strong support.
3. **Purpose:** A commemorative sculpture may be placed at a public or significant location.
4. **Visibility:** The sculpture should be visible to its intended audience.
5. **Lighting:** Appropriate lighting can highlight form, texture and details.
6. **Surroundings:** The environment should complement the sculpture.
7. **Safety:** The sculpture should not obstruct pathways or create hazards.
8. **Weather conditions:** Outdoor sculptures should be made from suitable durable materials.
9. **Accessibility:** Viewers should be able to observe the sculpture safely.
10. **Cultural meaning:** The location should respect the meaning and significance of the artwork.

16.2 Common places for displaying sculptures

- Art galleries.
- Museums.
- School exhibitions.
- Cultural centres.
- Public parks.
- Gardens.
- Community centres.
- Building entrances.
- Homes and offices.
- Memorial sites.

16.3 Care and maintenance of sculptures

- Clean sculptures using methods suitable for the material.
- Avoid exposing delicate works to unsuitable weather conditions.
- Protect wooden sculptures from termites and excessive moisture.
- Store clay and papier mâché works in dry conditions.
- Handle stone sculptures carefully to prevent chipping.
- Inspect joints and supports regularly.
- Avoid harsh chemicals that may damage finishes.
- Repair damaged parts using appropriate methods.
- Keep display areas clean and safe.

17.0 Appreciating and critiquing sculptures

Appreciation is the process of observing, understanding, valuing and responding to an artwork.

Critique is the process of examining an artwork and giving informed comments about its strengths and areas that may need improvement.

Learners should appreciate their own work and the work of others while respecting different opinions.

17.1 Steps in appreciating a sculpture

1. **Observation:** Look carefully at the sculpture from all sides.
2. **Identification:** Identify the subject matter and material used.
3. **Description:** Describe the shapes, forms, textures, colours and other visible features.
4. **Analysis:** Explain how the elements and principles of art have been used.
5. **Interpretation:** Explain the possible meaning or message of the sculpture.
6. **Evaluation:** Judge the effectiveness of the artwork using clear reasons.
7. **Reflection:** Identify what has been learnt and how future work can be improved.

17.2 Criteria for evaluating a sculpture

Criterion	What to examine
Creativity	Originality and imaginative use of ideas
Subject matter	Clarity and suitability of the chosen subject
Form	Development of the three-dimensional structure
Balance	Stability and distribution of visual weight
Proportion	Relationship between different parts
Texture	Effective use of surface qualities
Finishing	Neatness, smoothness and suitability of finish
Craftsmanship	Skill and care shown in construction
Material use	Appropriate selection and handling of materials
Presentation	Quality of display and overall appearance

17.3 How to give constructive feedback

Good feedback should be respectful, specific and helpful.

Examples of constructive comments:

- "The sculpture has an interesting texture because the artist has combined rough and smooth surfaces."
- "The animal's body is well developed, but the legs could be adjusted to improve balance."

- "The use of natural wood colour enhances the appearance of the sculpture."
- "The base could be made wider to improve stability."
- "The proportions of the head and body could be reviewed."

Avoid insulting comments or dismissing another learner's work. Different artists may have different ideas and approaches.

18.0 Kenyan cultural heritage, sustainability and entrepreneurship in sculpture

Sculpture provides opportunities for preserving cultural heritage, promoting creativity and developing income-generating skills.

18.1 Sculpture and Kenyan cultural heritage

Kenyan sculptural traditions reflect the history, beliefs, occupations, environments and creativity of different communities.

Examples of areas learners may investigate include:

- Kisii soapstone carving.
- Wooden carvings from different Kenyan communities.
- Traditional objects and ceremonial forms.
- Sculptures inspired by livestock and wildlife.
- Carved decorative objects used in homes and community spaces.
- Contemporary Kenyan sculptures reflecting social and environmental themes.

Learners should research the meaning and context of cultural objects before reproducing or adapting their designs.

18.2 Sustainable use of sculptural materials

Sustainable use means obtaining and using materials responsibly so that natural resources are not unnecessarily depleted or damaged.

Ways of promoting sustainability:

1. Use legally sourced wood.
2. Avoid cutting trees unnecessarily.
3. Reuse suitable wood offcuts.
4. Use clean waste paper for papier mâché.
5. Reuse suitable coconut shells.
6. Use safe and clean recycled materials.
7. Avoid materials obtained from protected wildlife.
8. Minimise material wastage during carving.
9. Collect and dispose of waste responsibly.
10. Use environmentally appropriate finishing products where possible.

18.3 Entrepreneurship opportunities in sculpture

Sculpture can provide opportunities for self-employment and business development.

Possible products for sale:

- Wooden decorative figures.
- Kisii soapstone sculptures.
- Animal sculptures.
- Coconut shell ornaments.
- Papier mâché decorations.
- Clay decorative objects.
- Personalised gifts.
- Sculptural souvenirs.

Skills needed to develop a sculpture business:

- Creativity and product design.
- Material selection.
- Craftsmanship.
- Costing and pricing.
- Quality control.
- Packaging.
- Marketing.
- Customer care.
- Record keeping.
- Digital promotion through suitable online platforms.

Possible Kenyan markets:

- Art galleries.
- Craft markets.
- Cultural festivals.
- Tourist shops.
- Schools.
- Home décor shops.
- Online marketplaces.
- Exhibitions and community events.

19.0 Health, safety and environmental conservation

Sculpture involves tools, materials and processes that may expose learners to physical hazards. Safety must be observed throughout the activity.

19.1 General safety precautions

1. Wear suitable protective equipment.
2. Use tools for their intended purposes.
3. Keep the working area clean and organised.

4. Secure materials before cutting or carving.
5. Handle sharp tools carefully.
6. Work in well-ventilated areas when using adhesives, paints and finishes.
7. Avoid inhaling wood, stone, bone or other material dust.
8. Do not taste or eat sculpting materials.
9. Wash hands after practical activities.
10. Store tools safely after use.
11. Seek assistance when using unfamiliar equipment.
12. Follow the teacher's instructions at all times.

19.2 Environmental conservation

- Avoid unnecessary destruction of trees.
- Use sustainably sourced materials.
- Reuse suitable waste materials.
- Avoid burning rubber and plastic.
- Dispose of adhesives, paints and chemical products according to their instructions.
- Keep dust and debris under control.
- Do not collect materials from protected habitats or wildlife.
- Use natural resources responsibly.

20.0 Core competencies, values and pertinent contemporary issues

20.1 Core competencies

1. Communication and collaboration

Learners develop communication skills by presenting their sculptures, explaining their processes and giving feedback. Collaboration is developed when learners work together to collect suitable materials, share ideas and display artworks.

2. Creativity and imagination

Learners develop original ideas, experiment with different materials and create sculptures based on personal observation and imagination.

3. Critical thinking and problem solving

Learners identify challenges such as weak joints, poor balance, cracks and unsuitable materials, then develop practical solutions.

4. Digital literacy

Learners use digital devices and suitable online resources to research sculptors, view sculpture examples, study techniques and document their work.

5. Learning to learn

Learners investigate different sculptural techniques, reflect on their progress and use feedback to improve their work.

20.2 Values

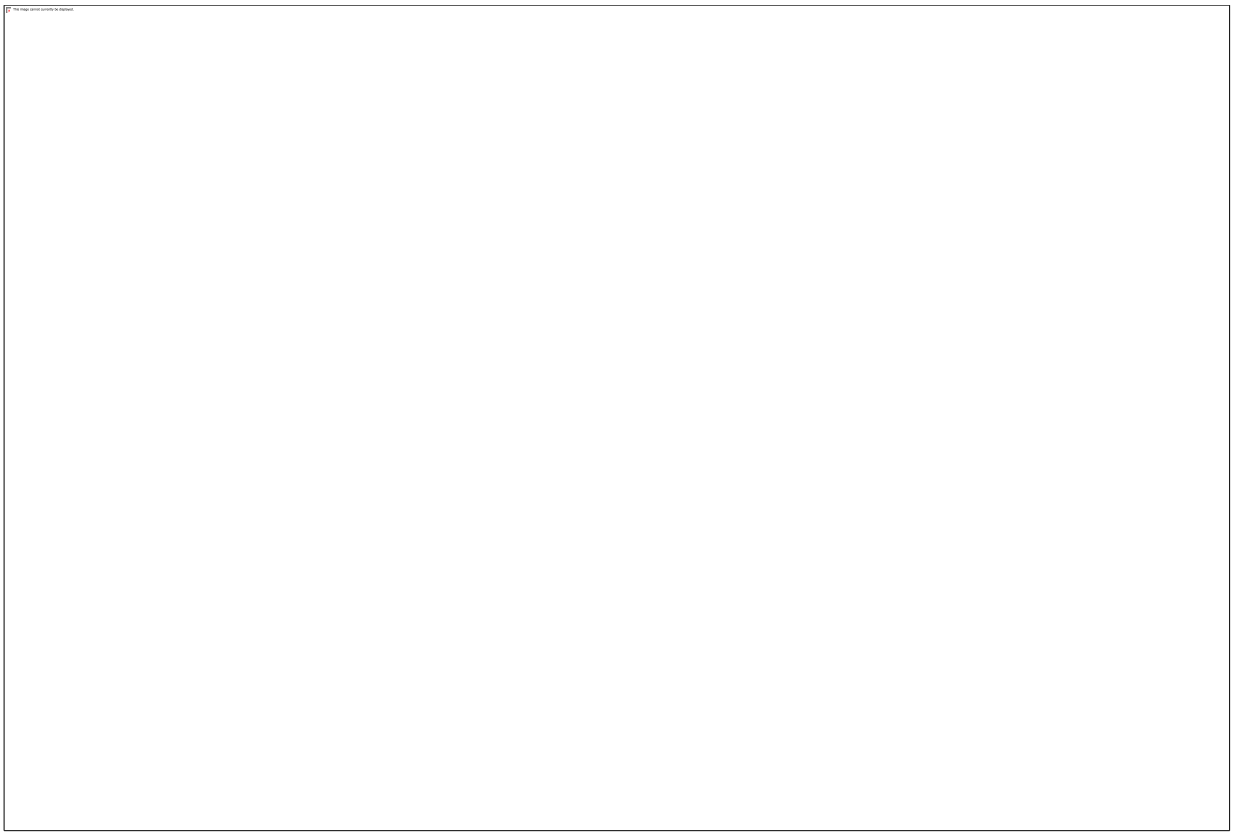
- **Respect:** Appreciating other learners' artistic ideas and opinions.
- **Patriotism:** Recognising and promoting Kenyan sculptural heritage and artists.
- **Responsibility:** Using tools and materials carefully.
- **Cooperation:** Working together during practical activities.
- **Integrity:** Acknowledging sources of inspiration and producing original work.
- **Environmental responsibility:** Conserving natural resources and reusing suitable materials.

20.3 Pertinent and contemporary issues

- Environmental conservation through recycling and responsible sourcing.
- Cultural preservation through the study of indigenous art.
- Occupational health and safety during practical work.
- Entrepreneurship and self-employment.
- Inclusion and appreciation of different abilities.
- Responsible use of digital information and images.
- Community participation through exhibitions and collaborative projects.

21.0 Practical learning activities

Activity 1: Modelling a clay animal sculpture



Task: Create a clay sculpture of an animal found in Kenya, such as an elephant, lion, giraffe, zebra or cow.

Materials:

- Prepared clay.
- Modelling tools.

- Water.
- Working board.
- Sponge.
- Suitable base.

Procedure:

1. Select an animal.
2. Observe its shape and body structure.
3. Sketch it from different viewpoints.
4. Prepare the clay.
5. Model the main body.
6. Add the head, legs, tail and other features.
7. Refine the proportions.
8. Create suitable surface textures.
9. Finish and dry the sculpture.
10. Display and critique the work.

Expected learning evidence: A completed clay animal sculpture, preliminary sketches and photographs showing stages of production.

Activity 2: Making a papier mâché sculpture



Task: Make a papier mâché sculpture of an African animal or a human figure.

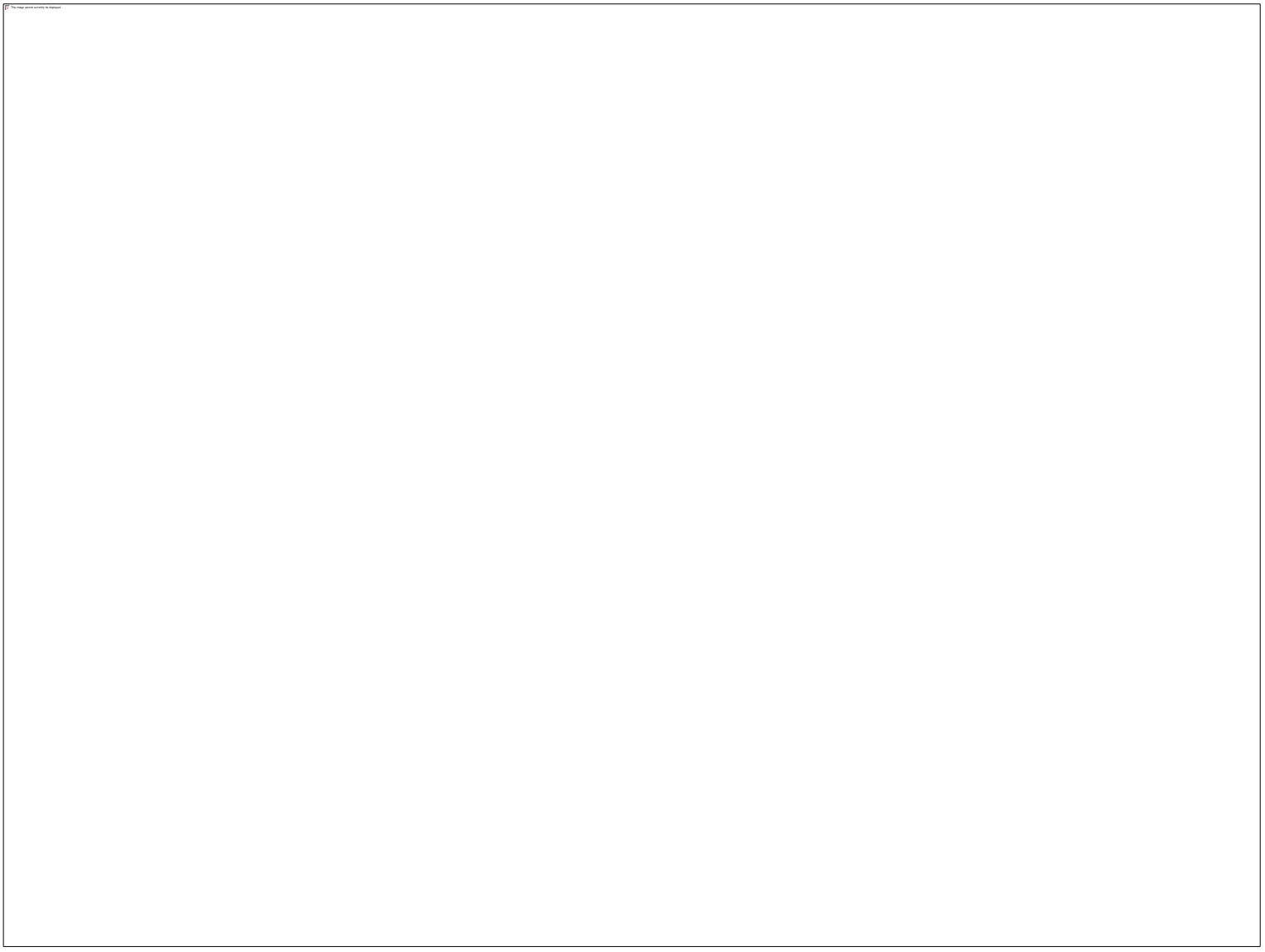
Procedure:

1. Select the subject.
2. Sketch the intended sculpture.
3. Collect clean waste paper.
4. Prepare the adhesive.
5. Construct an armature.

6. Apply paper strips or pulp.
7. Build up the form.
8. Allow it to dry thoroughly.
9. Refine the surface.
10. Paint and finish the sculpture.

Expected learning evidence: A completed papier mâché sculpture and a record of the construction process.

Activity 3: Carving a wooden sculpture



Task: Produce a small wooden sculpture of a bird, fish or another suitable subject.

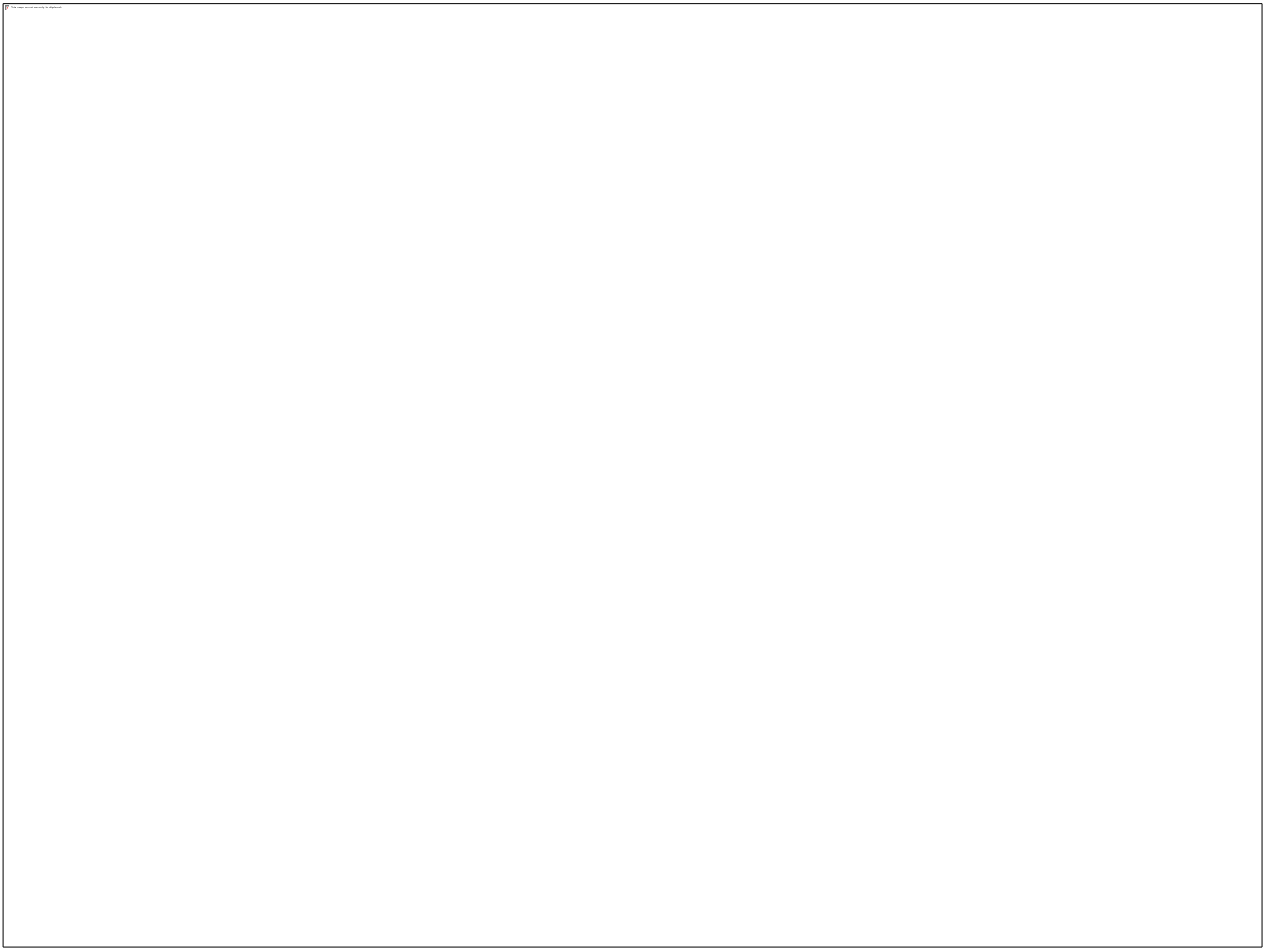
Procedure:

1. Select suitable wood.
2. Examine its grain and condition.
3. Sketch the design.
4. Transfer the design onto the wood.
5. Secure the wood.
6. Remove unwanted sections carefully.

7. Establish the main form.
8. Carve the details.
9. Smooth the surface.
10. Apply a suitable finish.

Expected learning evidence: A completed wooden sculpture, design sketches and a short explanation of the carving process.

Activity 4: Creating a coconut shell sculpture



Task: Create a small decorative sculpture using coconut shells.

Procedure:

1. Collect clean coconut shells.
2. Study their natural shapes.
3. Sketch an intended form.
4. Mark the design.
5. Cut and shape the shell.
6. Assemble the parts if necessary.
7. Add decorative patterns.

8. Smooth and polish the surface.
9. Display the sculpture.

Expected learning evidence: A completed coconut shell sculpture and an explanation of how waste material was reused.

Activity 5: Comparative sculpture appreciation

Task: Study a sculpture by a Kenyan artist and another by an international artist.

Learners should:

1. Identify the artists.
2. Identify the subject matter.
3. Describe the materials used.
4. Identify the techniques applied.
5. Explain the elements and principles of art.
6. Compare the finishing techniques.
7. Explain the possible messages of the sculptures.
8. Present their observations to the class.

22.0 Common problems encountered when making sculptures and their solutions

Problem	Possible cause	Suggested solution
Clay sculpture cracks	Uneven or rapid drying	Dry slowly and evenly
Clay parts detach	Weak joints	Score and slip before joining
Papier mâché collapses	Weak armature	Strengthen the internal support
Papier mâché develops mould	Poor drying or storage	Dry completely and store appropriately
Wooden sculpture splits	Poorly seasoned wood or incorrect carving direction	Use suitable seasoned wood and observe grain
Stone breaks unexpectedly	Excessive force or hidden cracks	Inspect stone and remove material gradually
Sculpture falls over	Poor balance or weak base	Adjust weight distribution and strengthen support
Surface looks rough unintentionally	Inadequate refinement	Use suitable smoothing and finishing tools
Details are unclear	Poor planning or unsuitable tools	Sketch carefully and use appropriate tools
Finish peels off	Incompatible coating or poor surface preparation	Prepare the surface and select a suitable finish

REVISION QUESTIONS

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer all the questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. Which statement best describes sculpture in the round?

A. An artwork made on a flat surface.

B. An artwork that can be viewed from all sides.

C. An artwork attached to a wall.

D. An artwork made using paint only.

2. Which of the following is an example of an additive sculptural technique?

A. Chiselling stone.

B. Carving wood.

C. Modelling clay.

D. Cutting coconut shell.

3. The process of removing unwanted material from a solid block to create a sculpture is known as:

A. Modelling.

B. Carving.

C. Casting.

D. Assembling.

4. Which Kenyan sculptor is associated with Kisii soapstone carving?

A. Michelangelo.

B. Leonardo da Vinci.

C. Elkana Ong'esa.

D. Pablo Picasso.

5. Michelangelo's sculpture David was primarily made from:

A. Wood.

B. Marble.

C. Clay.

D. Rubber.

6. Which of the following materials is most suitable for making a lightweight large sculpture using papier mâché?

A. Granite.

B. Marble.

C. Waste paper.

D. Bone.

7. What is an armature in sculpture?

A. A material used to polish sculptures.

B. An internal framework that supports a sculpture.

C. A tool used for carving stone.

D. A protective coating applied to wood.

8. Which material is commonly used to make an armature for a clay human figure?

A. Wire.

B. Sandpaper.

C. Paint.

D. Varnish.

9. Which of the following is a characteristic of well-prepared modelling clay?

A. It is excessively dry and brittle.

B. It contains many stones and roots.

C. It is workable and holds its shape.

D. It is completely hardened before modelling.

10. What is the main purpose of a base in a freestanding sculpture?

A. To change the colour of the sculpture.

B. To provide support and stability.

C. To make the sculpture hollow.

D. To create decorative patterns only.

11. Which tool is commonly used to remove excess clay from a model?

A. Loop tool.

B. Paintbrush.

C. Measuring tape.

D. Varnish brush.

12. Which of the following is used to strike a chisel during wood carving?

A. Sponge.

B. Mallet.

C. Caliper.

D. Ruler.

13. Which sculptural material is particularly associated with the Kisii region of Kenya?

A. Marble.

B. Soapstone.

C. Rubber.

D. Coconut fibre.

14. Which of the following is a subtractive technique?

A. Papier mâché modelling.

B. Clay modelling.

C. Wood carving.

D. Adding clay to an armature.

15. The relationship between the sizes of different parts of a sculpture is known as:

A. Rhythm.

B. Texture.

C. Proportion.

D. Emphasis.

16. The distribution of visual weight in a sculpture is referred to as:

A. Balance.

B. Contrast.

C. Pattern.

D. Movement.

17. Which of the following describes negative space in sculpture?

A. The material used to construct a sculpture.

B. The empty space around or within a sculpture.

C. The colour applied to a sculpture.

D. The weight of a sculpture.

18. Which technique involves making grooves or lines on a sculptural surface?

A. Varnishing.

B. Incising.

C. Polishing.

D. Firing.

19. Which finishing technique involves rubbing a surface to make it smoother or more lustrous?

A. Polishing.

B. Modelling.

C. Armature construction.

D. Roughing out.

20. Which finishing technique is most suitable for improving the appearance and protecting a suitable wooden sculpture?

A. Firing. B. Varnishing.

C. Soaking. D. Wedging.

21. Which of the following is a suitable method of achieving textural variation in a sculpture?

A. Using only one type of surface throughout.

B. Combining rough and smooth surfaces.

C. Removing all surface details.

D. Avoiding different tools.

22. What is the main purpose of wedging clay?

A. To paint the clay.

B. To improve its consistency and reduce trapped air.

C. To make the clay waterproof.

D. To polish the finished sculpture.

23. Which of the following is a major limitation of subtractive sculpture?

A. It requires no tools.

B. Mistakes may be difficult to reverse.

C. It always produces lightweight objects.

D. It involves adding material gradually.

24. Why should wood grain be considered during carving?

A. To determine the paint colour.

B. To reduce splitting and guide the direction of carving.

C. To make the wood heavier.

D. To prevent the need for finishing.

25. Which of the following is the most appropriate way to improve the stability of a sculpture?

A. Make its base unnecessarily narrow.

B. Place all the weight on one side.

C. Distribute its weight appropriately over a stable base.

D. Remove the supporting structure.

26. Which of the following materials is commonly used to make papier mâché pulp?

A. Waste paper.

B. Granite powder.

C. Metal rods only.

D. Coconut oil.

27. Why should wet clay sculptures be dried slowly before firing?

A. To increase their weight.

B. To reduce the risk of cracking during drying and firing.

C. To make them softer permanently.

D. To change them into wood.

28. Which safety measure is most appropriate when carving stone?

A. Working without eye protection.

B. Inhaling stone dust.

C. Wearing suitable eye and respiratory protection.

D. Holding the stone loosely while striking it.

29. Which practice promotes environmental sustainability in sculpture?

A. Using illegally harvested wood.

B. Burning discarded rubber.

C. Reusing suitable waste materials.

D. Collecting materials from protected wildlife.

30. During a sculpture critique, a learner should:

A. Insult artists whose work is different.

B. Give respectful and objective comments.

C. Ignore the materials used.

D. Judge the sculpture without observing it.

Section A: Answer key

Question	Answer	Question	Answer	Question	Answer
1	B	11	A	21	B
2	C	12	B	22	B
3	B	13	B	23	B
4	C	14	C	24	B
5	B	15	C	25	C
6	C	16	A	26	A
7	B	17	B	27	B
8	A	18	B	28	C
9	C	19	A	29	C
10	B	20	B	30	B

Total: 30 marks. Award 1 mark for each correct answer.

SECTION B: STRUCTURED QUESTIONS

TOTAL: 50 MARKS

Instructions: Answer all questions. Write your answers clearly and give relevant examples where necessary.

1. Sculpture in the round (10 marks)

a) Define sculpture in the round. (2 marks)

b) State four characteristics of sculpture in the round. (4 marks)

c) Give four examples of subject matter that can be represented in sculpture in the round. (4 marks)

2. Additive and subtractive techniques (8 marks)

a) Explain the meaning of additive sculpture. (2 marks)

b) Explain the meaning of subtractive sculpture. (2 marks)

c) State two differences between additive and subtractive techniques. (4 marks)

3. Modelling using papier mâché (8 marks)

a) What is papier mâché? (2 marks)

b) State three materials used in preparing papier mâché. (3 marks)

c) Outline three steps involved in making a papier mâché sculpture in the round. (3 marks)

4. Armature construction and modelling (8 marks)

a) Define an armature in sculpture. (2 marks)

b) State three reasons why an armature is important when modelling a sculpture in the round. (3 marks)

c) Outline three steps involved in constructing an armature for a clay human figure. (3 marks)

5. Carving and finishing techniques (8 marks)

a) Explain the meaning of carving in sculpture. (2 marks)

b) State three stages involved in carving a wooden sculpture. (3 marks)

c) Explain three finishing techniques that can be used to improve a sculpture. (3 marks)

6. Balance, proportion, appreciation and safety (8 marks)

a) Explain the meaning of balance in sculpture. (2 marks)

b) State two ways of achieving proportion in a sculpture in the round. (2 marks)

c) Give two criteria used when evaluating a sculpture. (2 marks)

d) State two safety precautions to observe when carving stone. (2 marks)

24.0 MARKING SCHEME FOR SECTION B

Question 1: Sculpture in the round (10 marks)

a) Define sculpture in the round. (2 marks)

- A three-dimensional artwork that has height, width and depth. (1 mark)
- It is designed to be viewed from all sides rather than from one fixed viewpoint. (1 mark)

b) State four characteristics. (4 marks)

Award 1 mark for each correct point.

1. It has height, width and depth.
2. It can be viewed from different directions.
3. It occupies physical space.

4. It has mass and volume.
5. It may be freestanding.
6. It may be placed on a base or pedestal.
7. It can be made using different materials.
8. It may have varied textures.
9. It may be decorative, commemorative or functional.
10. It requires appropriate balance and stability.

c) Give four examples of subject matter. (4 marks)

Award 1 mark for each correct example.

1. Human figures.
2. Animals.
3. Plants.
4. Cultural activities.
5. Historical events.
6. Religious themes.
7. Abstract forms.
8. Environmental themes.
9. Everyday activities.
10. Imaginary creatures.

Question 2: Additive and subtractive techniques (8 marks)

a) Explain additive sculpture. (2 marks)

- It is a sculptural technique in which material is added, joined or built up. (1 mark)
- The material is gradually shaped to create the intended three-dimensional form. (1 mark)

b) Explain subtractive sculpture. (2 marks)

- It is a sculptural technique in which unwanted material is removed from a solid mass. (1 mark)
- The intended form is revealed through carving, cutting, chiselling or scraping. (1 mark)

c) State two differences. (4 marks)

Award 2 marks for each well-explained difference.

Additive technique	**Subtractive technique**
Material is added to develop the form.	Material is removed to reveal the form.
It may begin with a support or basic mass.	It begins with a solid block or material.
Examples include clay and papier mâché modelling.	Examples include wood and stone carving.

Corrections can often be made by adding material.	Removing too much material may be difficult to correct.

Question 3: Modelling using papier mâché (8 marks)

a) What is papier mâché? (2 marks)

- A modelling material made from paper pulp or pieces of paper. (1 mark)
- The paper is combined with adhesive to produce a material that can be shaped into three-dimensional forms. (1 mark)

b) State three materials. (3 marks)

Award 1 mark each.

1. Waste paper or newspaper.
2. Water.
3. Flour paste or suitable adhesive.
4. Cardboard.
5. Wire.
6. Masking tape.
7. Paint.

c) Outline three steps. (3 marks)

Award 1 mark for each correct step.

1. Select a subject and prepare preliminary sketches.
2. Construct an armature using wire, cardboard or other suitable material.
3. Tear paper into strips or prepare paper pulp.
4. Prepare the adhesive mixture.
5. Apply paper strips or pulp over the armature.
6. Build up the main form gradually.
7. Allow the sculpture to dry thoroughly.
8. Refine and paint the surface.

Question 4: Armature construction and modelling (8 marks)

a) Define an armature. (2 marks)

- An armature is an internal supporting framework used in sculpture. (1 mark)
- It holds the intended shape and supports modelling material during construction. (1 mark)

b) State three reasons why an armature is important. (3 marks)

Award 1 mark each.

1. It provides structural support.
2. It maintains the intended shape.
3. It helps maintain proportion.

4. It prevents weak parts from collapsing.
5. It supports extended limbs and other projecting parts.
6. It helps maintain stability.
7. It can reduce the quantity of modelling material required.

c) Outline three steps in constructing an armature. (3 marks)

Award 1 mark each.

1. Study the subject and prepare a proportional sketch.
2. Select suitable wire, wooden sticks or other supporting materials.
3. Construct the central framework.
4. Add supporting parts for the head and limbs.
5. Join the sections securely.
6. Attach the framework to a stable base where necessary.
7. Check balance and cover sharp ends.

Question 5: Carving and finishing techniques (8 marks)

a) Explain carving. (2 marks)

- Carving is a subtractive sculptural technique. (1 mark)
- It involves removing unwanted material from a solid material to create a desired form. (1 mark)

b) State three stages involved in carving a wooden sculpture. (3 marks)

Award 1 mark each.

1. Selecting suitable seasoned wood.
2. Sketching and transferring the design.
3. Marking out the main form.
4. Roughing out the shape.
5. Developing the main features.
6. Carving details and textures.
7. Refining and smoothing the surface.

c) Explain three finishing techniques. (3 marks)

Award 1 mark for each correct explanation.

1. **Texturing:** Creating different surface qualities such as rough, smooth, ridged or patterned surfaces.
2. **Polishing:** Rubbing or treating a surface to make it smoother or more lustrous.
3. **Painting:** Applying suitable colour to improve appearance and highlight details.
4. **Varnishing:** Applying a suitable protective coating to improve appearance and protect the surface.
5. **Firing:** Heating a completely dry clay sculpture in a kiln to produce a durable ceramic object.

Question 6: Balance, proportion, appreciation and safety (8 marks)

a) Explain balance in sculpture. (2 marks)

- Balance is the distribution of visual weight in a sculpture. (1 mark)
- It helps the sculpture achieve visual stability and, where applicable, physical stability. (1 mark)

b) State two ways of achieving proportion. (2 marks)

Award 1 mark each.

1. Study the subject carefully before modelling or carving.
2. Make preliminary sketches from different viewpoints.
3. Compare the sizes of different parts.
4. Use measuring tools where necessary.
5. Construct the main forms before adding details.
6. Check and adjust proportions throughout construction.

c) Give two criteria used when evaluating a sculpture. (2 marks)

Award 1 mark each.

1. Creativity and originality.
2. Appropriate subject matter.
3. Balance.
4. Proportion.
5. Texture.
6. Finishing.
7. Craftsmanship.
8. Appropriate use of materials.
9. Presentation.
10. Effective use of elements and principles of art.

d) State two safety precautions when carving stone. (2 marks)

Award 1 mark each.

1. Wear suitable safety goggles.
2. Wear appropriate respiratory protection to reduce inhalation of dust.
3. Secure the stone firmly before carving.
4. Use appropriate carving tools.
5. Avoid striking the stone excessively hard.
6. Work in a suitably ventilated area.
7. Keep other learners at a safe distance.
8. Follow the teacher's instructions and safety procedures.

STRAND 3.0: INDIGENOUS CRAFTS

SUB-STRAND 3.3: JEWELLERY AND ORNAMENTATION



Examples of African indigenous beadwork, personal adornment and decorated leather products.

1.0 INTRODUCTION TO JEWELLERY AND ORNAMENTATION

1.1 Meaning of jewellery

Jewellery refers to decorative objects made from different materials and worn on the body to enhance appearance, express identity, communicate cultural meaning or indicate social status.

Jewellery may be worn around the neck, wrists, fingers, ankles, waist, ears and head.

Examples include:

- Necklaces.
- Bracelets.
- Earrings.
- Anklets.
- Rings.
- Waist beads.
- Beaded headbands.
- Hair ornaments.
- Pendants and brooches.

1.2 Meaning of ornamentation

Ornamentation is the process of decorating or embellishing an object, body accessory or functional item to improve its appearance and communicate artistic or cultural meaning.

Ornamentation may involve:

- Adding beads to a leather bracelet.
- Decorating a leather pouch using coloured leather strips.
- Attaching shells, seeds or other decorative materials to accessories.
- Painting patterns on handmade beads.
- Embossing decorative patterns on leather.
- Applying stitching and thonging to enhance leather products.

1.3 Meaning of indigenous jewellery

Indigenous jewellery refers to decorative accessories traditionally produced and used by local communities using materials, artistic techniques, designs and cultural knowledge passed from one generation to another.

In Kenya, indigenous jewellery is associated with communities such as:

- Maasai.
- Samburu.
- Turkana.
- Pokot.
- Rendille.
- Kamba.
- Luo.
- Kikuyu.

These communities have different jewellery traditions, designs, materials and meanings.

Important: Indigenous jewellery is not merely decoration. It can communicate cultural identity, age, gender, marital status, social position, wealth, achievement and belonging.

1.4 Meaning of beadwork

Beadwork is an artistic craft that involves making decorative objects by arranging, threading, stitching, weaving or attaching beads to form patterns, designs and functional or ornamental products.

Beads may be made from:

- Glass.
- Plastic.
- Wood.
- Seeds.
- Bone.
- Clay.
- Stones.

- Shells.
- Paper.
- Recycled bottles and containers.
- Recycled fabric and other suitable materials.

Beadwork can be used to produce jewellery, clothing decorations, household ornaments, accessories and cultural artefacts.

1.5 Meaning of leatherwork

Leatherwork is the art and craft of designing, cutting, shaping, joining, decorating and finishing leather to produce useful or decorative objects.

Leather products include:

- Wallets.
- Belts.
- Sandals.
- Handbags.
- Pouches.
- Key holders.
- Pen holders.
- Bracelets.
- Necklaces.
- Phone holders.

1.6 Meaning of thonging technique

Thonging is a leatherwork joining and decorative technique that involves passing a narrow strip of leather, called a thong, through holes along the edges of leather pieces to join or decorate them.

The thong may be passed through the holes in different patterns to create attractive edges and secure joints.

Thonging is commonly used in:

- Wallet making.
- Pouch making.
- Leather bags.
- Key holders.
- Decorative leather covers.
- Leather bracelets.
- Sandals.

2.0 INDIGENOUS BEADWORK IN AFRICAN CULTURES

2.1 Historical background of African beadwork

Beadwork is one of the important traditional artistic practices in many African communities.

Historically, African communities used locally available materials to produce beads and decorative accessories. These materials included seeds, shells, bones, stones, wood, clay and other natural resources.

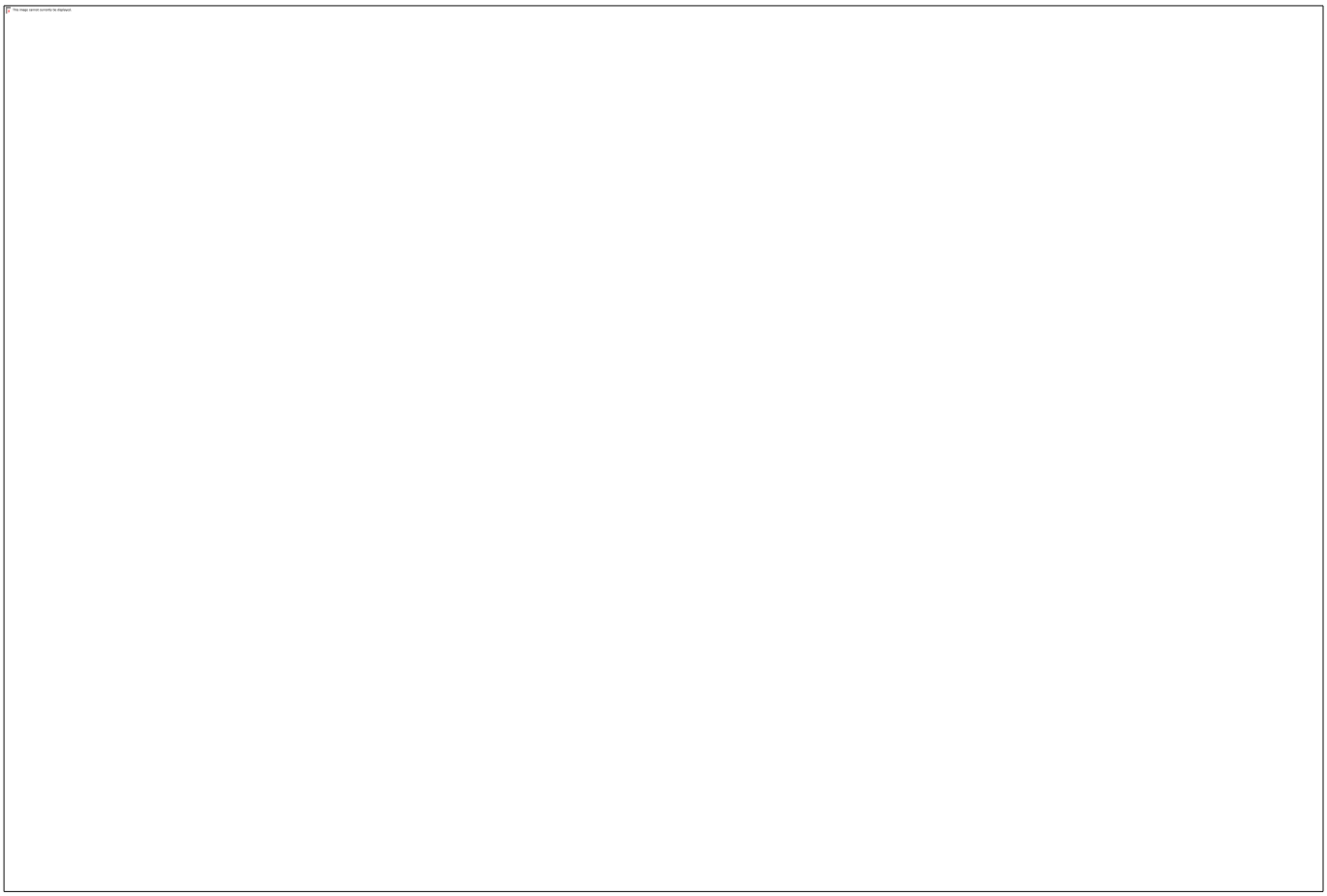
With the development of trade and cultural interaction, glass and manufactured beads became increasingly available.

Beadwork developed into an important form of artistic expression, cultural communication and economic activity.

In Kenya, communities such as the Maasai, Samburu, Turkana and Pokot are particularly recognised for their distinctive beadwork traditions.

2.2 Examples of indigenous Kenyan beadwork

A. Maasai beadwork



Maasai beadwork is recognised for its colourful patterns, circular forms and carefully arranged beads.

Characteristics include:

- Use of bright colours such as red, blue, white, green, orange and black.
- Production of broad circular necklaces and collars.
- Use of geometric patterns.
- Production of bracelets, earrings, belts and head ornaments.
- Use of bead arrangements to communicate cultural identity and social information.

B. Samburu beadwork



Samburu beadwork is an important part of traditional personal adornment.

Characteristics include:

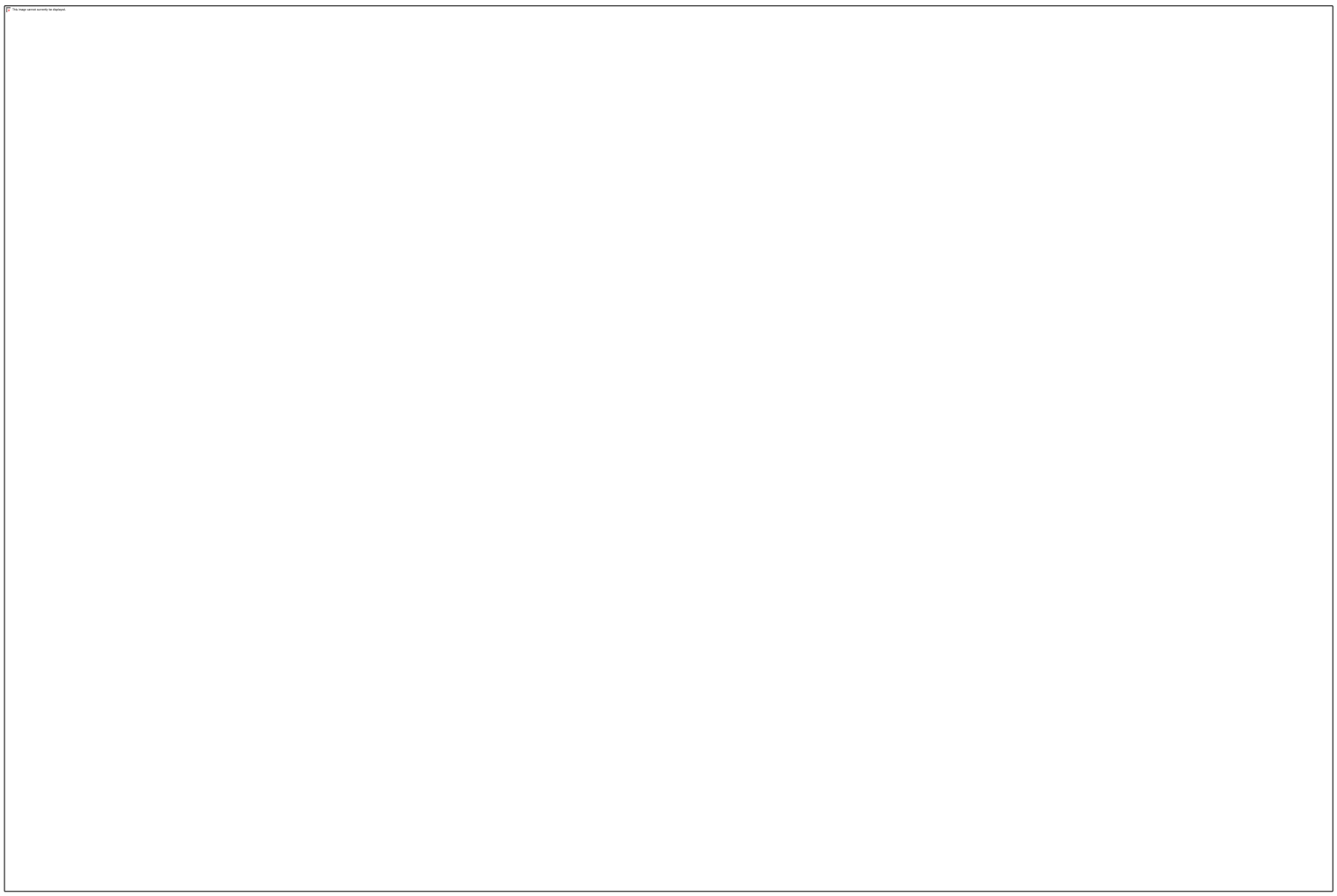
- Use of colourful beads.
- Production of layered necklaces.
- Use of circular and geometric arrangements.
- Production of bracelets, earrings and head ornaments.
- Use of beadwork during cultural ceremonies and celebrations.

C. Turkana beadwork

Characteristics include:

- Use of colourful beads and locally available materials.
- Production of necklaces, bracelets and other body ornaments.
- Use of repeated patterns.
- Incorporation of cultural symbols and personal identity.

D. Pokot beadwork



Characteristics include:

- Use of beads in necklaces and other ornaments.
- Use of colour combinations and repeated patterns.
- Production of decorative accessories.
- Use of beadwork in cultural celebrations and personal adornment.

2.3 Materials used in traditional African beadwork

1. **Glass beads:** Manufactured beads available in different colours, shapes and sizes. They are commonly used to create detailed patterns.
2. **Seeds:** Dried seeds can be cleaned, drilled and threaded to create natural jewellery.
3. **Wood:** Wooden pieces can be carved, shaped, drilled and polished into beads.
4. **Bones:** Properly processed bone pieces can be shaped and drilled for decorative purposes.
5. **Shells:** Shells can be used as beads or pendants.
6. **Stones:** Small stones can be shaped and polished to make decorative pieces.

7. **Clay:** Clay can be moulded into different bead shapes, dried and fired where appropriate.
8. **Leather:** Leather strips can be incorporated into necklaces and bracelets.
9. **Metal:** Small metal pieces may be used as pendants, spacers or decorative elements.

2.4 Cultural significance of indigenous beadwork

Beadwork plays several important roles in African communities.

1. Cultural identity

- Beadwork helps communities preserve their cultural heritage.
- Particular styles and patterns may be associated with specific communities.
- It helps communicate a sense of belonging.

2. Personal adornment

- Jewellery enhances the appearance of the wearer.
- It is used to complement traditional and contemporary clothing.
- It adds beauty, colour and uniqueness to personal appearance.

3. Communication of social information

- Certain traditional jewellery designs may communicate age, gender, marital status or social position.
- Some ornaments are associated with particular stages of life.
- Their meanings vary between communities and should not be assumed to be universal.

4. Ceremonial purposes

- Beaded ornaments may be worn during weddings, initiation ceremonies, cultural festivals and community celebrations.
- Special designs may be prepared for important occasions.

5. Economic importance

- Beadwork provides opportunities for self-employment.
- Artisans earn income through selling handmade jewellery.
- Beadwork supports cultural tourism and creative industries.

6. Preservation of cultural heritage

- Beadwork keeps traditional artistic knowledge alive.
- Young people learn techniques from older generations.
- It promotes appreciation of indigenous artistic practices.

7. Artistic expression

- Artists communicate ideas through colour, pattern, shape, texture and arrangement.
- Beadwork encourages creativity and experimentation.

2.5 Characteristics of indigenous African beadwork

- Use of repeated patterns.

- Use of geometric shapes.
- Careful arrangement of colours.
- Use of natural and manufactured materials.
- Combination of different bead sizes.
- Symmetrical and asymmetrical designs.
- Cultural symbolism.
- Handcrafted production techniques.
- Use of contrasting and harmonious colours.
- Incorporation of traditional and contemporary styles.

3.0 MATERIALS AND TOOLS USED IN BEADWORK

3.1 Materials used in making jewellery

Material	Use
Glass beads	Making colourful jewellery
Plastic beads	Making necklaces and bracelets
Paper beads	Producing recycled jewellery
Seeds	Making natural ornaments
Wooden beads	Creating necklaces and decorative accessories
Fishing line	Stringing beads
Nylon thread	Joining and stringing beads
Elastic cord	Making stretch bracelets
Wire	Making structured jewellery
Fabric strips	Decorating jewellery
Leather strips	Making necklaces and bracelets
Clasps	Fastening necklaces and bracelets
Paint	Decorating handmade beads
Varnish	Sealing and protecting finished beads

3.2 Tools and equipment



1. Scissors

- Used for cutting threads, fabric and paper.
- They should be sharp and handled carefully.
- They help produce neat edges.

2. Pliers

- Used for bending and shaping jewellery wire.
- Help open and close jump rings.
- Used when attaching metal clasps.

3. Beading needle

- A thin needle used to pass thread through small beads.
- Makes stringing easier and more accurate.

4. Awl

- A pointed tool used to make small holes in suitable materials.
- Helps prepare beads or other craft materials where drilling is not appropriate.

5. Hand drill

- Used to make holes in wooden, paper-based or other suitable bead materials.
- It should be operated carefully.

6. Ruler or measuring tape

- Used to measure the length of necklaces, bracelets and other accessories.
- Ensures consistency in size.

7. Paintbrushes

- Used to apply paint, varnish and other finishing materials.

8. Jewellery board or tray

- Used to arrange beads before stringing.
- Helps the artist plan patterns and colour arrangements.

9. File and sandpaper

- Used to smooth rough edges of handmade beads.
- Improve the appearance and safety of finished items.

10. Protective equipment

- Gloves, dust masks and safety goggles help protect the learner when cutting, drilling, sanding and applying finishes.

3.3 Factors to consider when selecting beadwork materials

1. **Availability:** Choose materials that can be obtained easily within the local environment.
2. **Cost:** Consider the cost of materials and the available budget.
3. **Durability:** Select materials that can withstand regular use.
4. **Weight:** Jewellery should be comfortable to wear.
5. **Colour:** Choose colours that complement one another.
6. **Texture:** Materials should have suitable surface qualities.
7. **Size:** Beads should be appropriate for the intended jewellery item.
8. **Safety:** Avoid sharp, toxic or contaminated materials.
9. **Flexibility:** Threads and cords should be suitable for the type of jewellery.
10. **Cultural relevance:** Designs should respect the cultural inspiration being used.

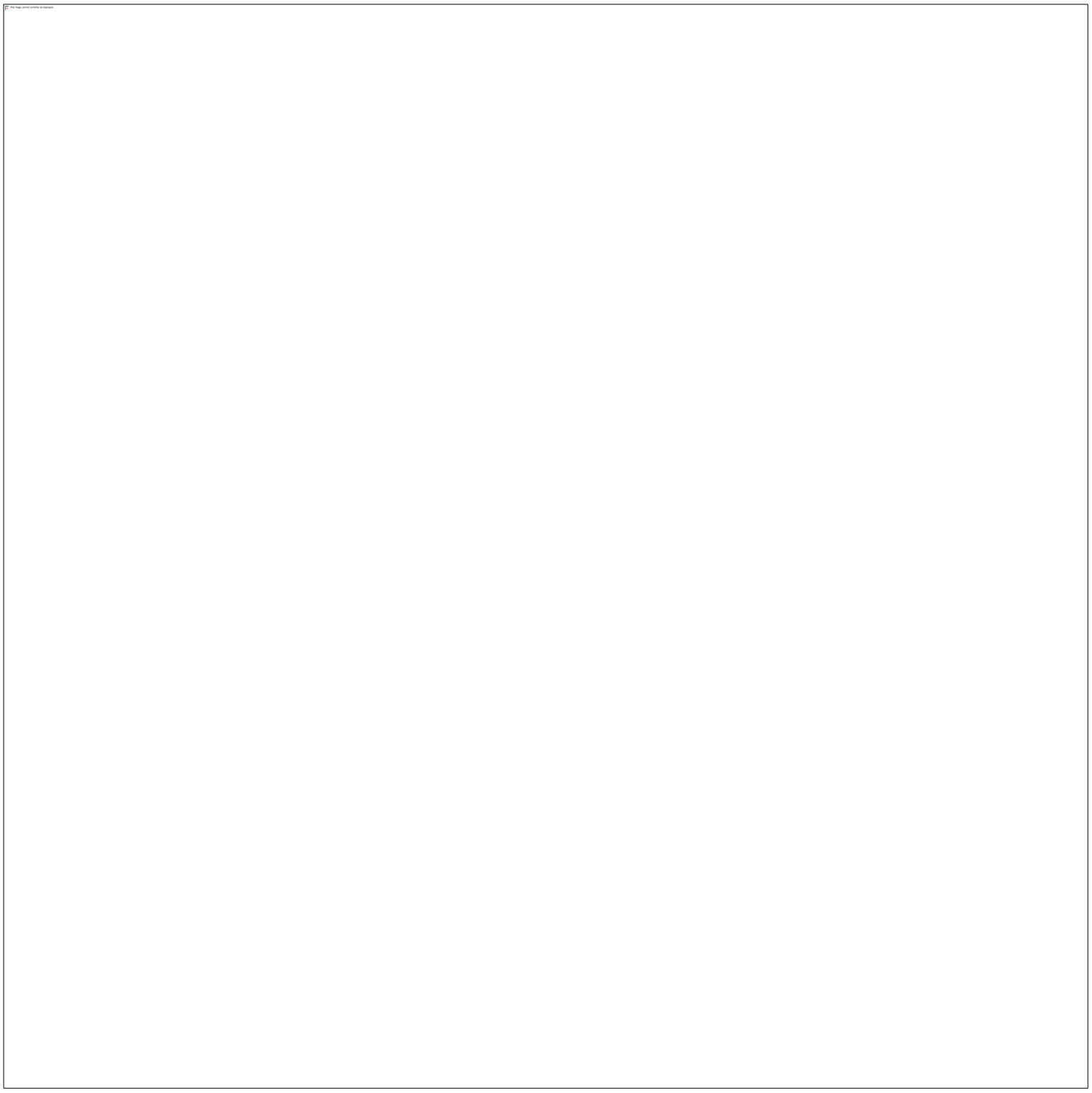
4.0 MAKING BEADS FROM RECYCLABLE MATERIALS

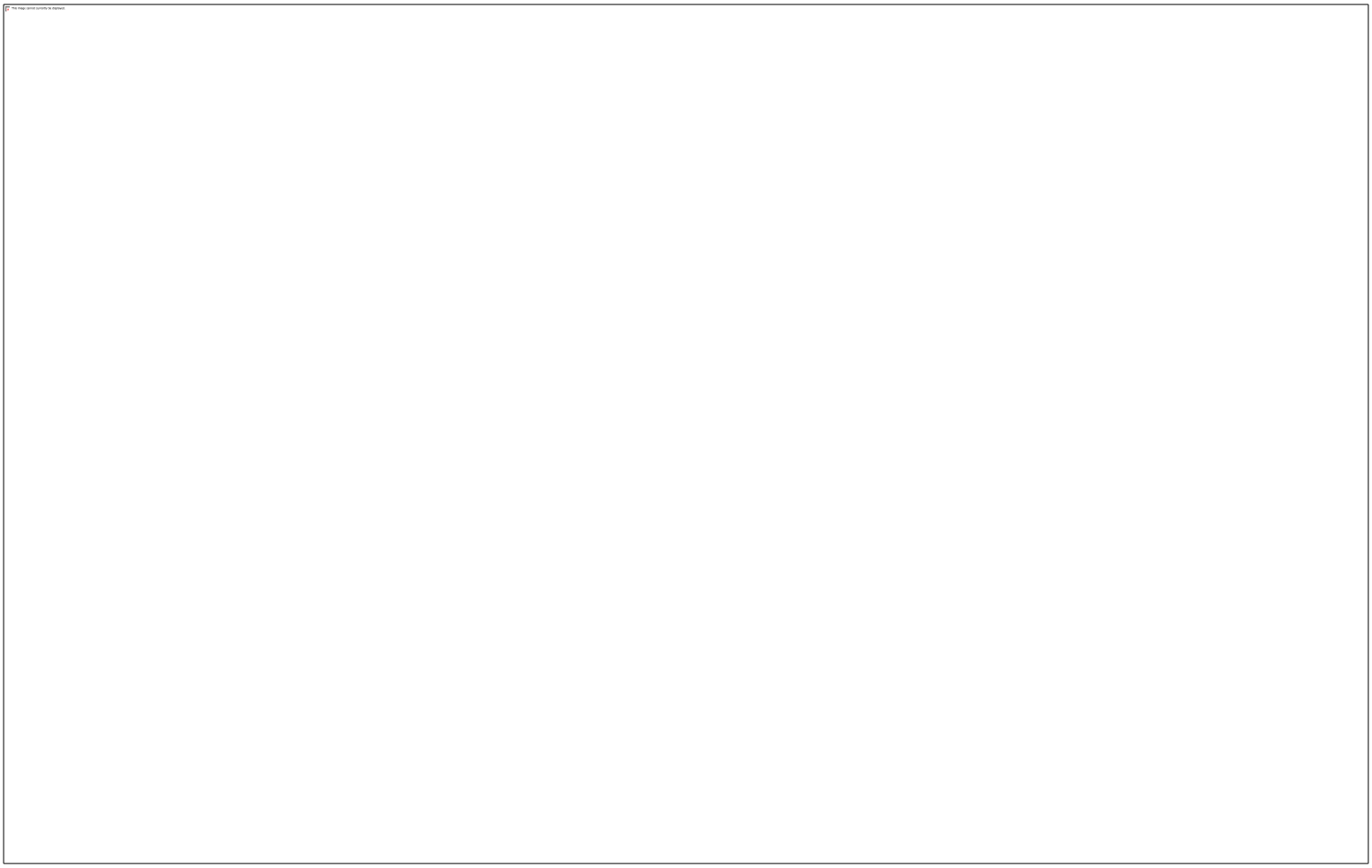
4.1 Meaning of recycled beads

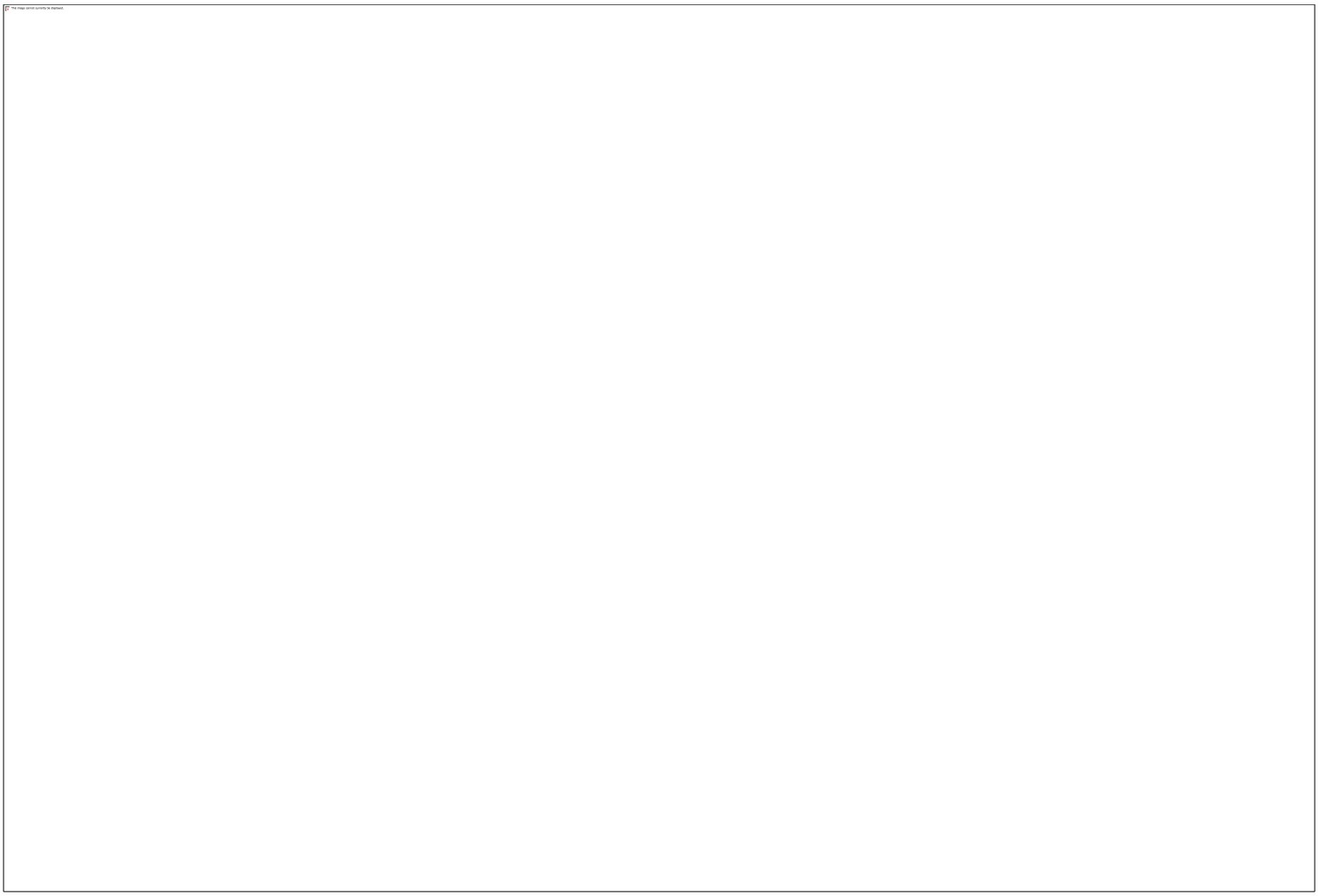
Recycled beads are decorative units made by converting discarded or used materials into small objects that can be threaded, arranged or attached to produce jewellery and ornaments.

Recycling materials for beadwork helps reduce environmental pollution while encouraging creativity and innovation.

4.2 Recyclable materials used to make beads







1. Waste paper and old magazines

- Old magazines, newspapers, calendars and coloured papers can be converted into decorative beads.
- The paper is cut into long triangular or rectangular strips.
- The strips are rolled tightly around a thin stick.
- Adhesive is applied to hold the paper together.
- The beads are dried and decorated.

2. Plastic bottles

- Clean plastic bottles can be cut into small strips or suitable shapes.
- The pieces can be shaped using appropriate controlled techniques.
- Edges must be smoothed to prevent injuries.
- The resulting pieces can be painted and used as decorative elements.

Safety: Learners should not heat or melt plastics using open flames or unknown chemicals. Plastic shaping should only be carried out using teacher-approved equipment and safe procedures.

3. Old fabrics

- Small pieces of fabric can be rolled around a core material.
- The fabric is secured using adhesive or thread.
- Different colours and textures can be combined.
- The finished beads can be used in necklaces and bracelets.

4. Cardboard

- Waste cardboard can be cut into strips.
- The strips are rolled into cylindrical or other shapes.
- Adhesive is applied to secure the rolled material.
- The beads are dried and decorated.

5. Used packaging materials

- Clean packaging materials can be cut into suitable shapes.
- The pieces can be folded, rolled or assembled.
- They can be painted to improve appearance.

6. Bottle caps

- Clean bottle caps can be incorporated as large decorative elements.
- They may be used as pendants or centrepieces.
- Sharp edges should be avoided or professionally smoothed.

7. Natural seeds

- Properly dried and cleaned seeds can be used as natural beads.
- Suitable seeds are drilled carefully.
- The beads can be polished or coated with an appropriate finish.

4.3 Procedures for making paper beads



Materials required:

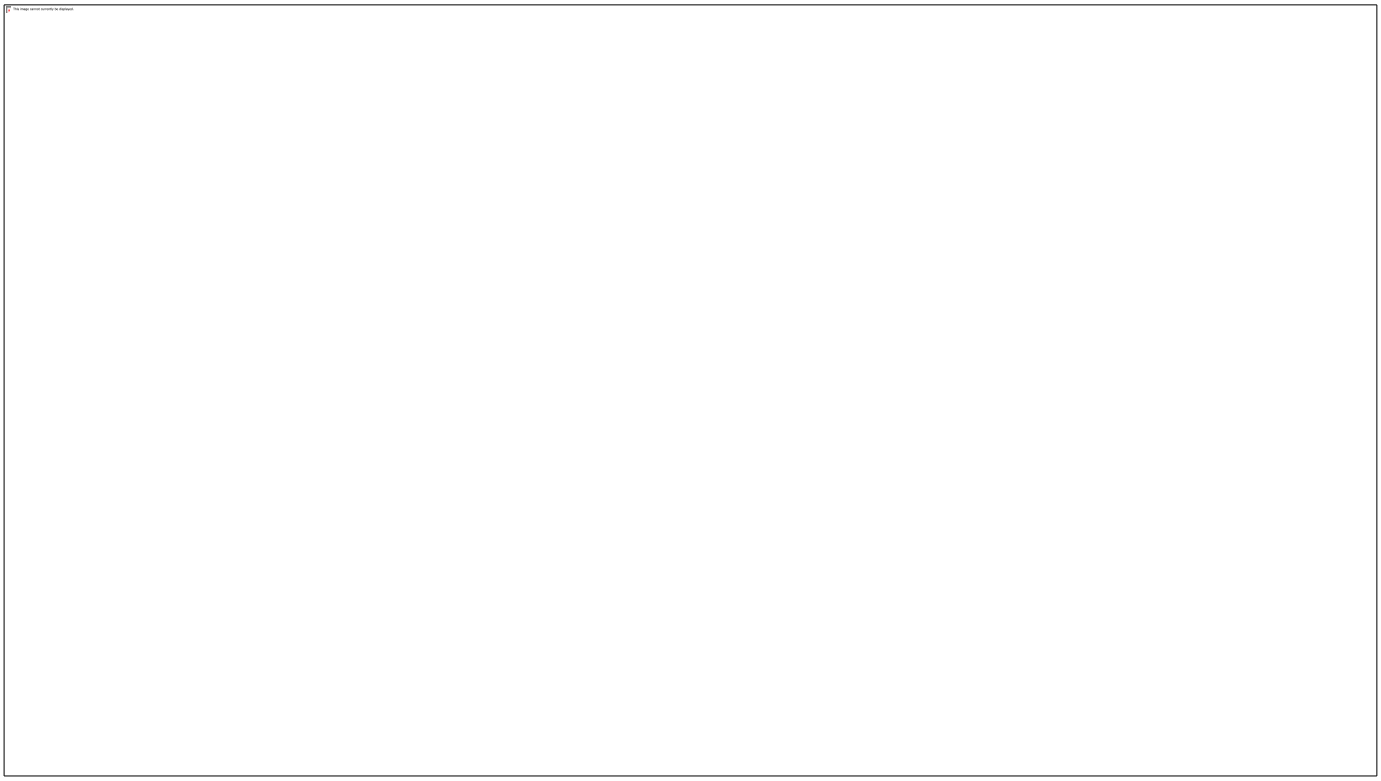
- Old magazines or coloured paper.
- White glue or suitable paper adhesive.
- Scissors.
- Ruler.
- Pencil.
- Thin wooden stick or skewer.
- Paint.

- Clear varnish or suitable water-based sealant.
- Drying surface.

Procedure:

1. **Collect materials:** Obtain clean waste paper from magazines, calendars or newspapers.
2. **Select colours:** Choose paper colours that will produce an attractive jewellery design.
3. **Prepare the paper:** Cut the paper into long triangular strips for tapered beads or rectangular strips for cylindrical beads.
4. **Mark the strips:** Use a ruler and pencil to ensure consistency in size.
5. **Roll the paper:** Place the wider end of a triangular strip around a thin stick and roll it tightly towards the pointed end.
6. **Apply adhesive:** Put a small amount of glue on the final part of the strip to secure the bead.
7. **Remove the bead:** Carefully slide the bead off the stick.
8. **Dry the beads:** Place the beads on a clean surface until the adhesive dries.
9. **Smooth the surface:** Remove loose paper fibres and rough edges.
10. **Decorate:** Apply paint or coloured designs where necessary.
11. **Apply finishing:** Apply a suitable clear varnish or sealant to protect the bead.
12. **Allow drying:** Leave the beads to dry completely before stringing.
13. **Sort the beads:** Arrange them according to colour, shape and size.

4.4 Types of handmade beads





A. Round beads

- Have a circular or spherical appearance.
- Commonly used in necklaces and bracelets.
- Can be made from clay, paper, wood and other suitable materials.

B. Cylindrical beads

- Have straight sides and a rounded or flat-ended form.
- Useful for creating repeated patterns.
- Can be made from rolled paper or shaped clay.

C. Oval beads

- Have an elongated rounded form.
- They provide variety in jewellery designs.

D. Disc beads

- Have a flattened circular form.
- They can be arranged to create broad decorative surfaces.

E. Tapered beads

- Become narrower towards one end.
- Triangular paper strips can be rolled to produce this shape.

F. Irregular beads

- Have different natural or artistic shapes.
- They can create unique handmade jewellery.

4.5 Finishing techniques used on handmade beads

Finishing improves the appearance, durability and quality of handmade beads.

1. Painting

Painting involves applying colour to the surface of beads using suitable paints.

Importance:

- Improves appearance.
- Introduces colour variation.
- Creates patterns and decorative effects.
- Helps achieve a uniform design.

2. Varnishing

Varnishing involves applying a transparent protective coating to the surface of beads.

Importance:

- Protects the beads from moisture.
- Improves surface appearance.
- Enhances colour.

- Reduces surface wear.
- Gives the beads a polished appearance.

3. Polishing

Polishing involves rubbing or treating a surface to make it smooth and attractive.

It is particularly useful for suitable wooden, stone and other hard beads.

4. Sealing

Sealing involves applying a suitable protective substance to prevent moisture penetration and surface deterioration.

5. Sanding

Sanding involves rubbing a material with suitable abrasive paper to remove rough surfaces and irregularities.

4.6 Qualities of well-finished beads

A good handmade bead should have:

- A smooth surface.
- A neat shape.
- A suitable hole for threading.
- Attractive colour.
- Properly applied finishing.
- No sharp edges.
- No loose paper or fabric fibres.
- Adequate strength.
- Consistent quality.
- Appropriate size for the intended jewellery.

5.0 COLOUR, PATTERN AND DESIGN IN BEADWORK

5.1 Meaning of colour in beadwork

Colour refers to the visual appearance of beads resulting from the way they reflect or absorb light.

Colour is an important design element because it influences the beauty, mood, meaning and cultural expression of jewellery.

5.2 Common colours used in Kenyan indigenous beadwork

Red

May represent courage, strength or cultural significance in particular traditions.

White

May represent peace, purity or other culturally specific meanings.

Blue

May be associated with the sky, water or other cultural meanings.

Green

May represent vegetation, growth or the natural environment.

Yellow

May be associated with sunshine, warmth or prosperity.

Black

May represent strength or other community-specific ideas.

Note: Colour symbolism varies between communities, occasions and individual designs. Learners should investigate the meaning of colours within the particular culture being studied.

5.3 Colour schemes used in jewellery design

1. Monochromatic colour scheme

This involves using different shades and tints of one colour.

Example: Light blue, medium blue and dark blue beads.

2. Complementary colour scheme

This involves combining colours that are opposite each other on the colour wheel.

Examples:

- Red and green.
- Blue and orange.
- Yellow and purple.

3. Analogous colour scheme

This involves using colours that are next to each other on the colour wheel.

Examples:

- Yellow, yellow-orange and orange.
- Blue, blue-green and green.

4. Triadic colour scheme

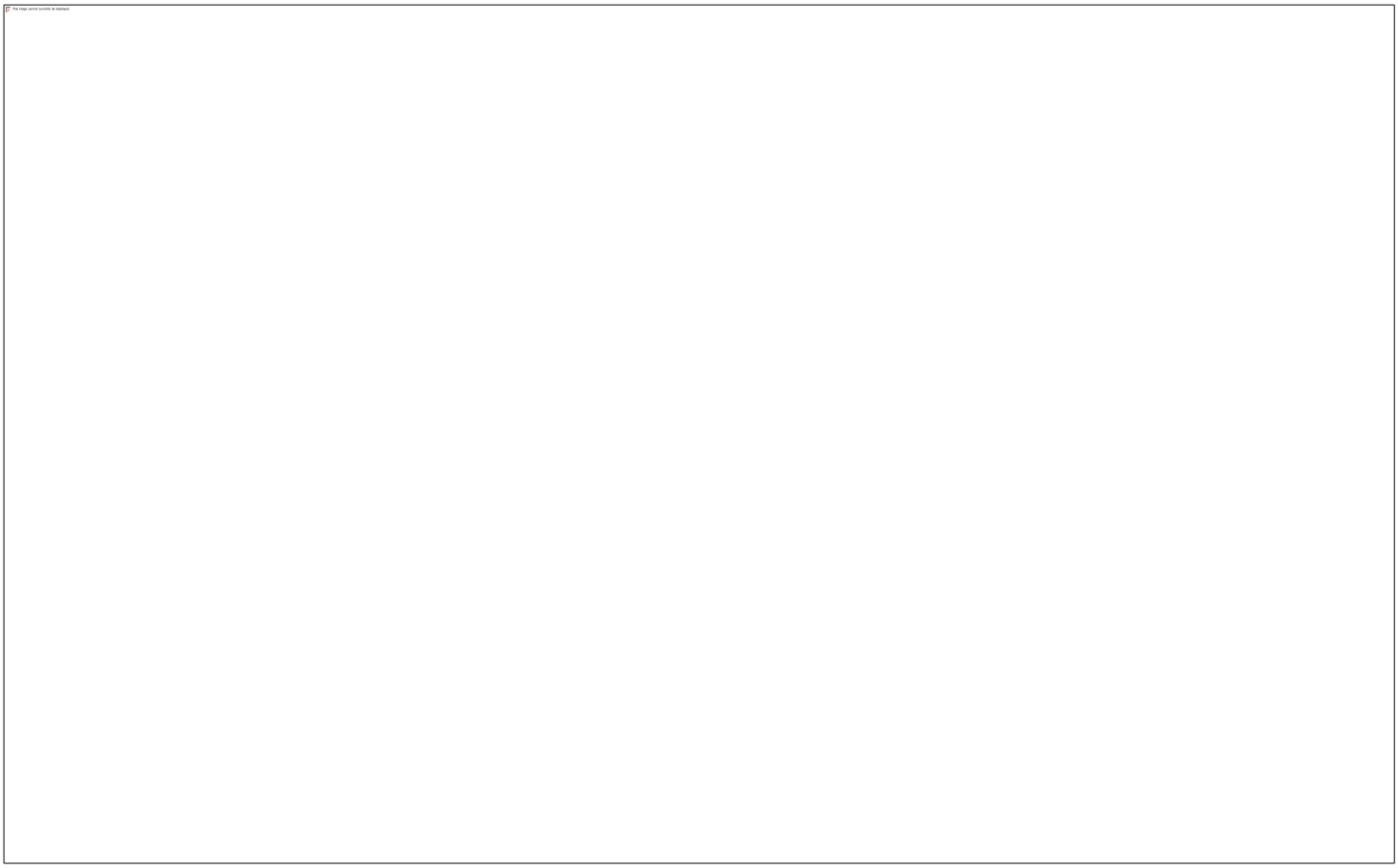
This involves combining three colours that are evenly spaced on the colour wheel.

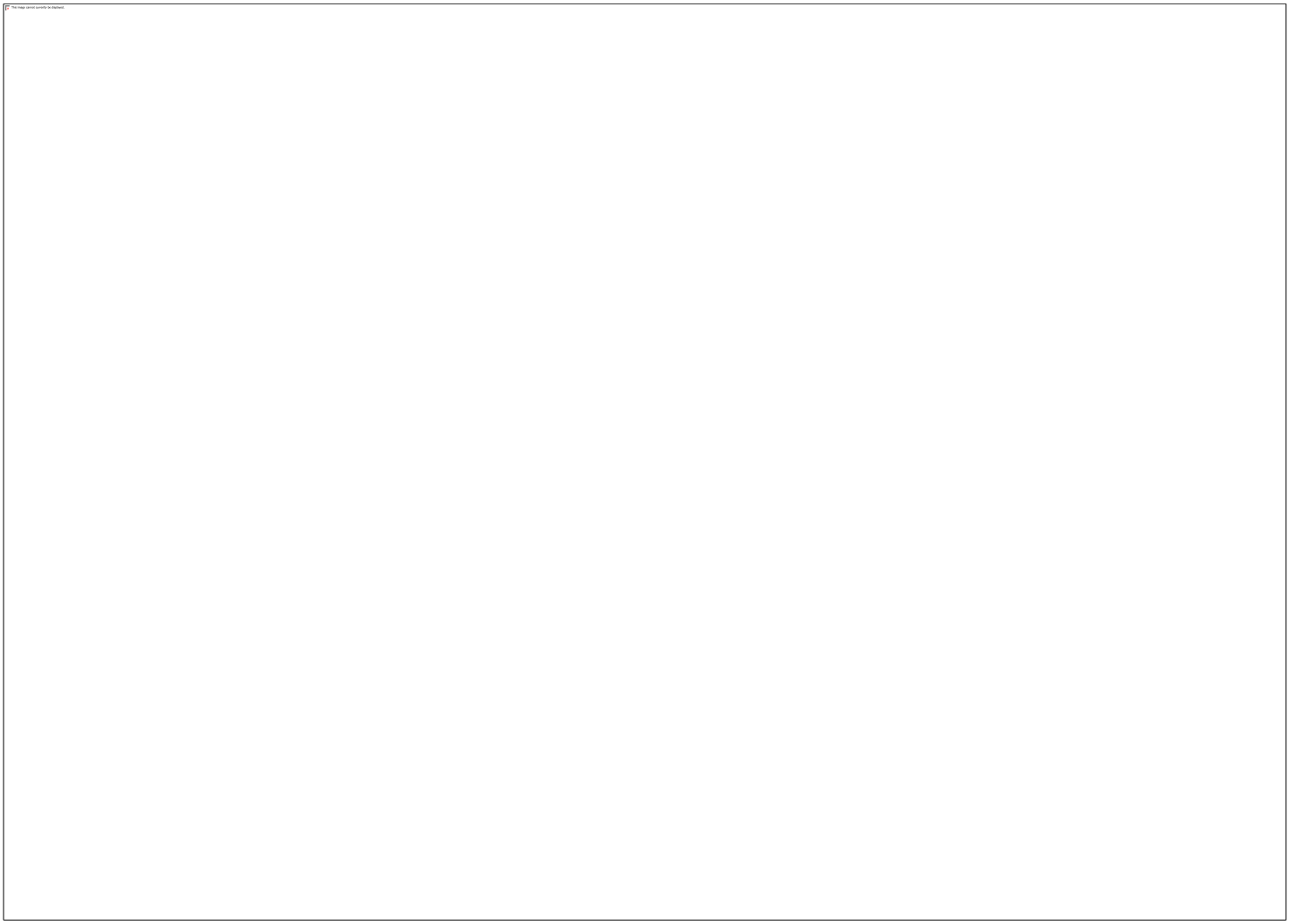
Example: Red, yellow and blue.

5. Neutral colour scheme

This involves using neutral colours such as black, white, grey and brown.

5.4 Patterns used in beadwork





1. Geometric patterns

These are designs formed using geometric shapes such as triangles, squares, circles, diamonds and rectangles.

2. Repetitive patterns

These involve repeating the same colour, shape or arrangement several times.

3. Alternating patterns

These involve arranging two or more different colours or shapes in a regular sequence.

Example: Red, white, red, white.

4. Symmetrical patterns

These are patterns in which both sides of a design have similar or corresponding arrangements.

5. Asymmetrical patterns

These are designs in which the two sides are not identical but still achieve visual balance.

6. Radial patterns

These are designs in which elements spread from a central point.

7. Zigzag patterns

These are formed by arranging beads in a continuous series of angled lines.

5.5 Principles of design applied in beadwork

1. **Balance:** Distribution of colours, shapes and sizes to create visual stability.
2. **Rhythm:** Repetition of colours and shapes to guide the viewer's eye.
3. **Proportion:** Relationship between the sizes of different parts of jewellery.
4. **Unity:** Arrangement of design elements so that they work together as one complete composition.
5. **Emphasis:** Creating a focal point that attracts attention, such as a large central pendant.
6. **Contrast:** Combining different colours, shapes, sizes or textures to create visual interest.
7. **Variety:** Using different elements to avoid monotony.
8. **Harmony:** Selecting elements that complement one another.
9. **Movement:** Arranging design elements to guide the eye around the jewellery.
10. **Repetition:** Reusing shapes, colours or motifs to create consistency.

6.0 TECHNIQUES USED IN BEADWORK

6.1 Stringing technique

Stringing is a beadwork technique in which beads are passed through a thread, cord, wire or fishing line to produce jewellery.



Procedure:

1. Select suitable beads.
2. Choose a thread or cord that can pass through the bead holes.
3. Measure the required length.
4. Cut the thread slightly longer than the required length.
5. Attach a temporary stopper or prepare one end.
6. Thread the beads according to the planned pattern.
7. Check the arrangement.
8. Attach a clasp or tie a secure knot.
9. Trim excess thread.
10. Test the strength of the finished jewellery.

Applications: Necklaces, bracelets, waist beads and anklets.

6.2 Weaving technique

Weaving involves interlacing threads, wires or cords to hold beads together in a structured arrangement.

Applications include:

- Broad beaded collars.
- Beaded belts.
- Decorative panels.
- Bracelets.

6.3 Stitching technique

Stitching involves attaching beads to fabric, leather or another flexible base using a needle and thread.

Applications include:

- Decorating handbags.
- Decorating clothing.
- Producing beaded patches.
- Decorating leather accessories.

6.4 Knotting technique

Knotting involves tying knots between beads or at selected intervals along the thread.

Importance:

- Prevents beads from rubbing against one another.
- Reduces the risk of losing all beads if the thread breaks.
- Improves the appearance of jewellery.
- Helps control spacing.

6.5 Wire-wrapping technique

This involves using jewellery wire to wrap, connect or hold beads in position.

It is used when producing:

- Pendants.
- Earrings.
- Rings.
- Decorative necklaces.

6.6 Bead embroidery

Bead embroidery involves sewing beads onto a fabric or leather surface to create decorative patterns.

It can be used to decorate:

- Traditional clothing.
- Leather pouches.
- Bags.
- Headgear.
- Wall hangings.

7.0 DESIGNING AND MAKING A BEADED JEWELLERY SET

7.1 Meaning of a jewellery set

A jewellery set is a collection of two or more complementary jewellery items designed to be worn together.

Examples include:

- Necklace and bracelet.
- Necklace, earrings and bracelet.
- Headband, necklace and bracelet.
- Anklet and bracelet.

A jewellery set should have a consistent design theme, colour scheme, pattern and general appearance.

7.2 Factors to consider when designing a beaded jewellery set

1. **Purpose:** Determine whether the jewellery is for everyday wear, cultural celebrations, performances or special occasions.
2. **Target wearer:** Consider the age, comfort and preferences of the intended wearer.
3. **Materials:** Select suitable beads, threads, cords and fasteners.
4. **Colour:** Choose harmonious and appropriate colour combinations.
5. **Pattern:** Plan the arrangement of beads.
6. **Size:** Ensure that the items fit comfortably.
7. **Durability:** Use strong threads and secure fasteners.
8. **Safety:** Avoid sharp edges, toxic finishes and small loose components that may be swallowed by young children.
9. **Cultural relevance:** Respect the cultural inspiration and avoid misrepresenting sacred or restricted designs.

10. **Cost:** Work within the available budget.
11. **Originality:** Develop a creative design rather than simply copying another artist's work.
12. **Unity:** Ensure that all items in the set have related visual features.

7.3 Stages in designing a jewellery set

Stage 1: Research and inspiration

- Study traditional and contemporary jewellery.
- Examine samples and photographs.
- Identify the materials and techniques used.
- Research the cultural meaning of selected designs.

Stage 2: Idea development

- Brainstorm possible jewellery designs.
- Identify suitable shapes and patterns.
- Explore different colour combinations.
- Sketch alternative designs.

Stage 3: Selection of design

- Select the most appropriate design.
- Consider the available materials and tools.
- Ensure that the design can be produced safely.

Stage 4: Preparation of materials

- Collect the beads and threads.
- Sort the beads by size, colour and shape.
- Measure and cut the thread.
- Prepare the clasps and other accessories.

Stage 5: Production

- Arrange the beads.
- Apply the selected stringing or weaving technique.
- Make the necklace, bracelet or other selected items.
- Ensure that the design remains consistent.

Stage 6: Finishing

- Secure the ends.
- Attach the fasteners.
- Remove excess thread.
- Clean the jewellery.
- Check the quality of the finished products.

Stage 7: Evaluation

- Examine the appearance and strength.
- Check the accuracy of the pattern.
- Seek feedback from peers.
- Make necessary improvements.

7.4 Practical activity: Making a beaded necklace and bracelet set



Materials

- Assorted coloured beads.
- Nylon thread or jewellery cord.

- Clasps.
- Scissors.
- Measuring tape.
- Beading tray.

Procedure

1. Study examples of African indigenous necklaces and bracelets.
2. Identify a design that can inspire an original jewellery set.
3. Sketch the necklace and matching bracelet.
4. Select a colour scheme.
5. Sort the beads according to size, colour and shape.
6. Measure the required length of the necklace.
7. Cut a suitable length of nylon thread.
8. Arrange the beads in the planned sequence.
9. String the beads carefully.
10. Attach a suitable clasp or secure the ends.
11. Repeat the process to produce the matching bracelet.
12. Inspect both items for consistency.
13. Clean and finish the jewellery.
14. Display the completed set.
15. Appraise the finished work.

Expected outcome: A well-designed, durable and attractive matching necklace and bracelet set inspired by indigenous African beadwork.

8.0 LEATHERWORK AND THONGING TECHNIQUE

8.1 Meaning and characteristics of leather

Leather is a durable material obtained by processing animal hides or skins to make them suitable for producing functional and decorative products.

Common sources include cattle, goats and sheep.

Leather is used in:

- Footwear.
- Bags.
- Wallets.
- Belts.
- Pouches.
- Key holders.
- Jewellery.
- Decorative accessories.

8.2 Types of leather

1. Full-grain leather

- Made from the outer layer of animal hide.
- Retains its natural surface grain.
- Is generally strong and durable.
- Used in high-quality leather products.

2. Top-grain leather

- Made from the upper layer of the hide.
- Its surface may be sanded or treated.
- Has a relatively smooth appearance.
- Used in bags, wallets and other accessories.

3. Split leather

- Obtained from the lower layers of the hide after separating the upper grain.
- May be treated or coated.
- Used in various leather products.

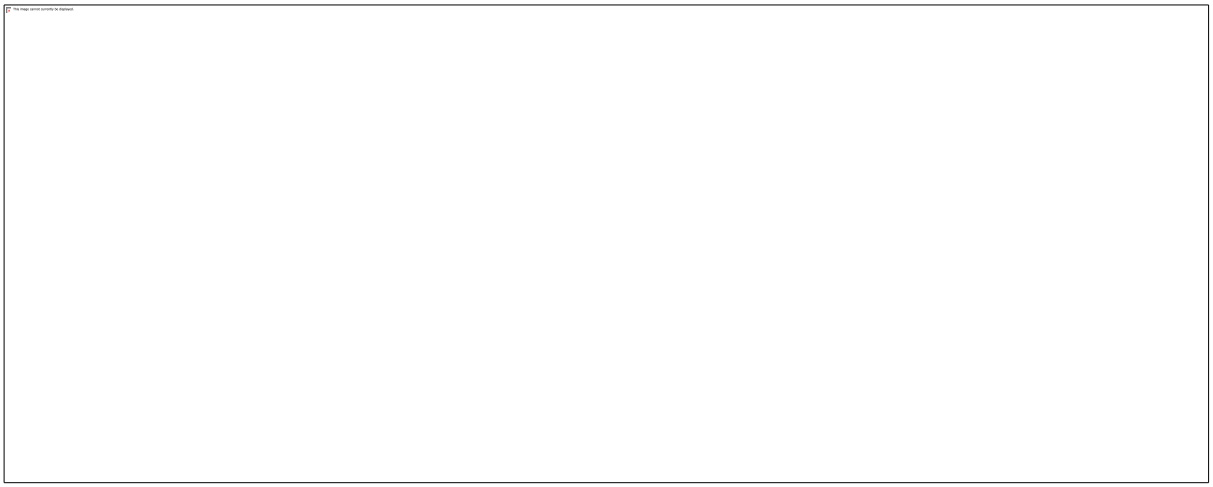
4. Suede

- Has a soft, velvety surface.
- Commonly used for clothing, accessories and footwear.

5. Bonded leather

- Made from processed leather fibres combined with binding materials.
- Used in some decorative and manufactured products.

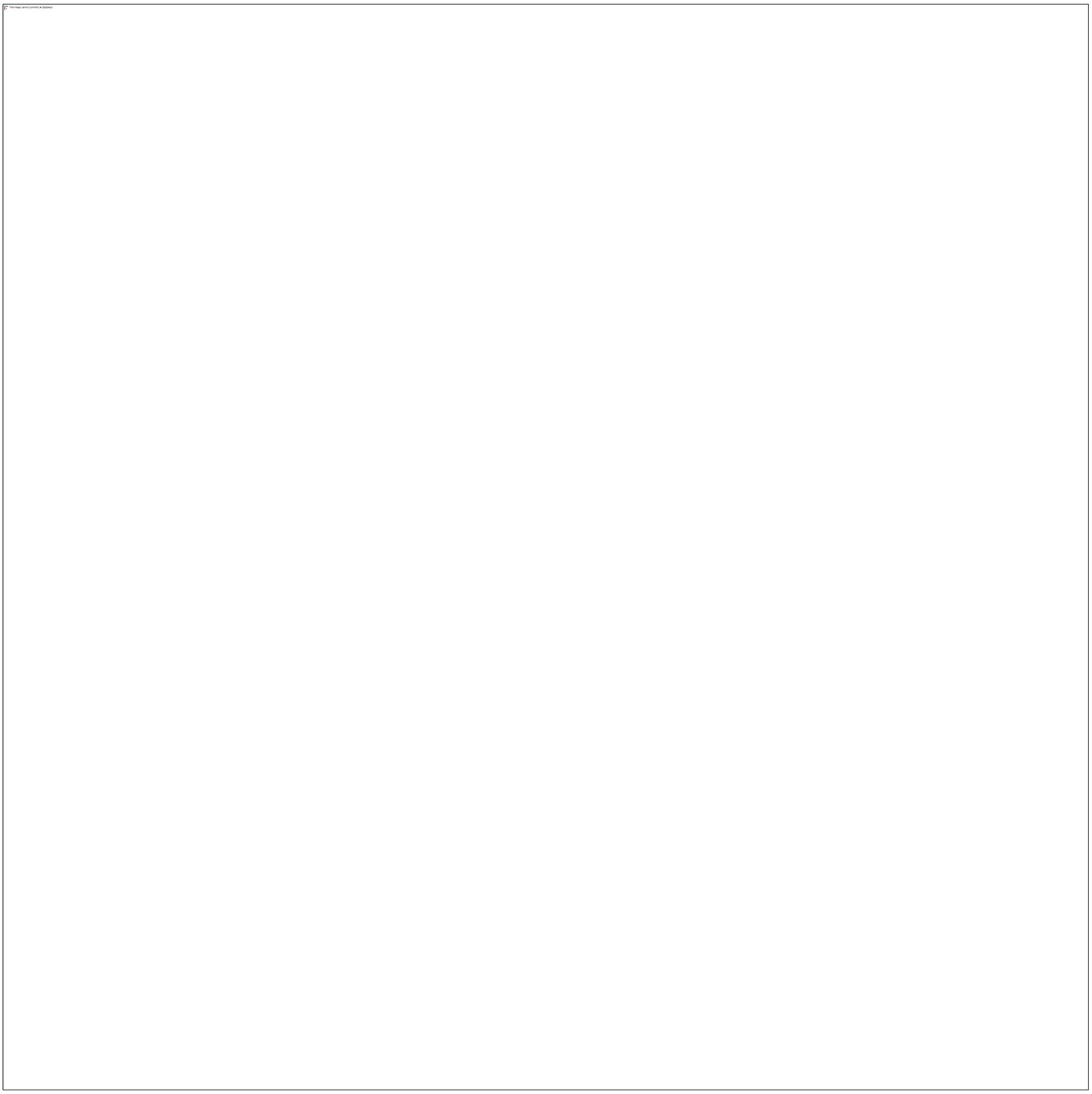
8.3 Materials used in leatherwork



1. Leather pieces: Main material for making leather products.
2. Leather thongs: Narrow strips used for joining and decorating leather.
3. Leather thread: Used for stitching.
4. Adhesives: Used to hold leather parts temporarily or permanently where appropriate.

5. Metal studs: Used for decorative and joining purposes.
6. Rivets: Used to secure leather pieces.
7. Buttons and snaps: Used as fasteners.
8. Dye: Used to colour leather.
9. Leather conditioner: Helps maintain the quality of suitable leather.
10. Decorative beads: Used to embellish leather items.

8.4 Tools and equipment used in leatherwork



Tool	Function

Craft knife	Cutting leather
Scissors	Cutting thin leather and thongs
Steel ruler	Measuring and guiding cuts
Cutting mat	Protecting the working surface
Hole punch	Making holes in leather
Awl	Piercing and enlarging holes
Mallet	Striking punches safely
Needles	Stitching leather
Pliers	Holding and pulling thongs
Edge beveler	Smoothing leather edges
Sandpaper	Smoothing rough surfaces
Burnishing tool	Polishing leather edges
Measuring tape	Measuring leather pieces
Groover	Making a channel for stitching
Paintbrush	Applying dyes and finishes

8.5 Meaning of thonging in leatherwork

Thonging is a technique used to join or decorate leather pieces by passing a narrow strip of leather through a series of prepared holes along the edges of the leather.

The thong may be made from leather or another suitable flexible material.

It produces both a functional and decorative effect.

8.6 Uses of thonging

- Joining the edges of leather pouches.
- Securing leather wallet sections.
- Decorating handbags.
- Making leather key holders.
- Joining leather covers.
- Decorating belts.

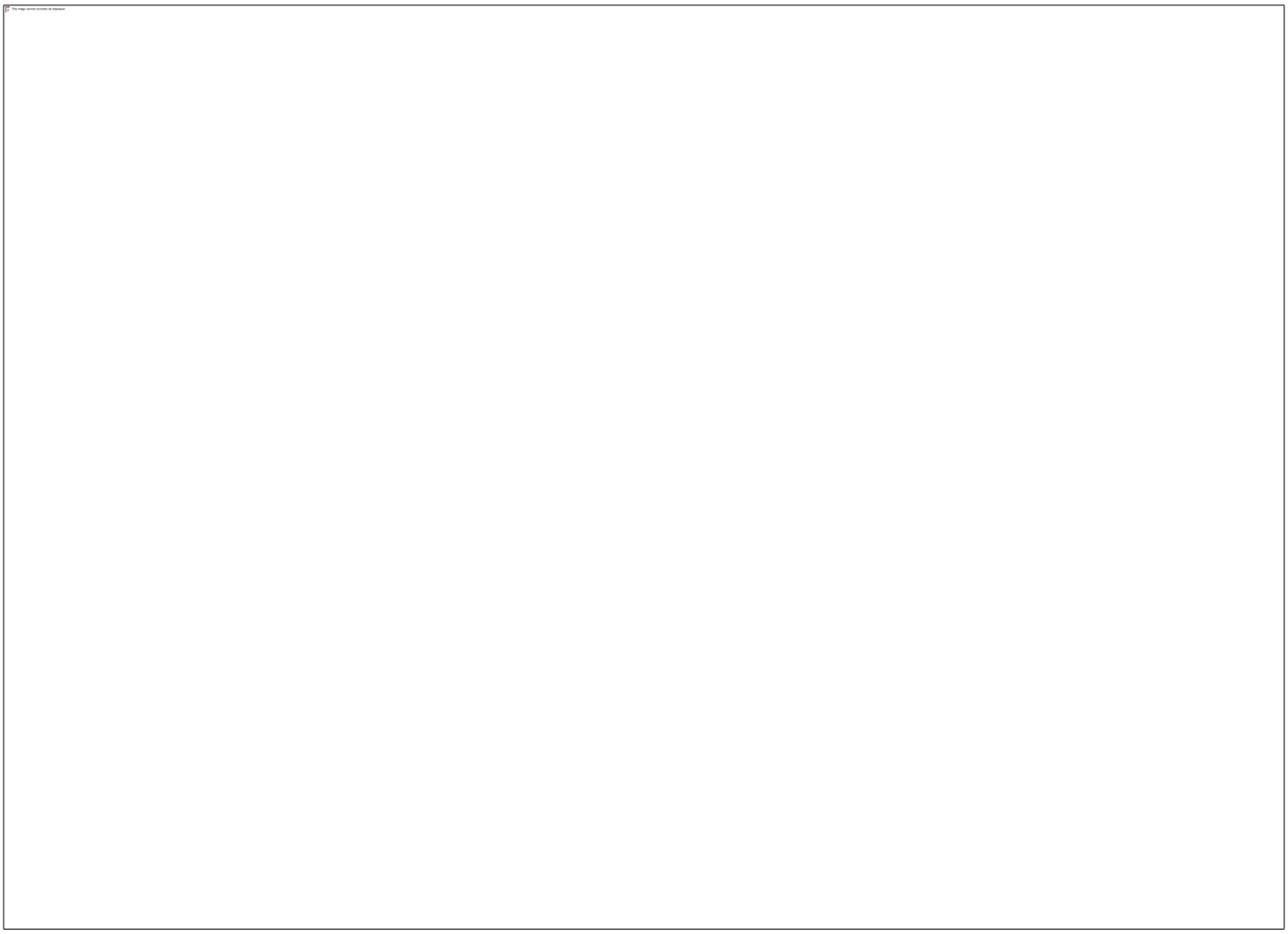
- Producing leather bracelets.
- Creating decorative borders.
- Reinforcing leather joints.

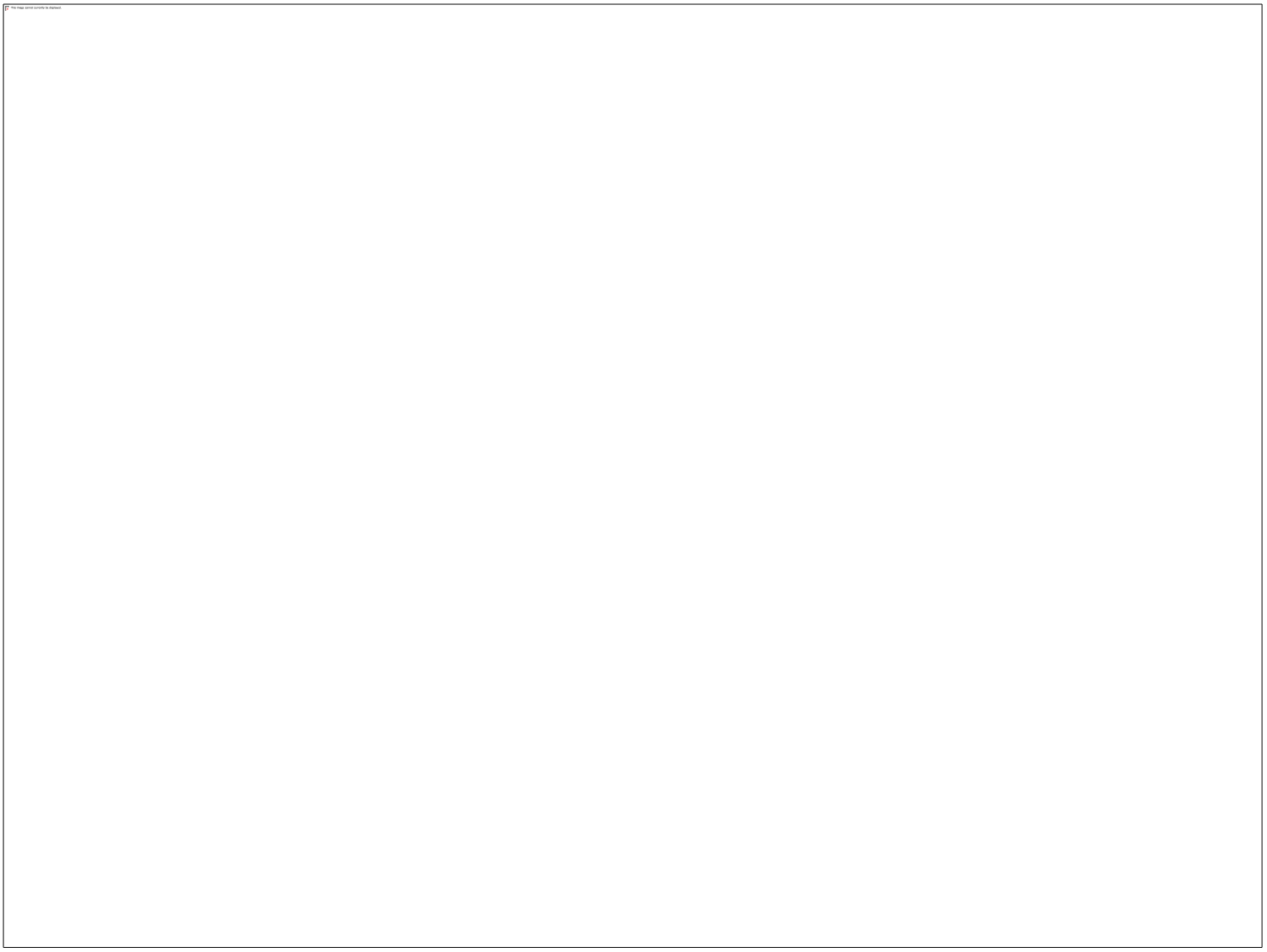
8.7 Characteristics of a good thong

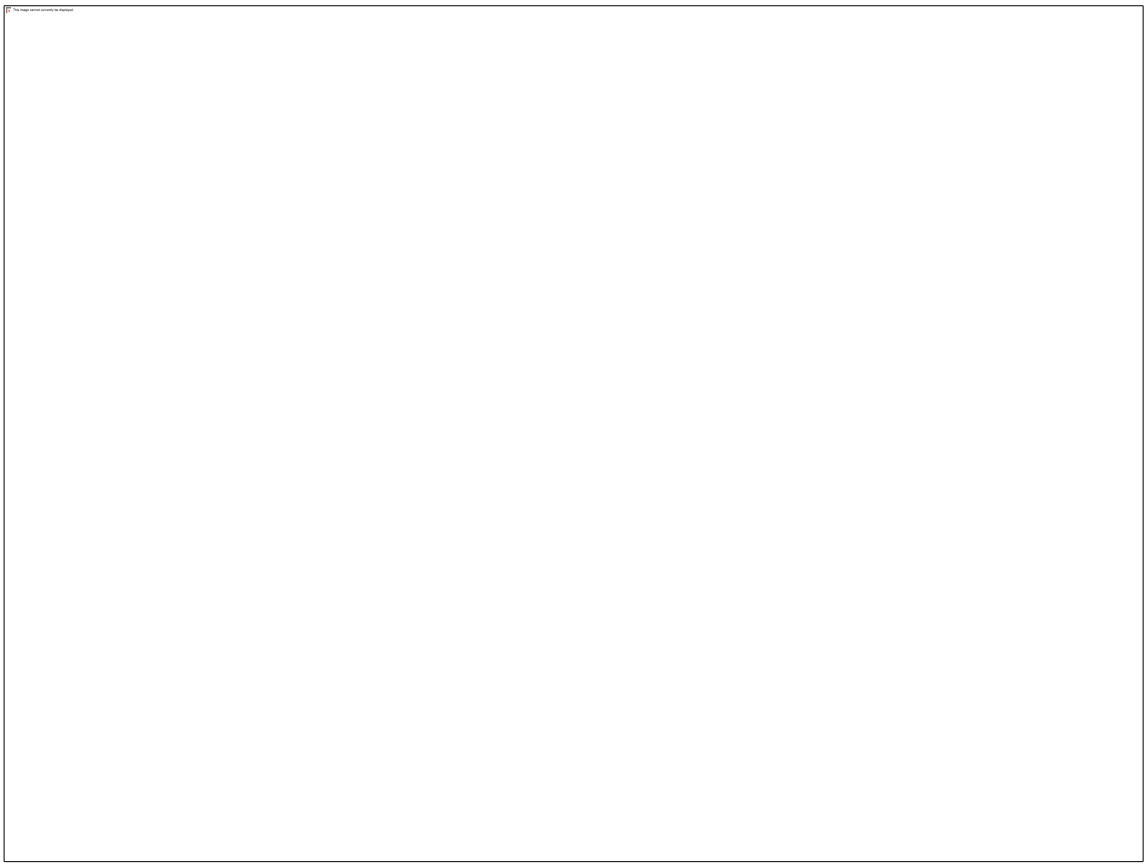
A suitable thong should have the following qualities:

1. It should be strong enough to withstand pulling.
2. It should be flexible enough to pass through holes.
3. It should have a reasonably uniform width.
4. It should not tear easily.
5. It should have smooth edges.
6. It should be long enough to complete the intended pattern.
7. Its colour should complement the leather.
8. It should be compatible with the thickness of the leather.

8.8 Types of thonging patterns







1. Single-loop thonging

- A thong is passed through successive holes along the edge.
- Each loop is formed in a regular sequence.
- It produces a simple decorative border.
- It is suitable for basic leather items.

2. Whipstitch thonging

- The thong is passed around the leather edge through successive holes.
- It produces a rope-like appearance along the edge.
- It is commonly used for joining leather edges.

3. Cross-lacing thonging

- The thong is passed through opposite holes to create crossing lines.
- It produces an attractive X-shaped pattern.
- It is used for decorative and joining purposes.

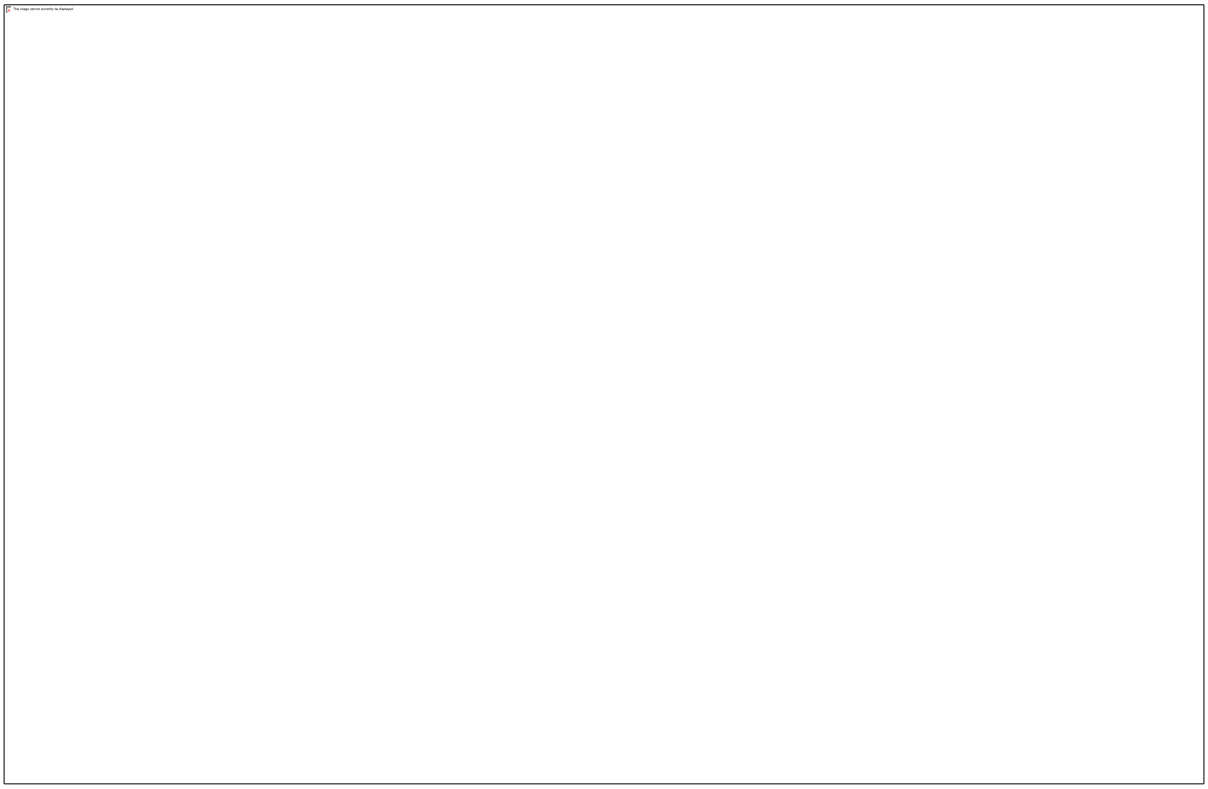
4. Double-loop thonging

- The thong is passed through holes in a sequence that produces two visible loops or a fuller border.
- It creates a more elaborate decorative effect.

5. Straight-lacing technique

- The thong is passed through holes in a regular straight arrangement.
- It creates a neat linear pattern.
- It is suitable for simple decorative borders.

8.9 General procedure for applying thonging



1. **Prepare the leather:** Select leather pieces of appropriate thickness and quality.
2. **Design the item:** Draw the shape and dimensions of the product.
3. **Cut the leather:** Use suitable cutting tools to produce the required pieces.
4. **Align the pieces:** Place the leather edges together in the correct position.
5. **Mark the holes:** Measure and mark evenly spaced points along the edges.
6. **Punch the holes:** Use a suitable leather hole punch to make clean holes.
7. **Prepare the thong:** Cut a thong of sufficient length and smooth any rough edges.
8. **Start the thonging:** Pass the thong through the first hole and secure the starting end.
9. **Apply the pattern:** Follow the selected thonging method consistently.
10. **Maintain tension:** Pull the thong firmly but avoid excessive tension that may damage the leather.
11. **Complete the edge:** Continue until all the required holes have been covered.
12. **Secure the end:** Tie, tuck or secure the thong using an appropriate method.
13. **Trim excess material:** Remove excess thong neatly.
14. **Finish the product:** Smooth the edges and apply an appropriate leather finish.
15. **Inspect the work:** Check the strength, appearance and neatness of the thonging.

8.10 Factors to consider when applying thonging

- Thickness of the leather.
- Width of the thong.
- Distance between holes.
- Size of the punched holes.
- Strength of the thong.
- Colour combination.
- Type of thonging pattern.
- Tension applied during lacing.
- Purpose of the finished product.
- Quality of the finishing.

8.11 Common mistakes in thonging and how to correct them

Mistake	Correction
Unevenly spaced holes	Measure and mark holes before punching
Holes too large	Use an appropriately sized punch
Thong too short	Estimate the required length and allow extra
Loose thonging	Maintain even tension

Excessively tight thonging	Pull gently to avoid tearing
Irregular patterns	Follow a planned lacing sequence
Rough leather edges	Smooth and finish edges before lacing
Untidy ends	Secure and trim the ends neatly

9.0 MAKING AN ORNAMENTED LEATHER ITEM

9.1 Meaning of an ornamented leather item

An ornamented leather item is a functional or decorative object made from leather and enhanced with additional decorative elements, patterns, textures or finishing techniques.

Examples include:

- Leather pouch.
- Wallet.
- Pen holder.
- Key holder.
- Bracelet.
- Small handbag.
- Card holder.
- Phone pouch.

9.2 Practical project: Making a leather pen holder using thonging



A. Materials required

- Suitable leather pieces.

- Leather thong.
- Button or snap fastener.
- Leather dye, if needed.
- Suitable leather finish.
- Decorative beads or other embellishments.

B. Tools required

- Ruler.
- Pencil or marking tool.
- Craft knife.
- Cutting mat.
- Hole punch.
- Mallet.
- Scissors.
- Awl.
- Pliers.
- Sandpaper.

C. Procedure

1. Study examples of leather pen holders.
2. Identify the purpose and desired dimensions.
3. Sketch the design.
4. Select suitable leather.
5. Measure and mark the leather.
6. Cut the leather into the required pieces.
7. Shape the body and flap.
8. Smooth the cut edges.
9. Align the leather pieces.
10. Mark evenly spaced holes along the edges.
11. Punch the holes.
12. Cut a suitable length of leather thong.
13. Apply the selected thonging pattern.
14. Maintain consistent tension throughout.
15. Secure the thong at the end.
16. Attach the fastener.
17. Decorate the surface using beads, embossing or other suitable methods.
18. Apply an appropriate finishing treatment.

19. Allow the item to dry.
20. Test whether the pen holder can securely hold writing materials.

D. Qualities of a well-made leather pen holder

- Correct dimensions.
- Neat cutting.
- Strong joints.
- Even thonging.
- Attractive decoration.
- Smooth edges.
- Properly fitted fastener.
- Durable construction.
- Functional design.
- Clean finishing.

9.3 Practical project: Making a leather pouch



Procedure

1. Select a suitable pouch design.

2. Draw a template showing the required dimensions.
3. Place the template on the leather.
4. Trace the outline.
5. Cut out the leather pieces.
6. Smooth the edges.
7. Fold the leather where necessary.
8. Mark the joining holes.
9. Punch the holes.
10. Apply thonging to join the edges.
11. Secure the thong ends.
12. Attach a suitable closure.
13. Decorate the surface.
14. Apply an appropriate finish.
15. Inspect the pouch for strength and neatness.

9.4 Methods of decorating leather items

1. Embossing

Embossing involves creating raised designs on a leather surface using appropriate tools and pressure.

2. Carving

Carving involves cutting or incising patterns into the leather surface using suitable tools.

3. Stamping

Stamping involves pressing patterned tools onto leather to produce decorative impressions.

4. Dyeing

Dyeing involves applying colour to leather using suitable dyes.

5. Bead decoration

This involves attaching beads to leather surfaces using stitching or other suitable joining methods.

6. Thonging

Thonging creates attractive patterns while joining or reinforcing leather edges.

7. Appliqué

Appliqué involves attaching shaped pieces of leather or another suitable material onto the surface of a leather item.

8. Painting

Painting involves applying suitable colours and designs to leather surfaces.

9. Stitching

Decorative stitching involves arranging threads in patterns to enhance the appearance of leather products.

9.5 Finishing techniques in leatherwork

1. **Edge smoothing:** Removes roughness along cut edges.
2. **Burnishing:** Rubbing suitable leather edges to create a smooth finish.
3. **Dyeing:** Gives leather a uniform or decorative colour.
4. **Conditioning:** Helps maintain flexibility and reduce drying in suitable leather.
5. **Polishing:** Improves the surface appearance.
6. **Sealing:** Protects the surface using a suitable finishing product.
7. **Trimming:** Removes unwanted excess material.
8. **Cleaning:** Removes dirt and unwanted marks.

10.0 SAFETY, HYGIENE AND ENVIRONMENTAL CONSERVATION

10.1 Safety precautions during beadwork

- Handle scissors and needles carefully.
- Store small beads in closed containers.
- Do not put beads in the mouth.
- Avoid using toxic paints and adhesives.
- Work in a well-ventilated room when applying finishes.
- Wear protective equipment when drilling or sanding.
- Keep the working area clean.
- Collect sharp waste materials safely.
- Use teacher-approved tools.
- Wash hands after handling materials.

10.2 Safety precautions during leatherwork

- Use cutting tools on suitable cutting mats.
- Cut away from the body.
- Keep fingers away from sharp blades.
- Handle hole punches and awls carefully.
- Use a mallet rather than an unsuitable hammer when required.
- Wear protective goggles when necessary.
- Avoid inhaling leather dust.
- Keep dyes and adhesives away from the eyes and skin.
- Store sharp tools safely.
- Maintain good ventilation.

10.3 Hygiene practices

- Wash hands before and after practical activities.
- Use clean materials.

- Avoid materials contaminated by chemicals or biological waste.
- Clean tools after use.
- Keep food away from the working area.
- Store finished jewellery in clean containers.
- Dispose of waste appropriately.

10.4 Environmental conservation through beadwork

Recycling supports environmental conservation in several ways.

1. Reduces waste sent to dumpsites.
2. Encourages reuse of discarded materials.
3. Reduces demand for newly manufactured materials.
4. Promotes responsible consumption.
5. Encourages environmental awareness.
6. Provides opportunities for creative reuse.
7. Supports sustainable craft production.
8. Can generate income from waste materials.

10.5 Responsible sourcing of indigenous craft materials

- Collect natural materials without damaging ecosystems.
- Avoid harvesting protected species.
- Do not use illegally obtained wildlife products.
- Use sustainably sourced leather.
- Prefer clean and safe recyclable materials.
- Respect community ownership of cultural designs.
- Seek guidance when using culturally restricted motifs.

11.0 APPRAISAL OF JEWELLERY AND ORNAMENTED FORMS

11.1 Meaning of appraisal

Appraisal is the process of examining and judging the quality, effectiveness, appearance and functionality of an artwork or craft product using established criteria.

In beadwork and leatherwork, appraisal helps learners identify strengths, weaknesses and areas requiring improvement.

11.2 Criteria for appraising beaded jewellery

1. Creativity

- Does the design demonstrate originality?
- Has the learner experimented with materials and patterns?

2. Colour arrangement

- Are the colours harmonious?
- Is there an effective use of contrast?

3. Pattern

- Is the pattern clear?
- Is the arrangement consistent?

4. Craftsmanship

- Are the beads securely attached?
- Are the knots and joints neat?

5. Functionality

- Is the jewellery comfortable to wear?
- Does the fastening work properly?

6. Durability

- Can the jewellery withstand normal use?
- Are the threads and fasteners strong?

7. Finishing

- Are the beads smooth?
- Is the surface clean and well finished?

8. Cultural relevance

- Does the work demonstrate an understanding of its cultural inspiration?
- Has the learner respected the source of the design?

11.3 Criteria for appraising leather items

- Accuracy of measurements.
- Quality of leather selection.
- Neatness of cutting.
- Accuracy of hole spacing.
- Quality of thonging.
- Strength of joints.
- Neatness of decoration.
- Quality of finishing.
- Durability.
- Functionality.
- Originality.

11.4 Steps in conducting an appraisal session

1. Display the completed jewellery and leather products.
2. Allow learners to observe the different products.
3. Explain the criteria for appraisal.

4. Ask each learner to describe their own work.
5. Invite peers to provide constructive feedback.
6. Identify strengths of each product.
7. Identify areas that need improvement.
8. Encourage respectful discussion.
9. Suggest possible improvements.
10. Record feedback for future reference.

11.5 Giving constructive feedback

Constructive feedback is information provided to help an artist improve their work without discouraging or humiliating them.

Examples:

- "The colour arrangement is attractive, but the clasp could be secured more firmly."
- "Your necklace demonstrates a good understanding of repetition. You could improve it by using more consistent bead sizes."
- "The thonging is creative, but some holes are unevenly spaced."
- "Your pouch is functional, although the edges require additional finishing."

Learners should avoid insulting language and unfair comparisons.

12.0 CARE AND MAINTENANCE OF JEWELLERY AND LEATHER ITEMS

12.1 Caring for beaded jewellery

- Store jewellery in clean, dry containers.
- Avoid exposing paper beads to water.
- Keep jewellery away from harsh chemicals.
- Untangle necklaces carefully.
- Avoid pulling threads excessively.
- Repair loose beads promptly.
- Clean using a method appropriate to the materials.
- Store different jewellery items separately to prevent scratching.

12.2 Caring for leather items

- Keep leather away from excessive moisture.
- Clean using suitable leather-cleaning products.
- Avoid prolonged exposure to direct sunlight.
- Store leather items in a dry, ventilated place.
- Apply appropriate leather conditioner when necessary.
- Repair loose thonging before the joint becomes damaged.
- Avoid folding leather unnecessarily.
- Keep leather away from harsh chemicals.

13.0 ENTREPRENEURSHIP AND CAREER OPPORTUNITIES IN JEWELLERY AND ORNAMENTATION

13.1 Economic importance of beadwork and leatherwork

1. **Employment creation:** Learners can establish small craft businesses.
2. **Income generation:** Handmade jewellery can be sold to customers.
3. **Tourism:** Indigenous jewellery attracts cultural tourists.
4. **Cultural preservation:** Craft businesses help sustain traditional skills.
5. **Innovation:** Recycled materials encourage new product designs.
6. **Export opportunities:** Quality handmade products may reach international markets.
7. **Community development:** Craft production can support community-based enterprises.

13.2 Possible career opportunities

- Jewellery designer.
- Beadwork artist.
- Leatherworker.
- Fashion accessories designer.
- Craft entrepreneur.
- Jewellery retailer.
- Costume designer.
- Product designer.
- Cultural heritage artist.
- Art instructor.
- Craft workshop facilitator.

13.3 Starting a small jewellery enterprise in Kenya

A learner interested in entrepreneurship can:

1. Identify a market for handmade jewellery.
2. Research customer preferences.
3. Develop unique designs.
4. Identify affordable and safe materials.
5. Estimate production costs.
6. Determine suitable selling prices.
7. Produce samples.
8. Package the products attractively.
9. Advertise through exhibitions, markets and digital platforms.
10. Maintain good customer relationships.

13.4 Factors to consider when pricing handmade jewellery

- Cost of materials.

- Labour and production time.
- Packaging.
- Transport.
- Tools and equipment.
- Quality of craftsmanship.
- Market demand.
- Desired profit.

A simple pricing formula is:

Selling Price=Total Production Cost+ProfitSelling Price=Total Production Cost+Profit

Example:

A learner makes a bracelet with the following costs:

Item	**Cost (KSh)**
Beads	80
Thread	20
Clasp	30
Labour	50
Packaging	20
Total cost	200

If the learner wishes to make a profit of KSh 100:

Selling price = 200 + 100 = **KSh 300**.

14.0 COMPETENCY-BASED EDUCATION (CBE) INTEGRATION

14.1 Specific learning outcomes

By the end of the sub-strand, the learner should be able to:

a) Analyse the concept of beadwork in jewellery and ornamentation.

The learner should:

- Explain the meaning of beadwork.
- Identify traditional beadwork materials.
- Analyse indigenous African jewellery samples.
- Describe patterns, colours and techniques.
- Explain the cultural significance of beadwork.

b) Make a beaded jewellery set for ornamentation.

The learner should:

- Select appropriate materials.
- Develop an original jewellery design.
- Make beads from recyclable materials.
- Apply suitable finishing techniques.
- Use appropriate stringing techniques.
- Produce a matching jewellery set.

c) Make a decorated leather item using thonging technique.

The learner should:

- Identify leatherwork materials and tools.
- Prepare leather pieces.
- Mark and punch holes.
- Apply the thonging technique.
- Decorate and finish a leather product.

d) Appraise own and peers' jewellery and ornamented forms.

The learner should:

- Identify appraisal criteria.
- Examine the quality of finished products.
- Give constructive feedback.
- Accept opinions from peers.
- Suggest improvements.

TOPICAL REVISION QUESTIONS

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer ALL the questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. What is beadwork?

A. The process of carving wooden objects.

B. The process of arranging and joining beads to create decorative objects.

C. The process of painting pictures on walls.

D. The process of weaving baskets using reeds.

2. Which of the following communities in Kenya is particularly recognised for its colourful traditional beadwork?

A. Maasai

B. Mijikenda

C. Abagusii

D. Taita

3. Which of the following is a natural material suitable for making beads?

A. Polythene paper

B. Synthetic rubber

C. Seeds

D. Aluminium foil

4. What is the main purpose of varnishing handmade paper beads?

A. To increase their weight.

B. To protect their surfaces and improve their appearance.

C. To make them absorb moisture.

D. To change their original shapes.

5. Which tool is most suitable for cutting paper strips when making paper beads?

A. Mallet

B. Pliers

C. Scissors

D. Awl

6. Which of the following materials is most suitable for stringing small beads?

A. Nylon thread

B. Thick cardboard

C. Clay

D. Sandpaper

7. A learner wants to make beads from old magazines. Which technique should the learner primarily use?

A. Carving

B. Rolling

C. Embossing

D. Weaving

8. Which design principle is achieved when both sides of a necklace have corresponding arrangements of beads?

A. Contrast

B. Emphasis

C. Symmetry

D. Variety

9. Which colour combination represents complementary colours?

A. Red and green

B. Blue and green

C. Yellow and orange

D. Black and white

10. What is the primary function of a clasp in jewellery making?

A. To decorate the beads.

B. To increase the size of beads.

C. To join and fasten the ends of jewellery.

D. To colour the thread.

11. Which of the following is an example of a jewellery set?

A. A wooden chair and table.

B. A necklace, bracelet and matching earrings.

C. A leather belt and school bag.

D. A painting and sculpture.

12. Which technique involves passing beads through a thread or cord to produce jewellery?

A. Carving B. Stringing

C. Embossing D. Casting

13. Which of the following is an important cultural function of indigenous jewellery?

A. Replacing traditional clothing.

B. Communicating cultural identity and social information.

C. Preventing environmental conservation.

D. Eliminating artistic creativity.

14. Which material is most suitable for producing cylindrical paper beads?

A. Rolled rectangular paper strips

B. Large stones

C. Thick leather sheets

D. Metal rods

15. What is the meaning of thonging in leatherwork?

A. Painting leather surfaces using dyes.

B. Passing narrow strips through holes along leather edges to join or decorate them.

C. Cutting leather into circular shapes.

D. Heating leather to make it soft.

16. Which tool is primarily used to make holes along leather edges for thonging?

A. Paintbrush

B. Hole punch

C. Ruler

D. Sandpaper

17. Which material is used to join leather pieces using the thonging technique?

A. Leather thong

B. Watercolour paint

C. Paper strip

D. Clay

18. What is the purpose of maintaining even tension when applying thonging?

A. To make the leather heavier.

B. To prevent the leather from changing colour.

C. To produce neat and secure joining.

D. To increase the number of holes.

19. Which thonging pattern produces visible crossing lines resembling the letter X?

A. Straight lacing

B. Cross-lacing

C. Whipstitching

D. Single-loop lacing

20. Which of the following is a suitable product for demonstrating the thonging technique?

A. Glass painting

B. Leather pouch

C. Clay sculpture

D. Paper collage

21. What is the main function of an awl in leatherwork?

A. Applying paint.

B. Piercing or enlarging holes in leather.

C. Polishing beads.

D. Measuring thread.

22. Which leather decoration technique involves creating raised patterns on the leather surface?

A. Embossing

B. Stringing

C. Weaving

D. Rolling

23. Which of the following is an important characteristic of a good leather thong?

A. It should be brittle.

B. It should be extremely short.

C. It should be strong and flexible.

D. It should have rough and sharp edges.

24. A learner produces a leather wallet with uneven holes and loose thonging. Which aspect requires improvement?

A. Colour symbolism

B. Craftsmanship

C. Cultural identity

D. Material collection

25. Why should recyclable materials be cleaned before being used in beadwork?

A. To increase their weight.

B. To improve hygiene and remove contaminants.

C. To make them difficult to shape.

D. To prevent them from being decorated.

26. Which principle of design involves repeating shapes and colours to create visual flow?

A. Rhythm B. Proportion

C. Emphasis D. Scale

27. Which of the following practices demonstrates responsible environmental conservation during jewellery production?

A. Burning all waste materials.

B. Throwing plastics into rivers.

C. Reusing clean waste paper to make beads.

D. Collecting materials from protected wildlife.

28. During an appraisal session, a learner identifies weaknesses in a friend's bracelet and suggests improvements politely. Which value is demonstrated?

A. Dishonesty

B. Respect

C. Discrimination

D. Selfishness

29. Which of the following is a suitable method of maintaining leather products?

A. Soaking them in water regularly.

B. Exposing them continuously to direct sunlight.

C. Cleaning them using suitable leather-care products.

D. Cutting off their decorative edges.

30. Which core competency is most directly developed when learners experiment with different bead arrangements to create original jewellery?

A. Creativity and imagination

B. Memorisation

C. Physical endurance

D. Mechanical repetition.

SECTION B: STRUCTURED QUESTIONS

50 MARKS

Answer ALL questions. Show clear understanding and use appropriate examples where necessary.

QUESTION 1: INDIGENOUS BEADWORK (8 MARKS)

a) Define the term beadwork. (2 marks)

b) Identify four materials used in traditional African beadwork. (4 marks)

c) State two cultural functions of indigenous beadwork among Kenyan communities. (2 marks)

QUESTION 2: MAKING BEADS FROM RECYCLABLE MATERIALS (8 MARKS)

a) Identify four recyclable materials that can be used to produce handmade beads. (4 marks)

b) Describe four steps involved in making beads from waste paper. (4 marks)

QUESTION 3: JEWELLERY DESIGN AND PRODUCTION (8 MARKS)

a) Explain four factors that a learner should consider when designing a beaded jewellery set. (4 marks)

b) Describe four techniques used in beadwork. (4 marks)

QUESTION 4: LEATHERWORK AND THONGING TECHNIQUE (8 MARKS)

a) Define the term thonging as used in leatherwork. (2 marks)

b) Identify three tools used when applying the thonging technique and state one function of each. (3 marks)

c) State three precautions to observe when applying thonging in leatherwork. (3 marks)

QUESTION 5: PRACTICAL PRODUCTION OF ORNAMENTED LEATHER ITEMS (9 MARKS)

A Grade 11 learner intends to produce a decorated leather pouch using the thonging technique.

a) Identify three materials required for the production of the leather pouch. (3 marks)

b) Outline four stages involved in preparing leather pieces before applying thonging. (4 marks)

c) State two ways of decorating the finished leather pouch. (2 marks)

QUESTION 6: APPRAISAL, VALUES AND ENTREPRENEURSHIP (9 MARKS)

a) Explain three criteria that can be used to appraise a finished beaded jewellery set. (3 marks)

b) Explain three ways in which beadwork and leatherwork can contribute to economic development in Kenya. (3 marks)

c) Identify three values learners develop when participating in group appraisal of jewellery and ornamented leather products. (3 marks)

ANSWER KEY: SECTION A

Teacher's reference – Multiple-choice answers

Question	Answer	Question	Answer
1	B	16	B
2	A	17	A
3	C	18	C
4	B	19	B
5	C	20	B
6	A	21	B
7	B	22	A
8	C	23	C
9	A	24	B
10	C	25	B
11	B	26	A
12	B	27	C
13	B	28	B
14	A	29	C
15	B	30	A

STRAND 3.0: INDIGENOUS CRAFTS

SUB-STRAND 3.4: WEAVING CRAFTS



Illustrations: African indigenous weaving traditions, tapestry art and twill fabric structures.

PART ONE: INTRODUCTION TO WEAVING CRAFTS

1.0 UNDERSTANDING WEAVING

1.1 Meaning of weaving

Weaving is the process of producing a fabric or other textile structure by interlacing two sets of yarns or threads at right angles to one another.

The two sets of yarns are:

- **Warp yarns:** Threads arranged lengthwise on a loom. They remain relatively stationary during weaving.
- **Weft yarns:** Threads passed across the warp yarns during weaving.

The interlacing of warp and weft yarns produces a stable woven structure.

Weaving can be done by hand using traditional or modern looms, or mechanically using industrial weaving machines.

1.2 Meaning of weaving crafts

Weaving crafts refer to the artistic and practical activities involved in producing useful and decorative items by interlacing fibres, yarns, threads or other flexible materials.

Weaving crafts combine technical skills, creativity, cultural knowledge and artistic expression.

Examples of woven products include:

1. Scarves.
2. Mats.
3. Blankets.
4. Bags.
5. Wall hangings.
6. Rugs.
7. Baskets.
8. Table runners.
9. Clothing fabrics.
10. Decorative tapestries.
11. Cushion covers.
12. Traditional garments.

1.3 Importance of weaving in African communities

Weaving has played an important role in the social, cultural and economic development of African communities.

Its importance includes:

1. Clothing production

- Weaving provides materials for making clothes.
- Traditional woven fabrics are used to produce garments for everyday wear and special occasions.
- Woven materials can be made into scarves, wraps and other clothing accessories.

2. Cultural identity

- Different communities produce textiles with distinctive patterns and colours.

- Woven fabrics can communicate cultural identity and heritage.
- Traditional weaving techniques preserve indigenous knowledge.

3. Ceremonial purposes

- Woven fabrics are used during weddings, cultural celebrations and other important occasions.
- Specially designed textiles may be worn during ceremonies.
- Some woven products are used as ceremonial decorations.

4. Economic development

- Weaving provides employment for artisans.
- Woven products can be sold in local and international markets.
- It supports small businesses and creative industries.

5. Interior decoration

- Woven mats, rugs and wall hangings enhance interior spaces.
- Tapestry products can be displayed as decorative artworks.
- Woven cushion covers and table runners improve interior appearance.

6. Preservation of cultural heritage

- Traditional weaving knowledge is transferred from one generation to another.
- Young people learn indigenous production methods.
- It encourages appreciation of African artistic traditions.

7. Artistic expression

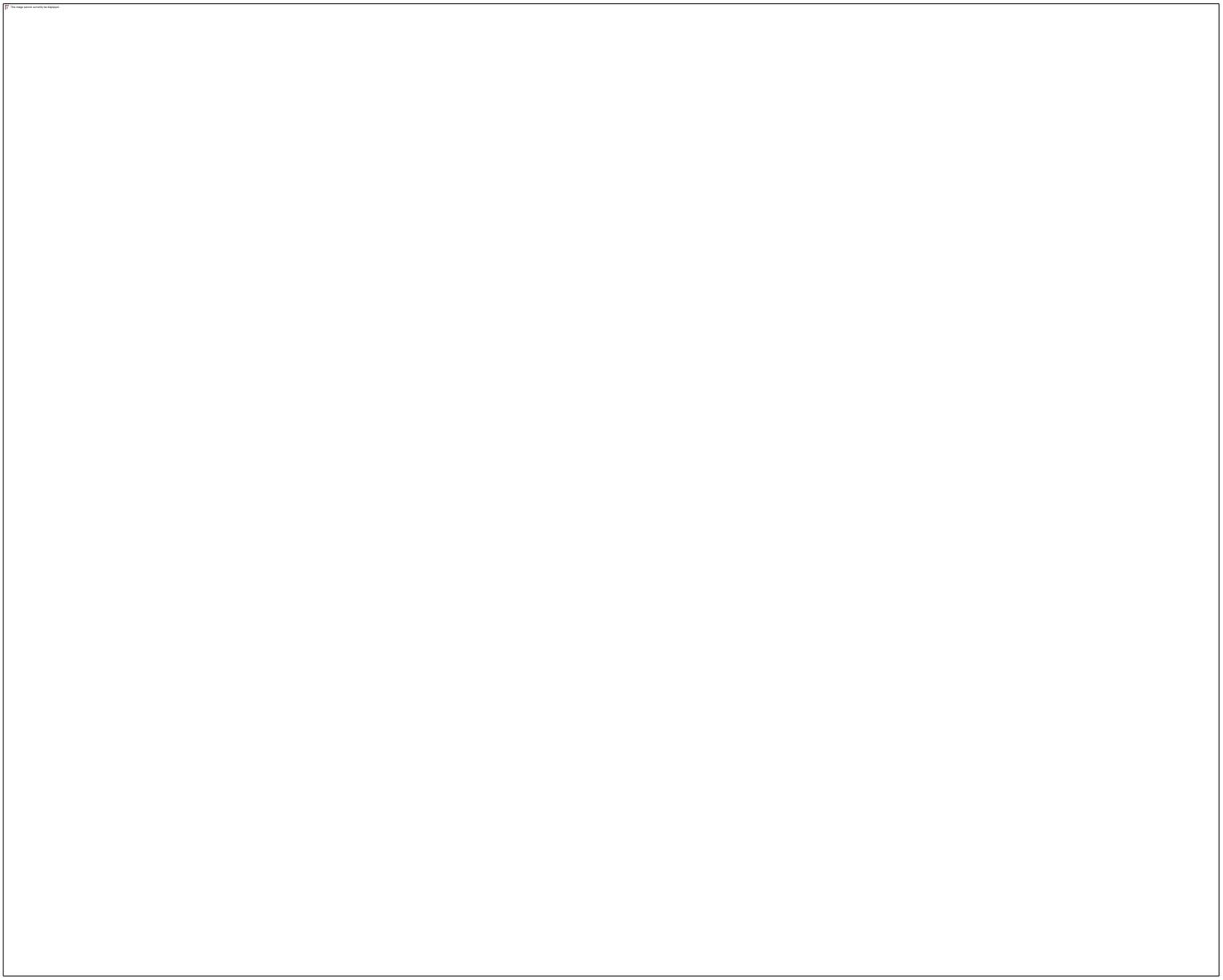
- Artists communicate ideas through colour, shape, pattern and texture.
- Weaving provides opportunities for experimentation.
- Different weaving structures produce distinctive artistic effects.

1.4 Basic terms used in weaving

Term	Meaning
Loom	A device used to hold warp yarns during weaving
Warp	Lengthwise yarns held on a loom
Weft	Crosswise yarns interlaced with the warp
Shed	An opening formed between two sets of warp yarns
Shuttle	A tool used to carry weft yarn across the warp
Selvedge	The finished edge of a woven fabric

Pick	One passage of weft across the warp
Dent	A space or division in a reed through which warp yarns pass
Beat-up	Pressing the weft into position using a beater or comb
Draft	A plan showing the order in which warp yarns are controlled during weaving
Tension	The degree of tightness of the warp or yarn
Repeat	A pattern sequence that is repeated throughout a woven design

1.5 Basic structure of a woven fabric



A woven fabric consists of two main yarn systems.

A. Warp yarns

- These are arranged vertically or lengthwise on the loom.
- They are held under suitable tension.

- They provide the foundation for weaving.
- Their number and spacing influence the width and appearance of the fabric.

B. Weft yarns

- These run horizontally or across the warp.
- They are passed over and under the warp yarns.
- They form the crosswise structure of the fabric.
- Their colour, thickness and arrangement influence the final design.

C. Interlacing

Interlacing is the manner in which warp and weft yarns pass over and under each other.

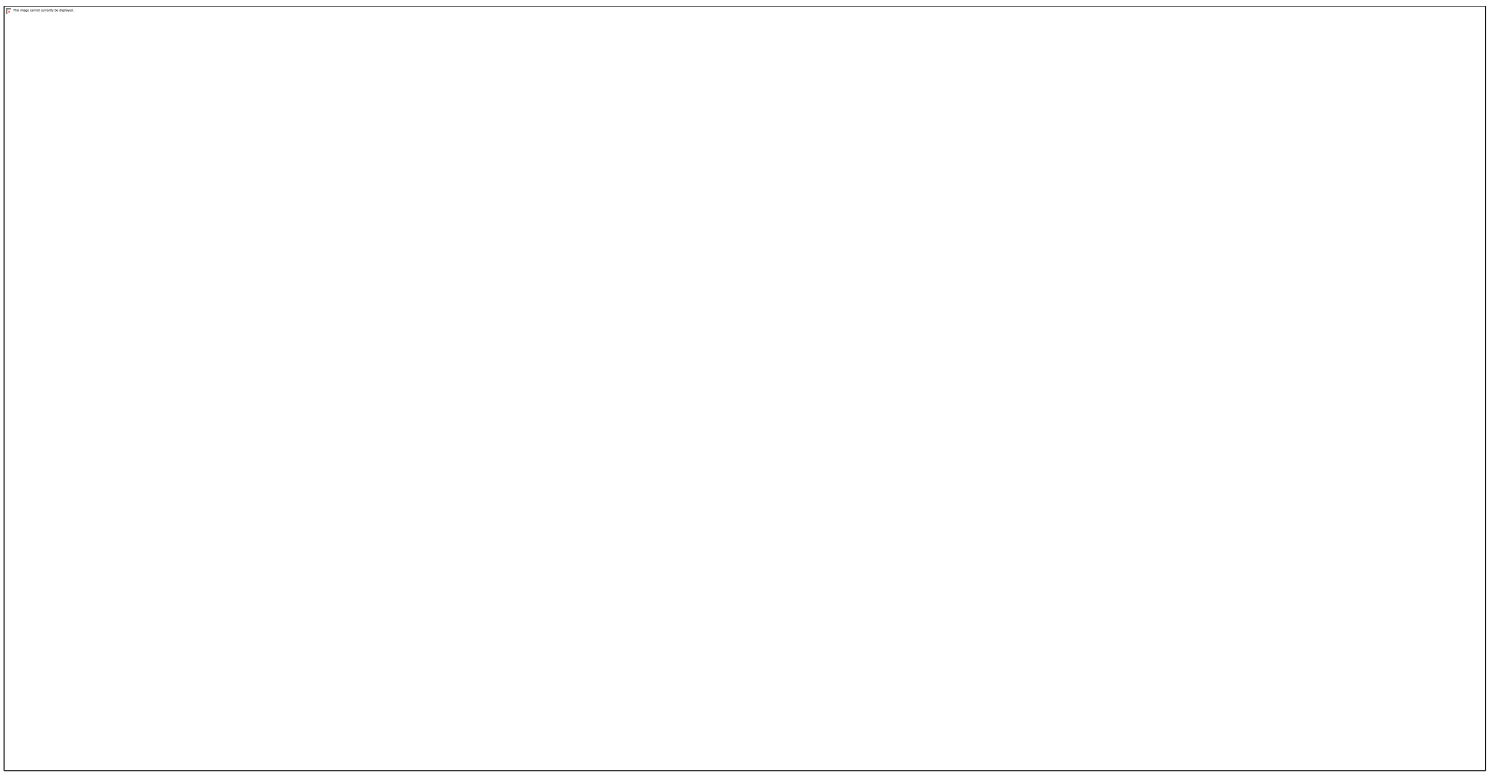
Different arrangements of interlacing produce different weave structures, including:

- Plain weave.
- Twill weave.
- Satin weave.
- Tapestry weave.

2.0 INDIGENOUS AFRICAN WEAVING TRADITIONS

African weaving is an important part of indigenous visual culture. Different communities have developed distinctive weaving techniques, materials, patterns and textile designs.

2.1 Kente weaving of Ghana





Kente is a traditional woven textile associated particularly with the Akan people of Ghana, including the Asante and Ewe weaving traditions.

It is recognised for its colourful geometric patterns and carefully arranged woven strips.

Characteristics of Kente weaving

1. It uses brightly coloured yarns.
2. It contains geometric patterns.

3. Different colours are arranged to produce visually attractive designs.
4. Narrow strips are woven separately and joined to form larger cloths.
5. It involves skilled handloom weaving.
6. It is used for cultural, ceremonial and decorative purposes.
7. Different designs and colours may communicate cultural and social meanings.

Materials used

- Cotton yarn.
- Silk yarn.
- Coloured threads.
- Other suitable textile fibres.

Importance of Kente

- Preserves Ghanaian cultural heritage.
- Provides employment for textile artisans.
- Promotes African textile identity.
- Demonstrates creativity and technical skill.
- Provides inspiration for contemporary textile designers.

2.2 Himba weaving and textile traditions of Namibia





The Himba people of Namibia are known for distinctive cultural dress, body adornment and craft traditions.

Their material culture provides inspiration for studying indigenous approaches to clothing, ornamentation and the use of locally available materials.

Features relevant to indigenous textile study

- Use of natural and locally available materials.
- Combination of textile and leather-based accessories.
- Decorative arrangements influenced by cultural identity.
- Use of handmade accessories and adornments.
- Preservation of traditional craft knowledge.

Teaching note: Kente is a clearly established example of African handwoven cloth. Himba cultural craft traditions provide broader inspiration for indigenous material culture and adornment; learners should distinguish woven textiles from leatherwork and other decorative practices.

2.3 Indigenous weaving in Kenya

Kenya has diverse indigenous weaving practices.

Examples include:

A. Basket weaving



- Practised in different Kenyan communities.
- Uses fibres such as sisal, reeds and other plant materials.

- Produces baskets for storage, transportation and decoration.
- Incorporates geometric patterns and colour variations.

B. Mat weaving



- Uses plant fibres and other flexible materials.
- Produces mats for domestic and cultural purposes.
- Can incorporate decorative patterns.

C. Textile weaving

- Uses yarns and threads.
- Produces fabrics for clothing and decoration.
- Can be practised using frame looms and other handlooms.

2.4 Lessons learners can draw from indigenous African weaving

- Appreciation of traditional knowledge.
- Understanding the relationship between art and culture.
- Ability to use locally available materials.
- Development of patience and precision.
- Appreciation of geometric patterns.
- Understanding the economic value of traditional crafts.
- Development of original textile designs inspired by indigenous art.

PART TWO: TWILL WEAVING

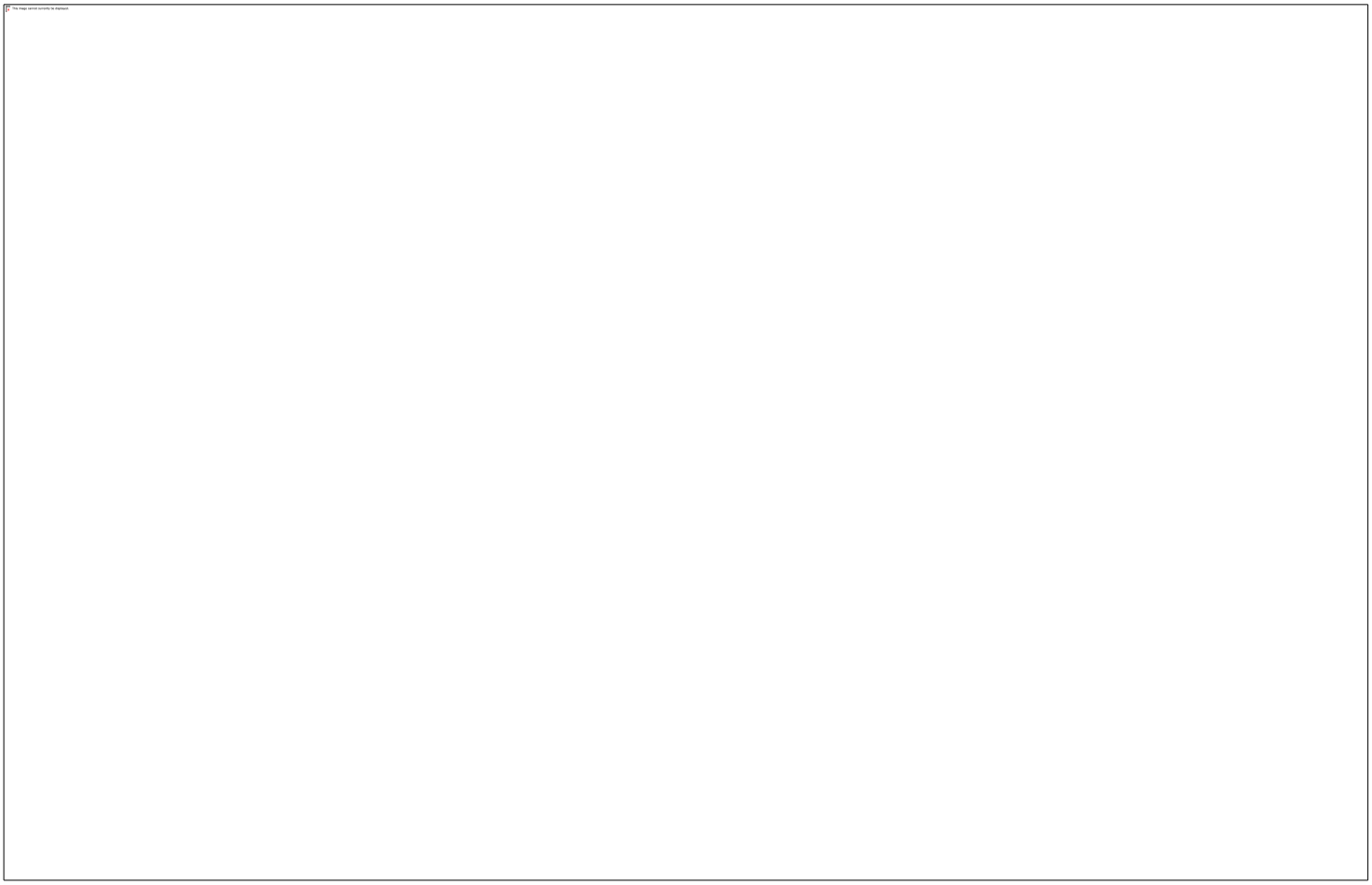
3.0 UNDERSTANDING TWILL WEAVING

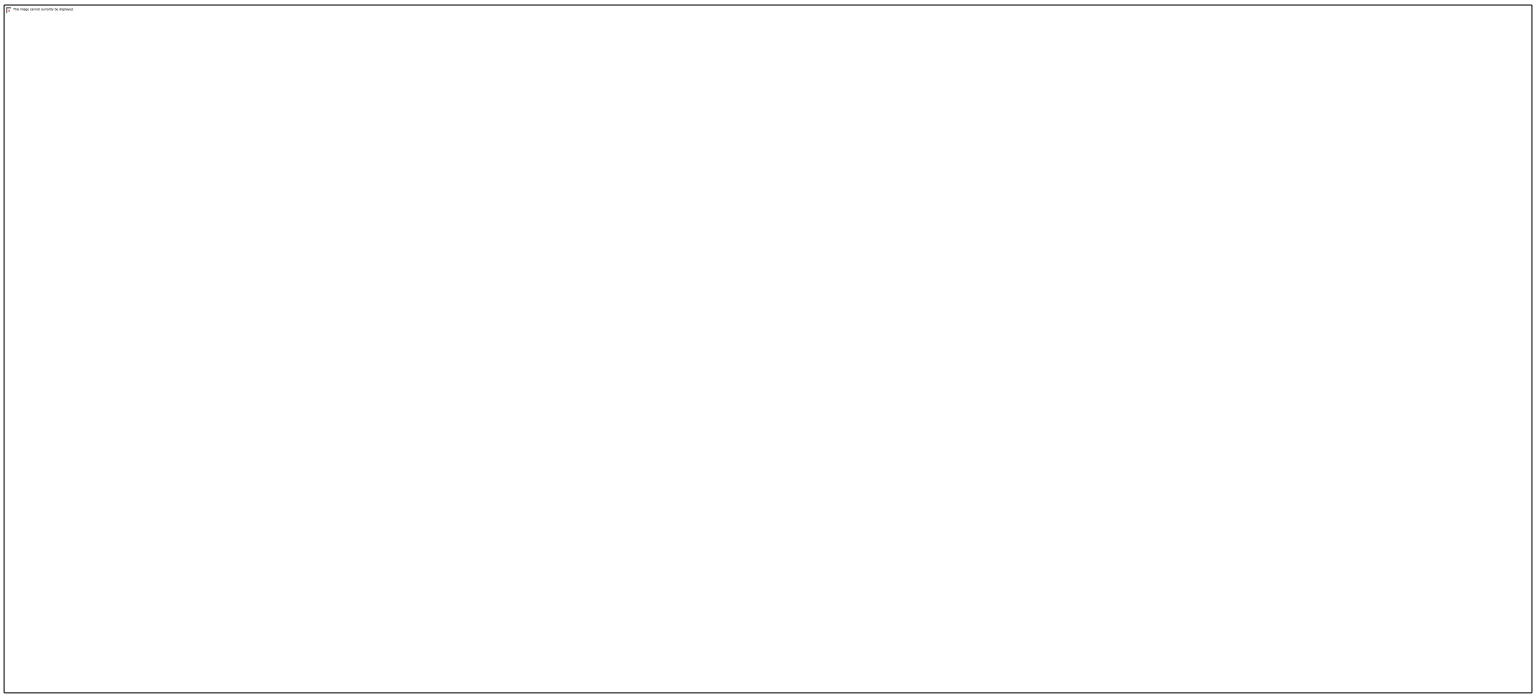
3.1 Meaning of twill weave

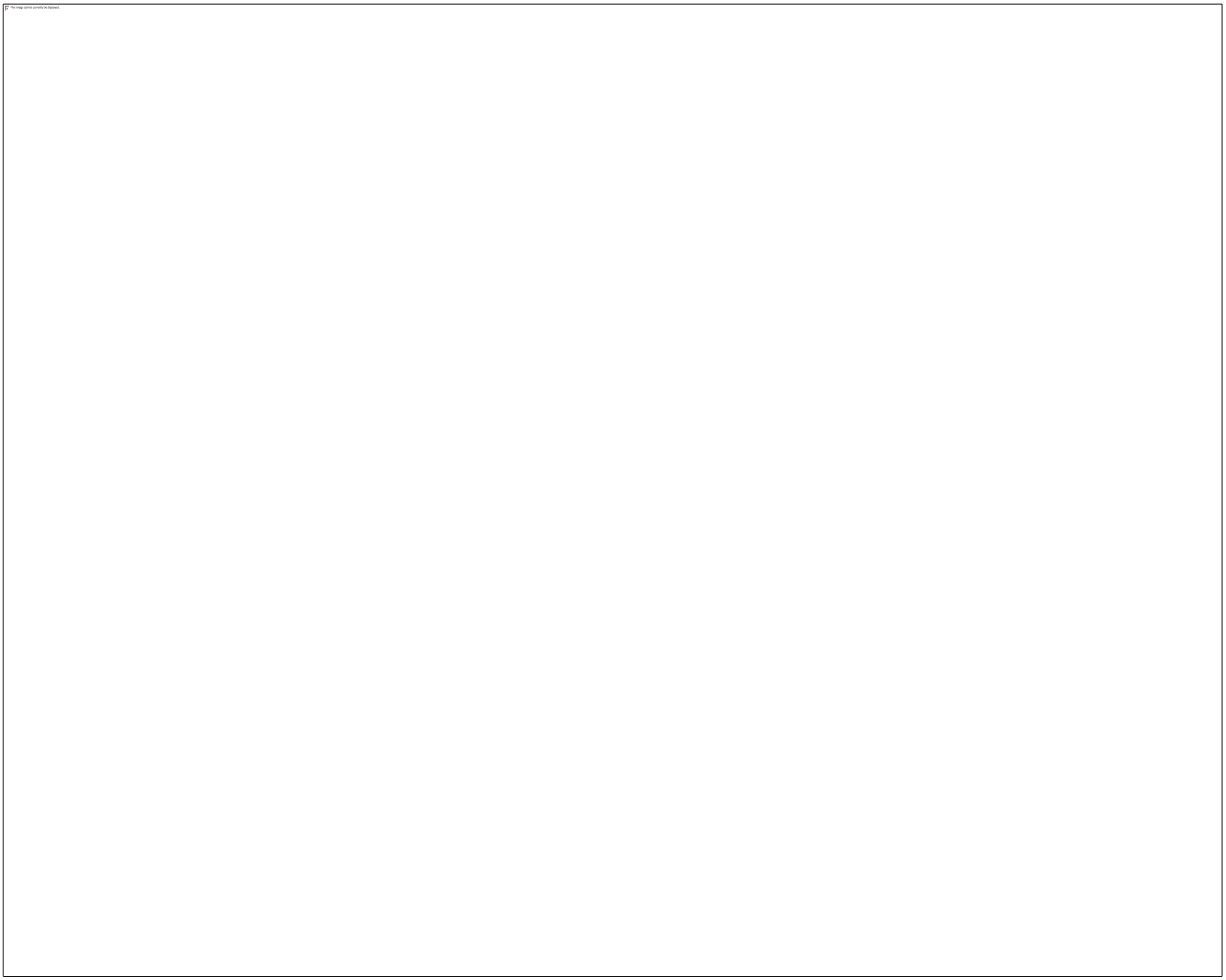
Twill weave is a type of textile weave in which the warp and weft yarns interlace in a regular sequence to produce characteristic diagonal lines or ribs on the fabric surface.

The diagonal effect is created by shifting the interlacing points progressively from one warp yarn to the next.

Twill weaving is commonly used in producing durable and attractive fabrics.





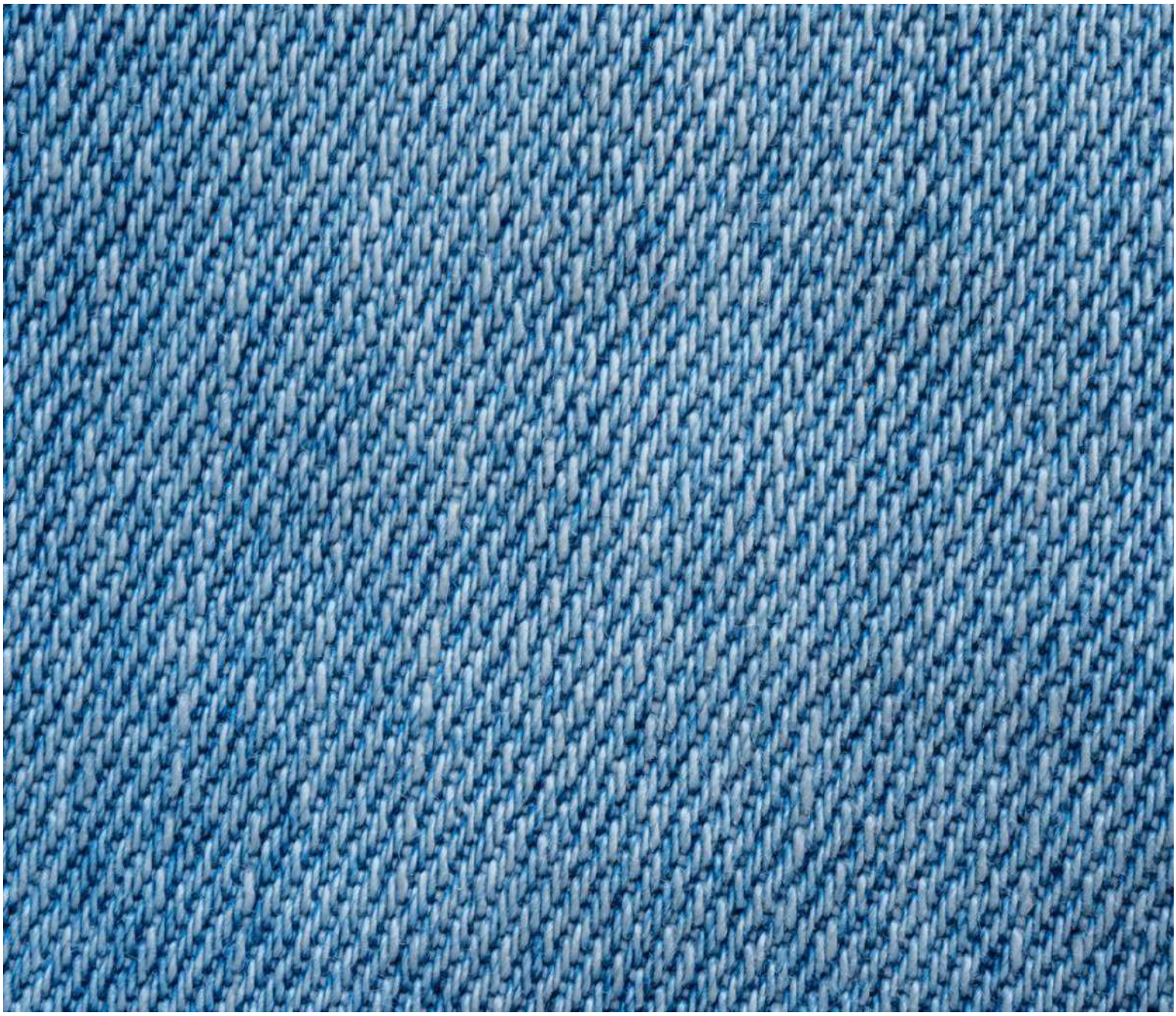


3.2 Characteristics of twill weave

1. It produces diagonal lines on the fabric surface.

2. It has a recognisable diagonal pattern.
3. It can produce fabrics with good draping qualities.
4. It can be stronger and more durable than some comparable plain-weave fabrics, depending on yarns and construction.
5. It can be produced using different yarn colours.
6. It can have a smooth or textured appearance.
7. It can be used in clothing, upholstery and decorative textiles.
8. It can be woven in different directions depending on the design.

3.3 Examples of products made using twill weave



- Denim trousers.
- Jackets.
- Workwear.
- Scarves.
- Uniform fabrics.
- Upholstery fabrics.
- Bags.
- Cushion covers.
- Decorative textiles.

3.4 Types of twill weave

Twill weaves are classified according to their interlacing structures.

1. Simple twill

A simple twill weave produces diagonal lines through a regular sequence of warp and weft interlacing.

It may be classified according to the direction of the diagonal lines.

2. Warp-faced twill

- The warp yarns are more visible on the surface.
- More warp yarns float over the weft yarns.
- The surface is dominated by warp yarns.

3. Weft-faced twill

- The weft yarns are more visible on the surface.
- More weft yarns float over the warp yarns.
- The surface is dominated by weft yarns.

4. Balanced twill

- Warp and weft yarns have relatively equal visibility.
- Both yarn systems contribute significantly to the surface appearance.

5. Herringbone twill



- It is formed by reversing the direction of diagonal twill lines.
- It produces a zigzag or V-shaped pattern.
- It is commonly used in clothing and decorative textiles.

4.0 UNDERSTANDING THE 3/1 TWILL WEAVE TECHNIQUE

4.1 Meaning of 3/1 twill weave

A 3/1 twill is a four-end twill weave in which each weft yarn passes over three warp yarns and under one warp yarn, or the reverse arrangement depending on the chosen face and drafting convention.

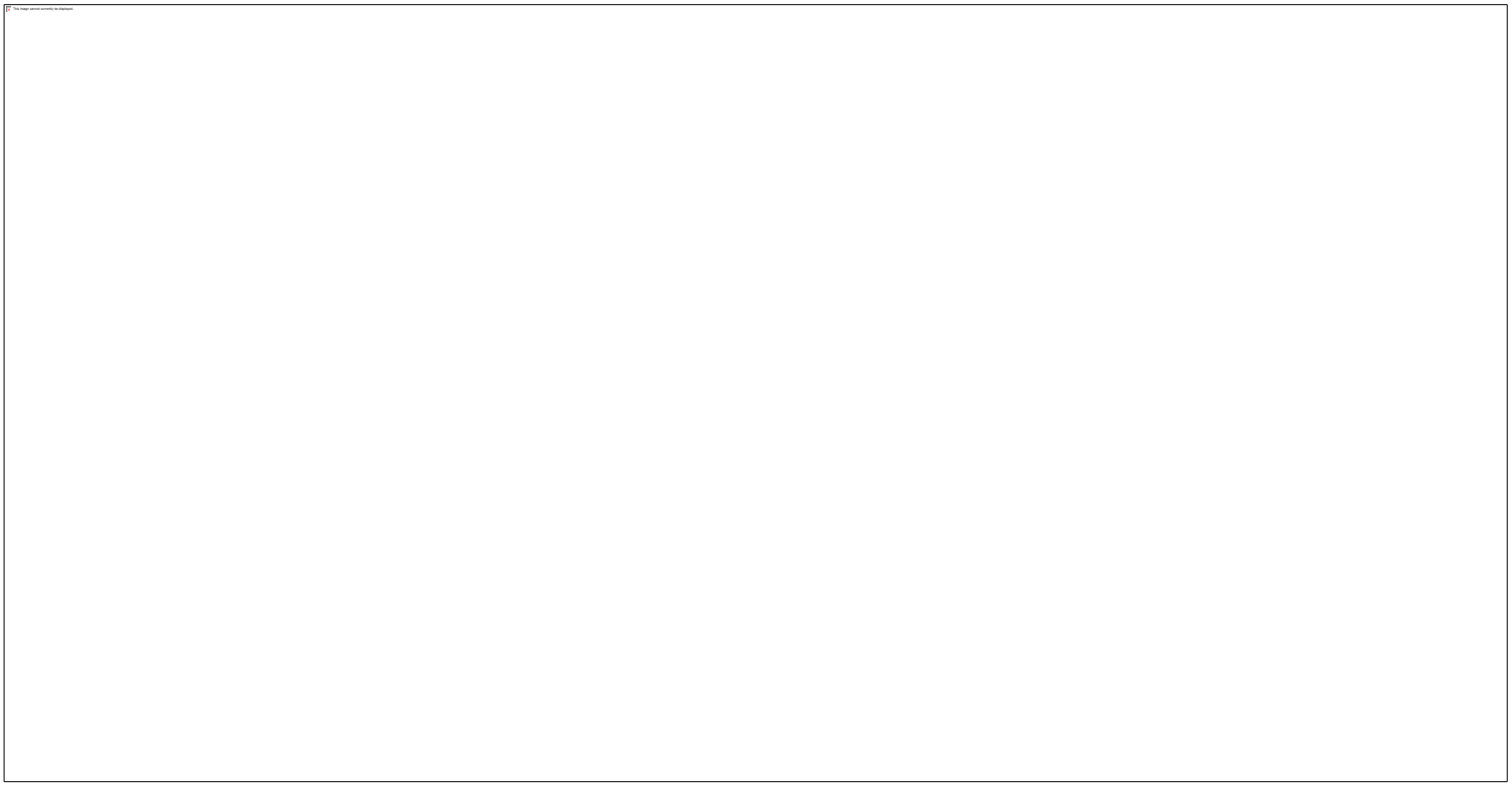
The interlacing point shifts by one warp end on each successive pick to produce a diagonal pattern.

In the usual warp-faced 3/1 twill:

- Three warp yarns show on the surface for each weft yarn that passes over the surface.

- Each weft pick passes over one warp and under three warp ends, depending on the chosen starting point and viewing face.

Important technical distinction: The notation 3/1 indicates three yarn intersections on one side of the fabric and one on the other within a four-end repeat. It does not mean that the fabric contains only three warp yarns and one weft yarn.



4.2 Structure of a 3/1 twill

A 3/1 twill uses:

- Four warp ends in each basic repeat.
- Four picks in the corresponding repeat.
- Three-over-one interlacing.
- A progressive shift of the interlacing sequence.
- A diagonal surface pattern.

The exact arrangement depends on whether the fabric is warp-faced or weft-faced.

4.3 Understanding a 3/1 twill weave draft

A weave draft is a visual plan showing how warp and weft yarns interlace.

For a simple 3/1 twill, the basic repeat can be represented using the following four-end sequence.

4.4 How the 3/1 twill pattern is formed

1. Warp yarns are arranged lengthwise on the loom.
2. The warp yarns are divided into groups according to the selected draft.
3. A shed is formed by raising and lowering the appropriate warp yarns.
4. The weft yarn is passed through the shed.
5. The weft is beaten into position.

6. The next shed is formed by changing the warp arrangement.
7. The weft is passed through again.
8. The interlacing point shifts progressively.
9. The repeated sequence creates diagonal lines.
10. The process continues until the required fabric length is achieved.

4.5 Features of a 3/1 twill fabric

- Has a distinct diagonal surface pattern.
- Contains a four-end weave repeat.
- Usually has a more pronounced warp-faced or weft-faced surface.
- Can produce an attractive two-colour effect.
- Can be used to make clothing and accessories.
- Requires consistent warp tension.
- Requires accurate control of the weaving sequence.

4.6 Advantages of 3/1 twill weaving

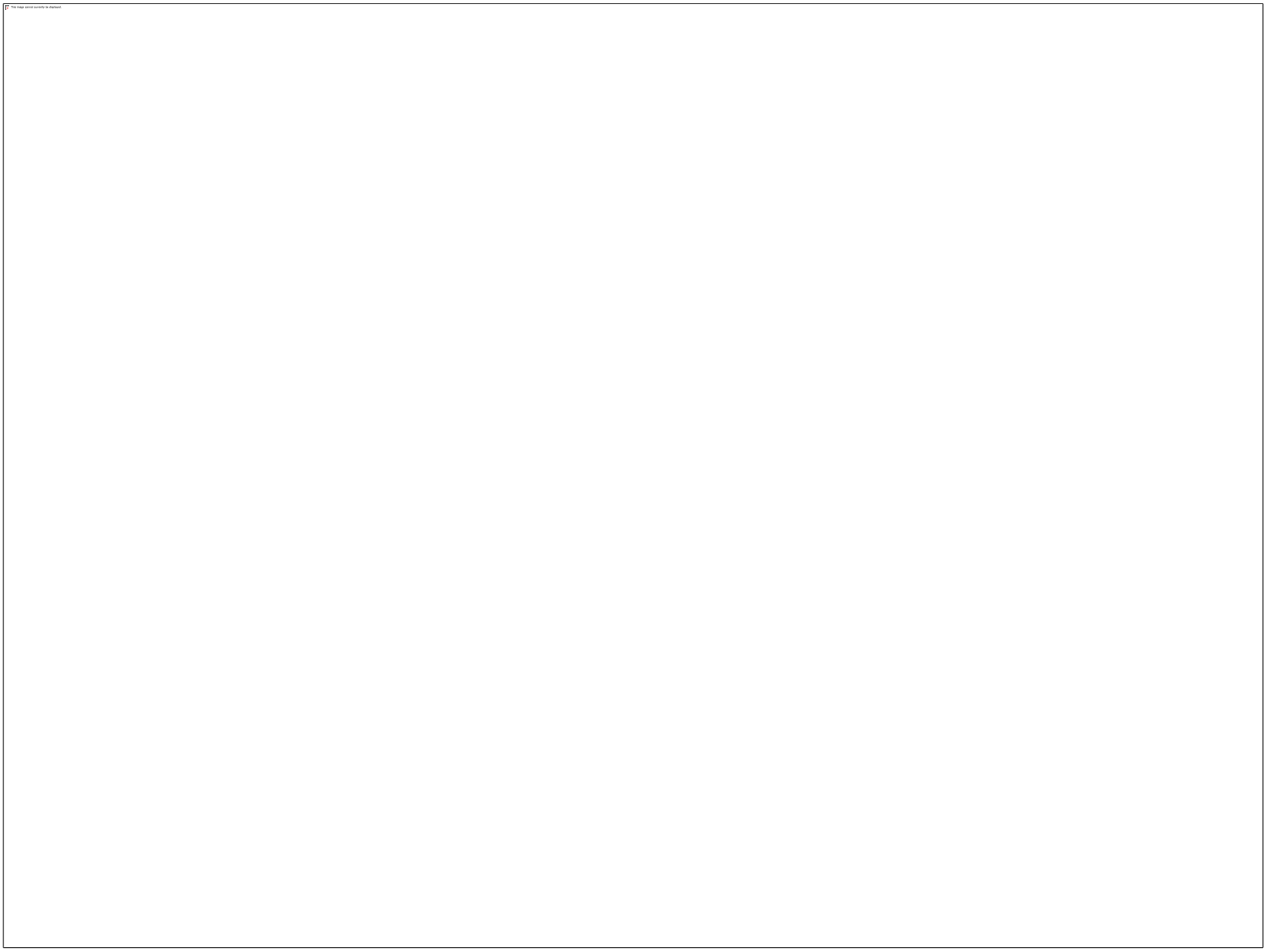
1. Produces an attractive diagonal pattern.
2. Can produce durable fabrics.
3. Allows the use of different coloured yarns.
4. Produces interesting surface textures.
5. Is suitable for scarves and other textile products.
6. Can be used for decorative and functional fabrics.
7. Allows variation in the appearance of the fabric through colour selection.

4.7 Limitations of 3/1 twill weaving

1. Requires careful control of the weaving sequence.
2. Incorrect interlacing can distort the diagonal pattern.
3. Uneven warp tension may produce irregular fabric.
4. Some twill structures may fray at cut edges.
5. It requires attention to the arrangement of warp yarns.
6. Learners may need practice to maintain consistent selvedges.

5.0 MATERIALS, TOOLS AND EQUIPMENT USED IN TWILL WEAVING

5.1 Materials



1. Cotton yarn

- Made from cotton fibres.
- Easy to handle.
- Available in different colours and thicknesses.
- Suitable for scarves and other woven items.

2. Wool yarn

- Obtained from animal fibres.
- Has warmth and softness.
- Suitable for scarves, blankets and decorative textiles.

3. Acrylic yarn

- A manufactured fibre.
- Available in different colours.
- Useful for decorative and educational weaving projects.

4. Silk yarn

- Has a smooth and attractive appearance.
- Can be used in decorative textile production.

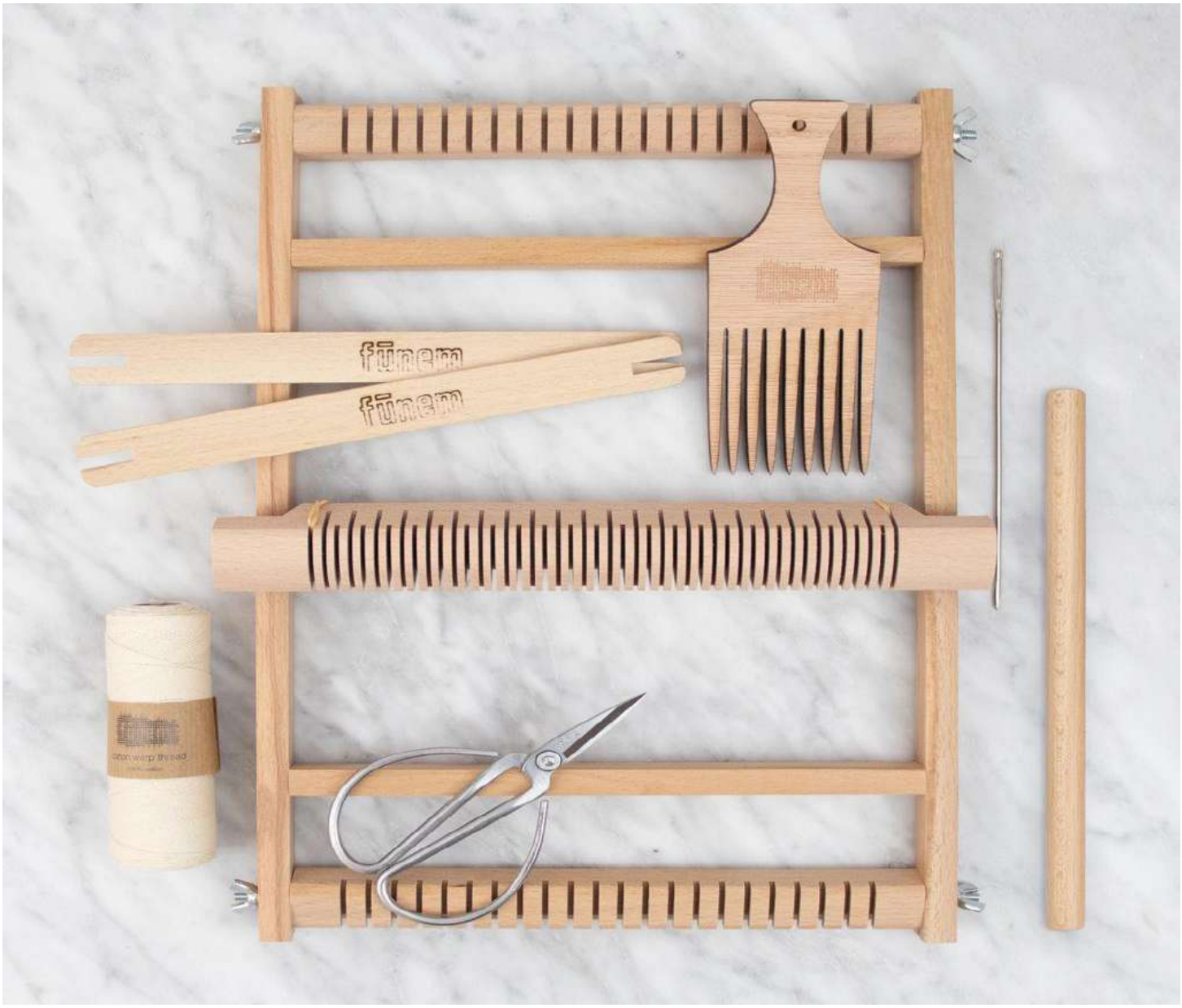
5. Linen yarn

- Made from flax fibres.
- Has a natural appearance.
- Can be used in textile weaving.

6. Recycled yarn

- Obtained from suitable reused textile materials.
- Helps reduce waste.
- Can be used in creative weaving projects.

5.2 Tools and equipment





Tool/equipment	Function
Frame loom	Holds warp yarns during weaving
Shuttle	Carries weft yarn across the warp
Weaving needle	Passes yarn through warp threads
Beater or weaving comb	Pushes weft yarns into position
Scissors	Cuts yarn
Ruler	Measures fabric dimensions
Measuring tape	Measures yarn and finished fabric
Bobbin	Holds yarn for weaving
Heddle	Helps separate warp yarns to form a shed
Warp separator	Maintains spacing between warp yarns
Yarn winding tool	Helps prepare yarn for weaving
Comb	Helps arrange and align warp yarns

5.3 Factors to consider when selecting yarn

1. **Strength:** Yarn should withstand tension during weaving.
2. **Thickness:** Yarn thickness influences fabric density and texture.

3. **Colour:** Colours should complement the intended design.
4. **Flexibility:** Yarn should bend without breaking.
5. **Texture:** Texture determines the surface quality of the fabric.
6. **Availability:** Select materials that can be obtained easily.
7. **Cost:** Consider the available budget.
8. **Purpose:** Select yarn according to the intended use of the product.
9. **Durability:** Choose yarn that can withstand regular use.
10. **Compatibility:** Warp and weft yarns should be suitable for working together.

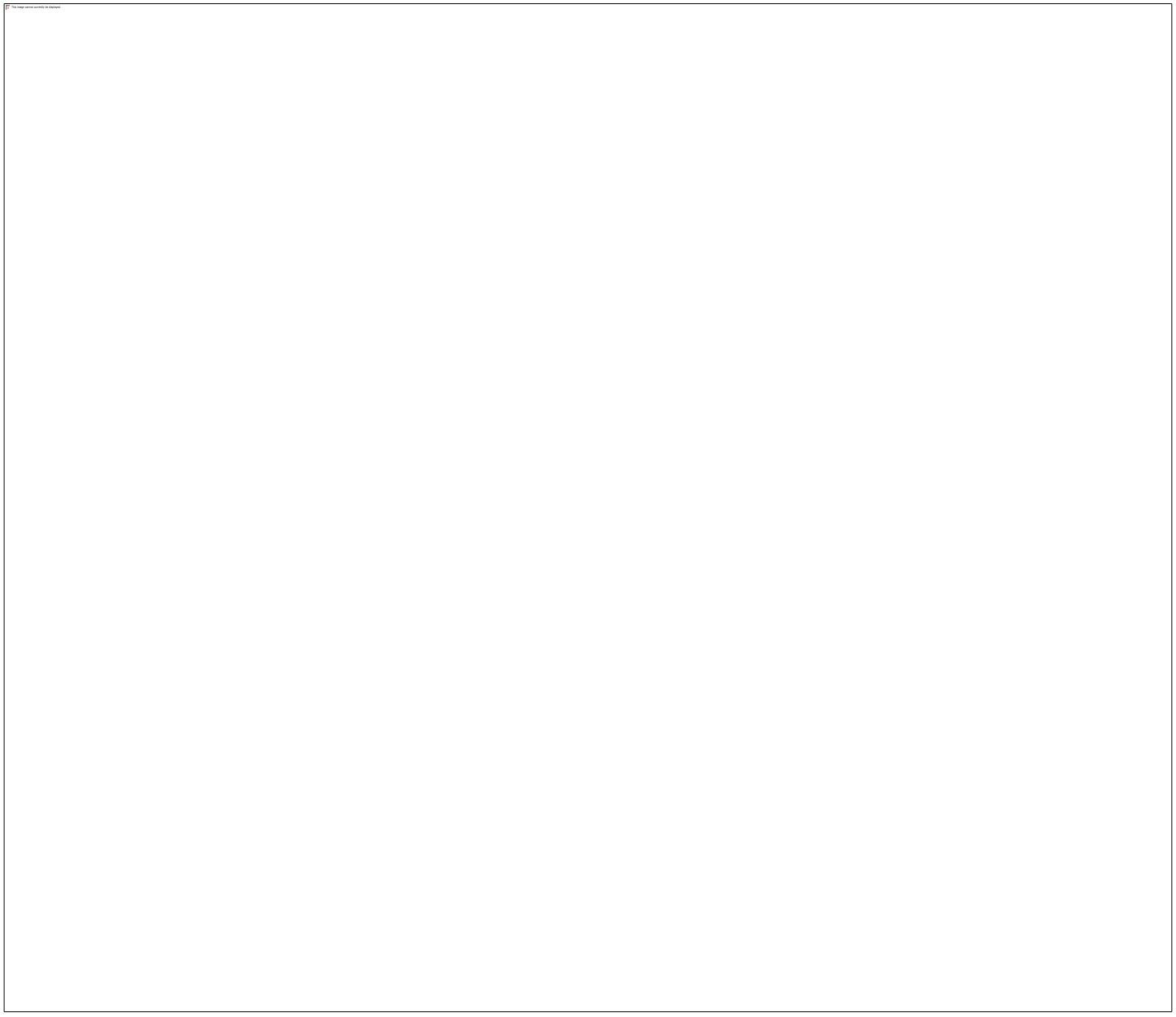
6.0 CONSTRUCTING A FRAME LOOM

6.1 Meaning of a frame loom

A frame loom is a simple weaving device consisting of a rigid frame with parallel warp yarns stretched across it to provide a foundation for weaving.

It can be made from wood or other suitable materials.

Frame looms are useful for learning basic weaving techniques, including twill and tapestry weaving.



6.2 Materials required for constructing a frame loom

- Four wooden strips.
- Suitable nails or screws.
- Strong cotton cord or warp yarn.
- Sandpaper.
- Wood glue where appropriate.
- Measuring tape.
- Pencil.

6.3 Tools required

- Hammer.
- Saw.
- Ruler.
- Screwdriver.
- Sandpaper.
- Drill, if required.

6.4 Procedure for constructing a simple frame loom

1. Select four suitable wooden strips.
2. Determine the desired dimensions of the loom.
3. Measure and mark the wooden strips.
4. Cut the strips to the required lengths.
5. Smooth rough edges using sandpaper.
6. Arrange the strips into a rectangular frame.
7. Join the corners using suitable nails, screws or other secure joints.
8. Check that the frame is square and stable.
9. Mark evenly spaced points along the top and bottom rails.
10. Fix suitable nails or pegs if required by the loom design.
11. Stretch strong warp yarn between the top and bottom rails.
12. Maintain even spacing between the warp yarns.
13. Ensure that the warp is firm but not excessively tight.
14. Inspect the loom before beginning weaving.



6.5 Qualities of a good frame loom

- It should be rigid.
- It should be stable.
- It should have smooth edges.
- It should have evenly spaced warp supports.
- It should be of appropriate dimensions.
- It should hold warp yarns firmly.
- It should be safe to handle.
- It should be easy to use.

6.6 Importance of a frame loom

1. Holds warp yarns in position.
2. Maintains warp tension.
3. Supports systematic weaving.
4. Helps learners practise different weave structures.
5. Provides a simple platform for textile experimentation.
6. Encourages practical skills and creativity.

PART THREE: TAPESTRY WEAVING

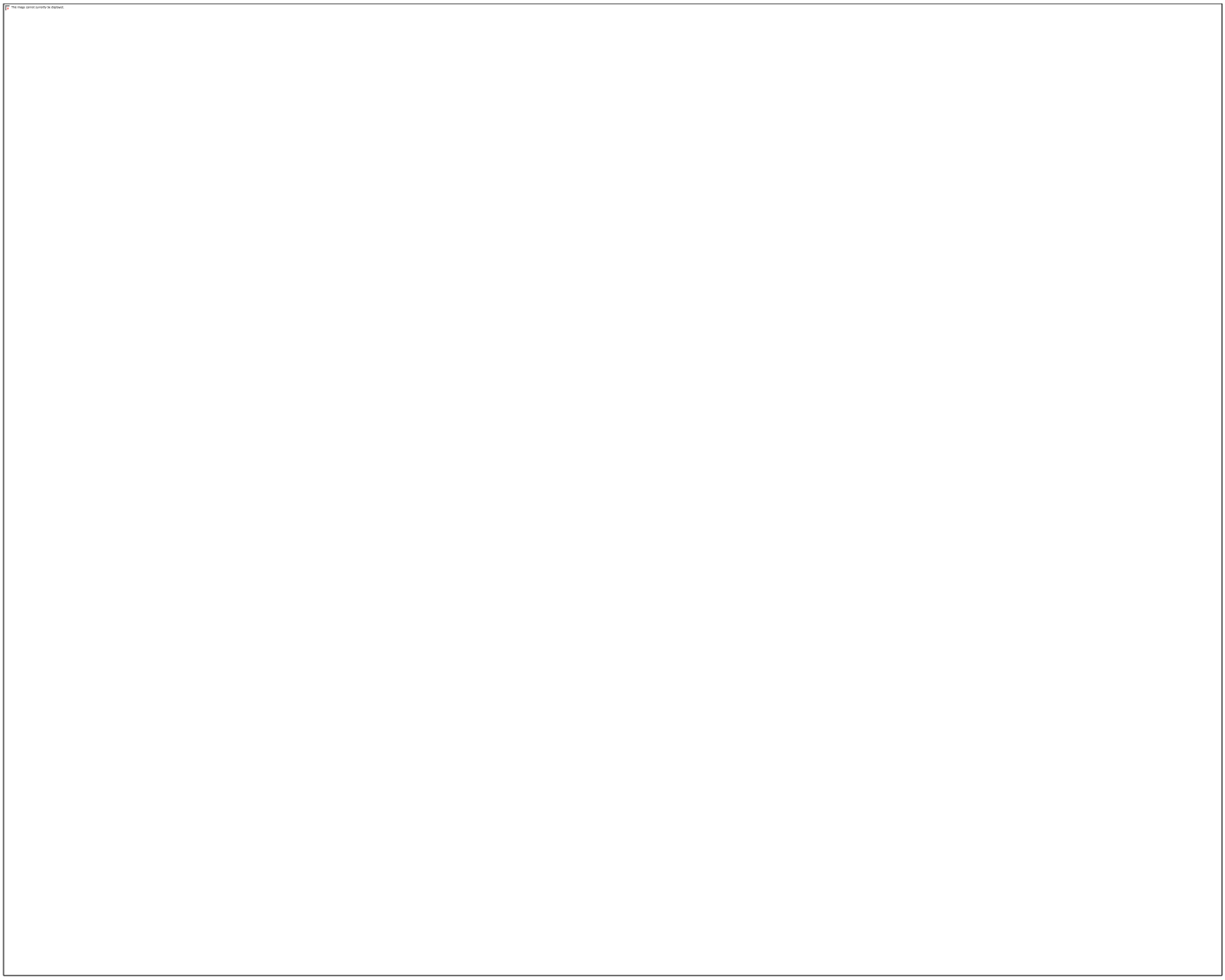
7.0 UNDERSTANDING TAPESTRY WEAVING

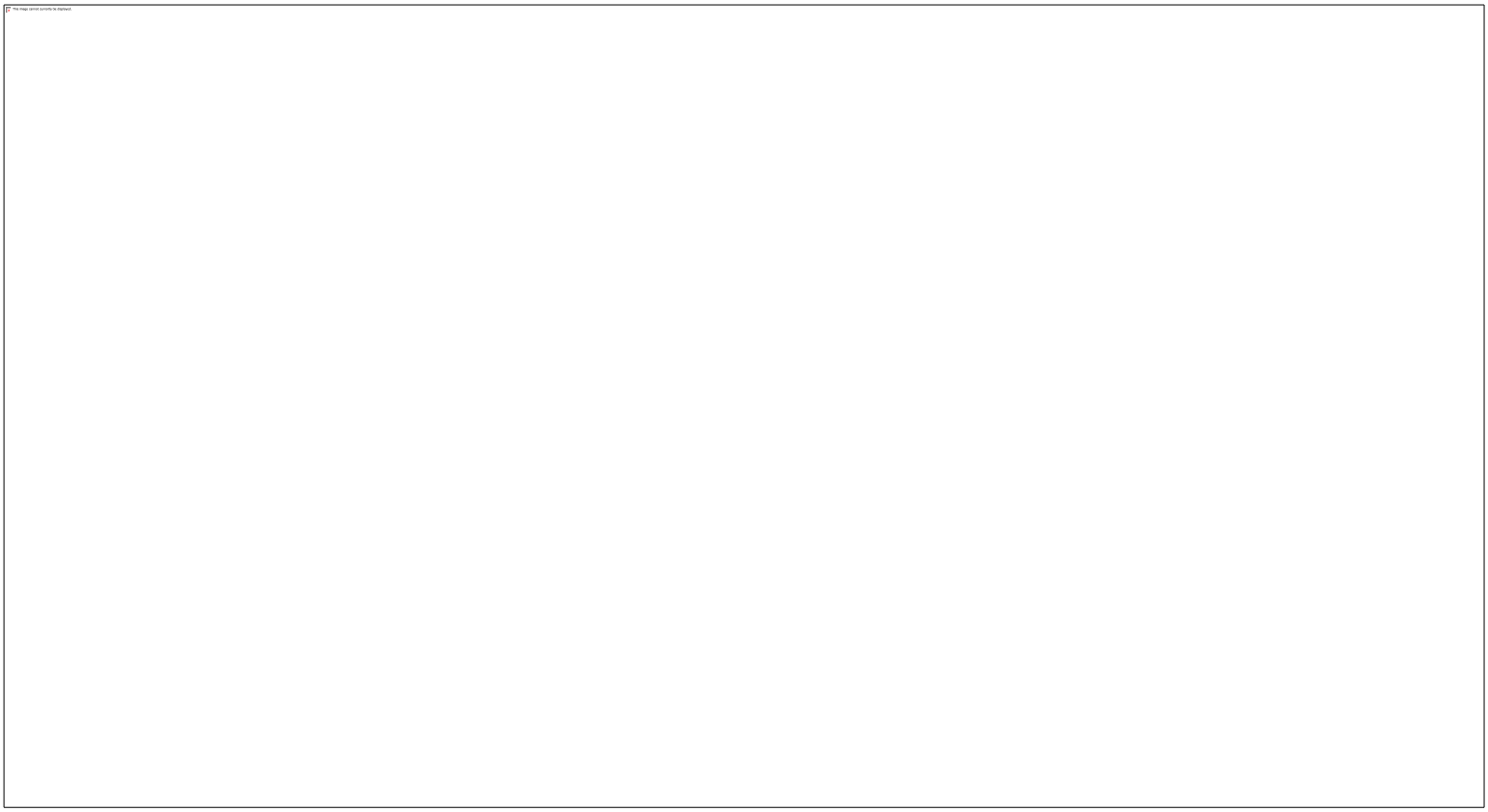
7.1 Meaning of tapestry weaving

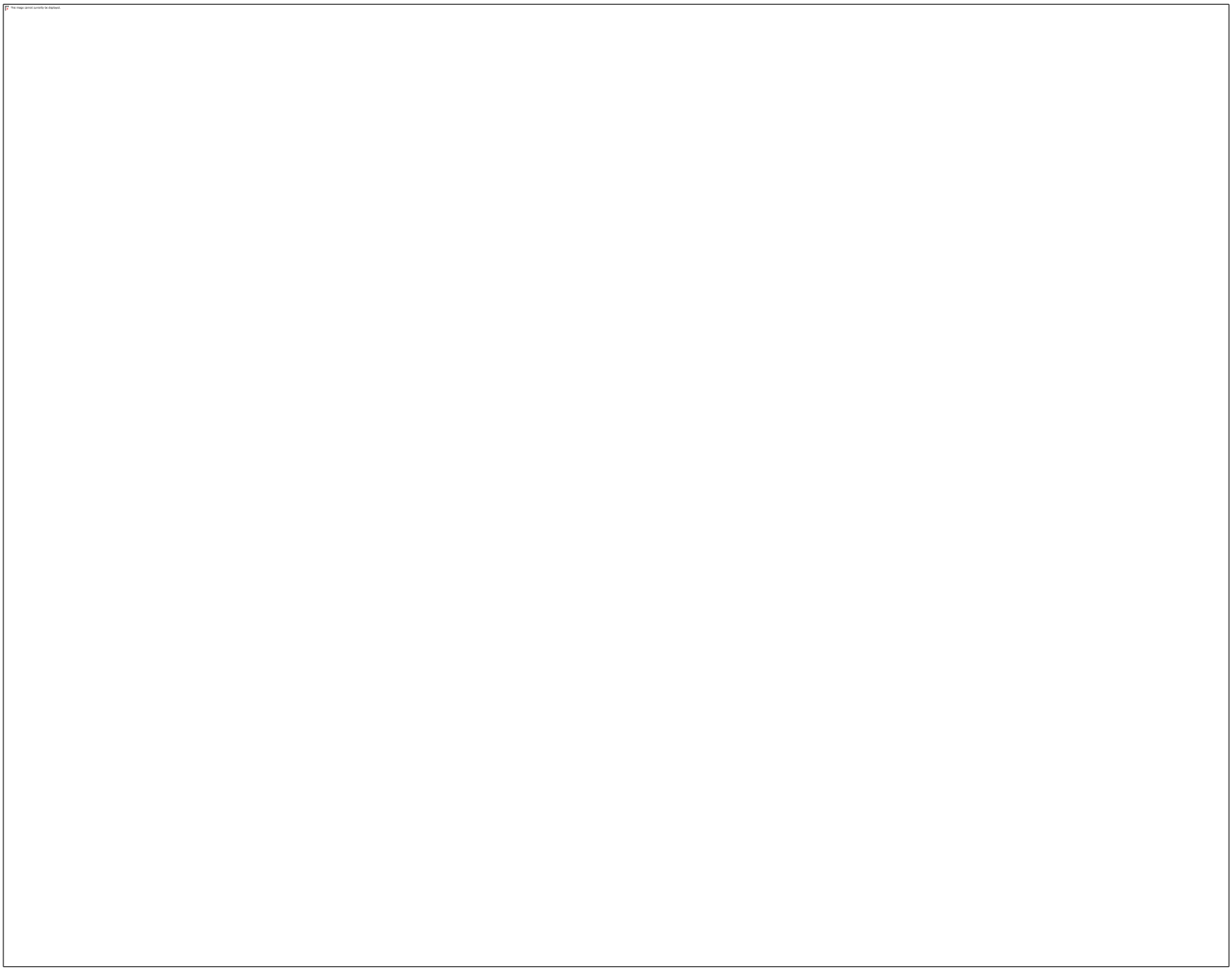
Tapestry weaving is a decorative weaving technique in which coloured weft yarns are interlaced with warp yarns to create pictures, patterns, shapes, symbols and other artistic designs.

Unlike conventional continuous-weft weaving, tapestry commonly uses discontinuous weft yarns. This means that different coloured weft yarns can cover selected sections of the warp to create specific shapes and images.

Tapestry weaving is used to produce decorative and functional textile artworks.



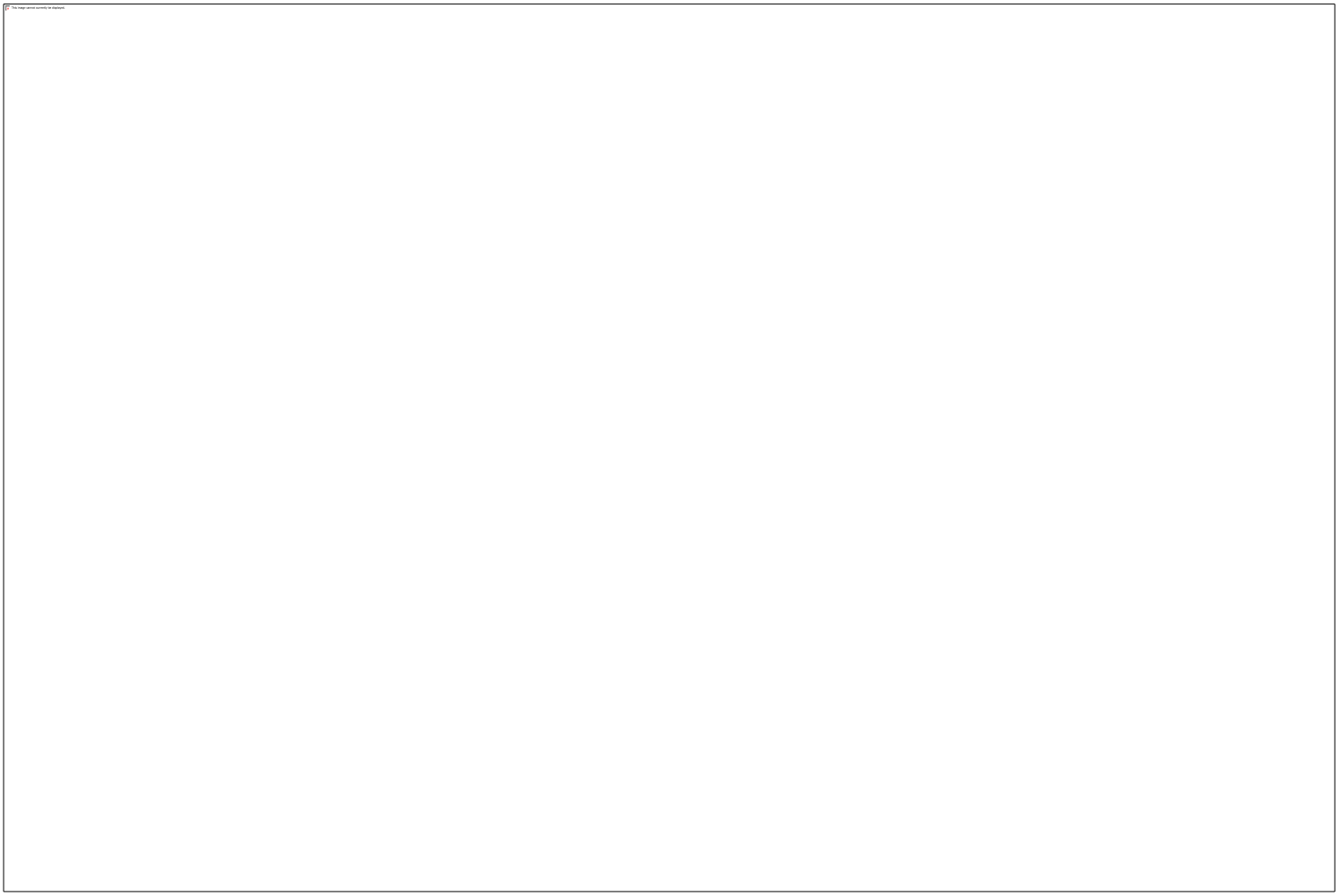




7.2 Characteristics of tapestry weaving

1. It uses warp and weft yarns.
2. It commonly uses discontinuous weft yarns.
3. It allows the use of several colours in one woven article.
4. It can produce pictures and geometric patterns.
5. It involves careful placement of coloured yarns.
6. It can produce raised or textured surfaces depending on the yarns and methods used.
7. It allows the artist to express ideas and emotions.
8. It can be used to create functional and decorative items.
9. It requires careful control of yarn tension.
10. It can incorporate different weaving techniques within one composition.

7.3 Materials used in tapestry weaving

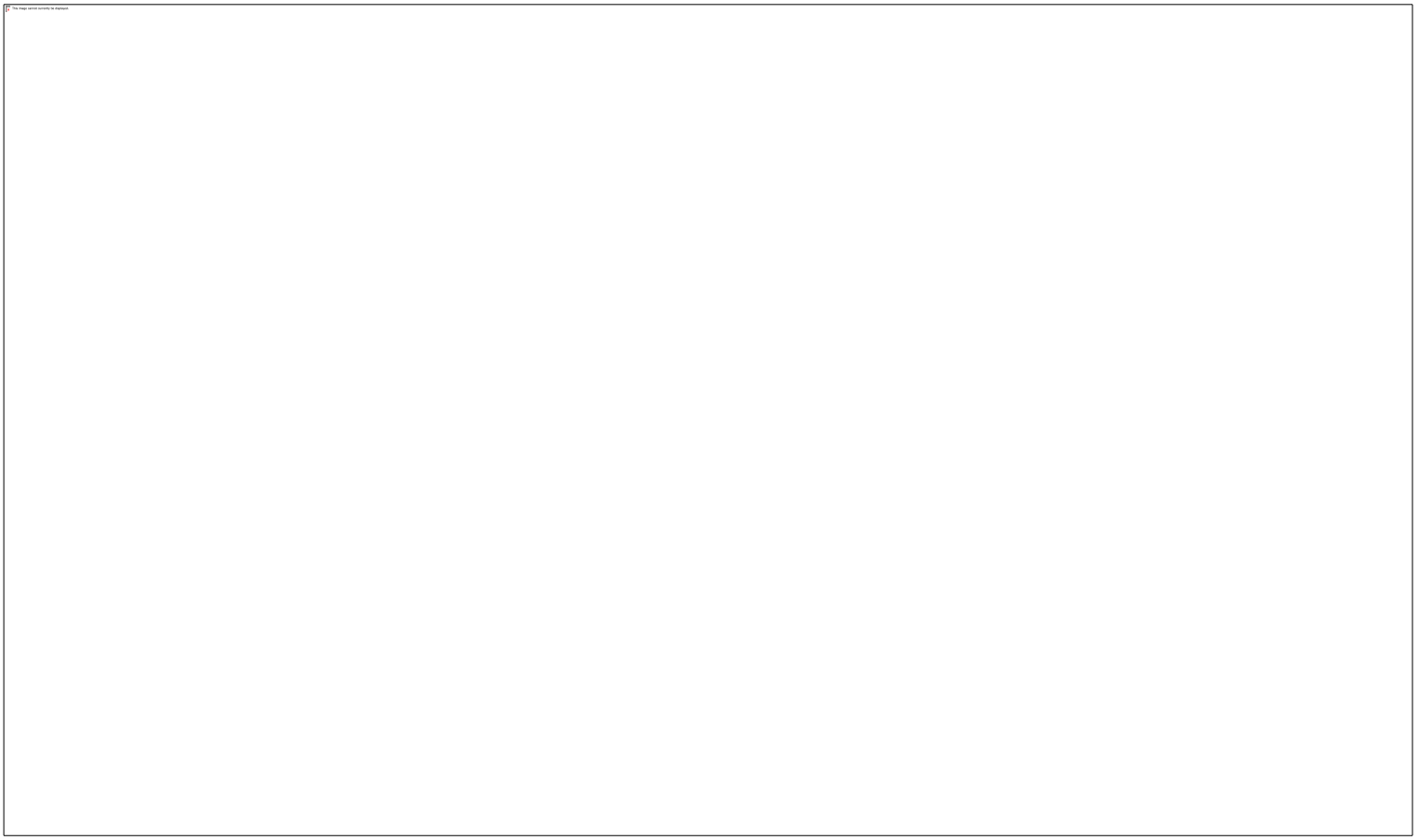


- Wool yarn.
- Cotton yarn.
- Acrylic yarn.
- Silk yarn.
- Linen yarn.

- Recycled textile yarn.
- Coloured threads.
- Suitable natural fibres.

7.4 Products made using tapestry weaving





1. Wall hangings.
2. Decorative mats.
3. Bags.
4. Cushion covers.
5. Table runners.
6. Decorative panels.
7. Rugs.
8. Small textile artworks.
9. Decorative scarves.

10. Interior decoration pieces.

7.5 Importance of tapestry weaving

1. Artistic expression

- Allows artists to communicate ideas using woven images.
- Provides opportunities to experiment with colour and pattern.
- Enables the production of unique textile artworks.

2. Cultural preservation

- Can incorporate indigenous patterns and symbols.
- Helps preserve traditional artistic knowledge.
- Encourages appreciation of African textile heritage.

3. Decoration

- Produces attractive wall hangings and interior accessories.
- Enhances the appearance of living and working spaces.

4. Employment creation

- Provides opportunities for textile artisans.
- Supports small-scale craft enterprises.
- Creates opportunities for selling handmade products.

5. Skill development

- Develops hand-eye coordination.
- Improves concentration.
- Develops patience and precision.
- Encourages problem-solving.

8.0 TAPESTRY WEAVING TECHNIQUES

The main techniques covered in this sub-strand are:

1. Interlocking technique.
2. Dovetailing technique.
3. Slit technique.
4. Angle technique.

These techniques are used to join colour areas, create boundaries, form shapes and produce visual effects in woven artworks.

8.1 Interlocking technique

Meaning

Interlocking is a tapestry weaving technique in which two adjacent coloured weft yarns are interlinked around the same warp yarn at the boundary where the two colours meet.

This helps connect neighbouring colour areas and reduce the formation of open slits.

Characteristics

- Uses two or more colours.
- The weft yarns meet at a common warp position.
- The yarns are linked at the colour boundary.
- It helps secure adjacent woven sections.
- It is useful when producing shapes with connected colour areas.

Procedure

1. Prepare the loom with evenly spaced warp yarns.
2. Select two different coloured weft yarns.
3. Weave the first colour into its designated section.
4. Weave the second colour in the adjacent section.
5. Bring the two yarns together at the boundary.
6. Interlink the yarns around the same warp yarn.
7. Continue weaving the two colours.
8. Beat the weft gently into position.
9. Check that the boundary is secure and neat.

Applications

- Producing geometric patterns.

- Joining adjacent colour blocks.
- Making decorative wall hangings.
- Creating multicoloured woven bags.

8.2 Dovetailing technique

Meaning

Dovetailing is a tapestry weaving technique in which two different coloured weft yarns meet at a shared boundary and turn around the same warp yarn, without being twisted together.

The shared warp yarn helps hold the two colour areas together.



Characteristics

- Uses adjacent colour areas.
- The weft yarns meet at a common warp.
- The yarns turn around the shared warp independently.
- It creates a clear boundary between colours.
- It is useful for producing geometric designs.

Procedure

1. Select two contrasting yarn colours.
2. Weave the first colour to the planned boundary.
3. Weave the second colour towards the same boundary.
4. Bring both yarns to a common warp.
5. Turn each yarn around the shared warp independently.
6. Continue weaving each colour in its respective section.
7. Beat the weft gently.
8. Check the neatness of the boundary.

Applications

- Producing geometric shapes.
- Creating colour blocks.
- Making patterned mats.
- Producing decorative tapestry panels.

8.3 Slit technique

Meaning

Slit technique is a tapestry weaving method in which adjacent coloured weft areas are woven separately around their respective warp sections, leaving an opening or slit between the two colour areas.

The slit forms at the boundary where the different coloured wefts do not interlock.

Characteristics

- Uses separate coloured weft sections.
- Creates a visible opening between adjacent colour areas.
- Produces clear boundaries.
- Is suitable for geometric patterns.
- Long slits may weaken the fabric if not properly managed.

Procedure

1. Prepare the loom and warp yarns.
2. Select the required colours.
3. Weave the first colour within its section.

4. Weave the second colour in the adjacent section.
5. Allow the two weft sections to meet without interlocking.
6. Maintain appropriate yarn tension.
7. Continue the process according to the design.
8. Secure the slit through suitable construction or finishing where necessary.

Applications

- Producing geometric shapes.
- Making angular designs.
- Creating contrasting colour blocks.
- Producing decorative wall hangings.

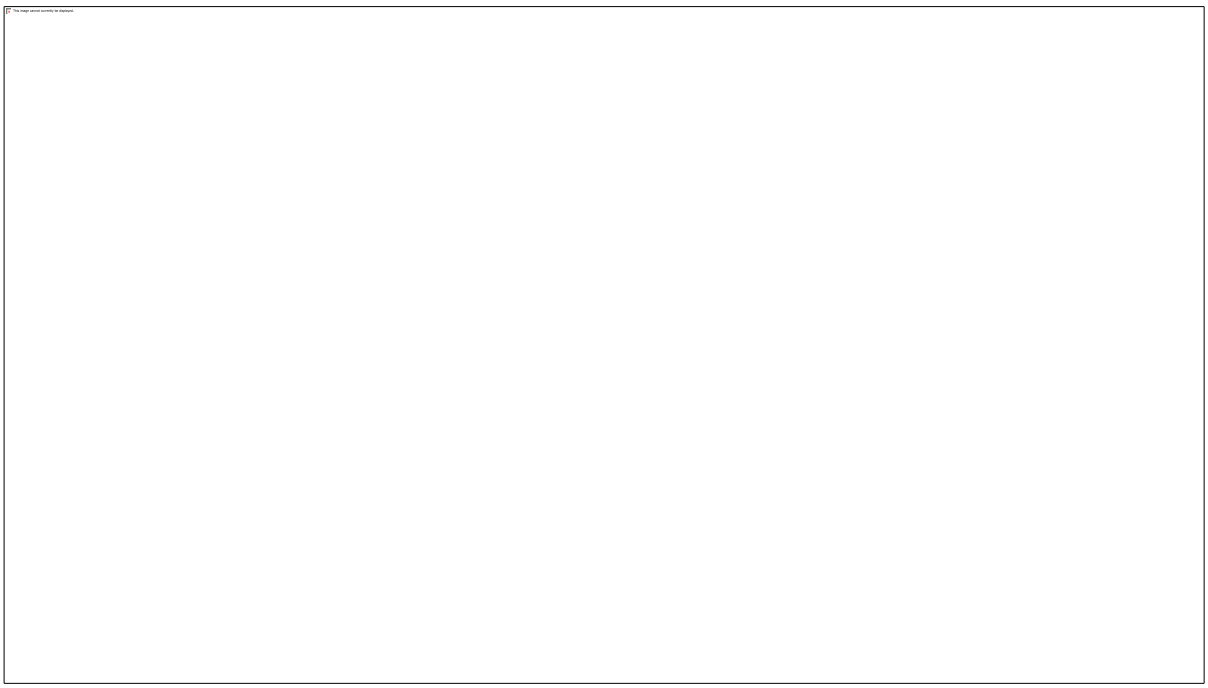
Important consideration: Long open slits may cause the fabric to separate. They should be controlled, and the design should not depend on unsupported long openings where structural strength is needed.

8.4 Angle technique

Meaning

Angle technique is a tapestry weaving method in which weft yarns are introduced at varying angles to produce diagonal lines, sloping edges and angular shapes.

The technique is useful when producing triangular, diamond-shaped and other geometric forms.



Characteristics

- Produces diagonal lines.
- Creates sloping boundaries between colours.
- Allows the production of triangles and diamond shapes.
- Requires careful control of the weft.
- Can create movement and visual interest.

Procedure

1. Prepare a loom with evenly spaced warp yarns.
2. Select the required colours.
3. Plan the angular design.
4. Introduce the weft in the required section.
5. Gradually change the turning points of the weft to form the intended slope.
6. Maintain suitable tension.
7. Beat the weft gently.
8. Continue until the required angular shape is completed.

Applications

- Producing zigzag designs.
- Making triangular patterns.
- Creating diamond shapes.
- Producing artistic wall hangings.
- Making decorative textile panels.

8.5 Comparison of tapestry weaving techniques

Technique	Main feature	Typical application
Interlocking	Adjacent wefts are linked around a shared warp	Joining colour areas
Dovetailing	Two wefts turn independently around a shared warp	Creating clear colour boundaries
Slit	Separate colour areas leave an opening between them	Geometric colour blocks
Angle	Weft placement forms sloping or diagonal boundaries	Triangles and diagonal designs

8.6 Factors to consider when selecting a tapestry technique

1. Shape of the intended design.
2. Number of colours.
3. Desired appearance.
4. Strength of the woven article.
5. Thickness of yarn.
6. Distance between warp yarns.
7. Level of experience of the weaver.
8. Complexity of the pattern.
9. Intended use of the finished item.

10. Time available for production.

9.0 DESIGNING A TAPESTRY WOVEN ARTICLE

9.1 Meaning of tapestry design

Tapestry design is the process of planning the arrangement of colours, shapes, lines, patterns and textures before weaving a textile artwork.

The design acts as a guide during the weaving process.

9.2 Elements of art used in tapestry weaving

1. Line

- Lines are created through the arrangement of warp and weft yarns.
- They may be horizontal, vertical, diagonal or curved.
- They help create patterns and shapes.

2. Shape

- Shapes are formed by arranging coloured weft yarns.
- They may be geometric or organic.
- Examples include circles, triangles, squares and irregular forms.

3. Colour

- Colour improves the visual appearance of woven products.
- Contrasting colours help distinguish different areas.
- Harmonious colours create unity.

4. Texture

- Texture refers to the surface quality of the woven article.
- It may be smooth, rough, soft, coarse or raised.
- Different yarns produce different textures.

5. Space

- Space refers to the areas occupied or left between shapes and design elements.
- It helps organise the composition.

6. Form

- Form refers to the three-dimensional appearance of a woven object.
- It is particularly relevant to products such as bags and other shaped articles.

9.3 Principles of design in tapestry weaving

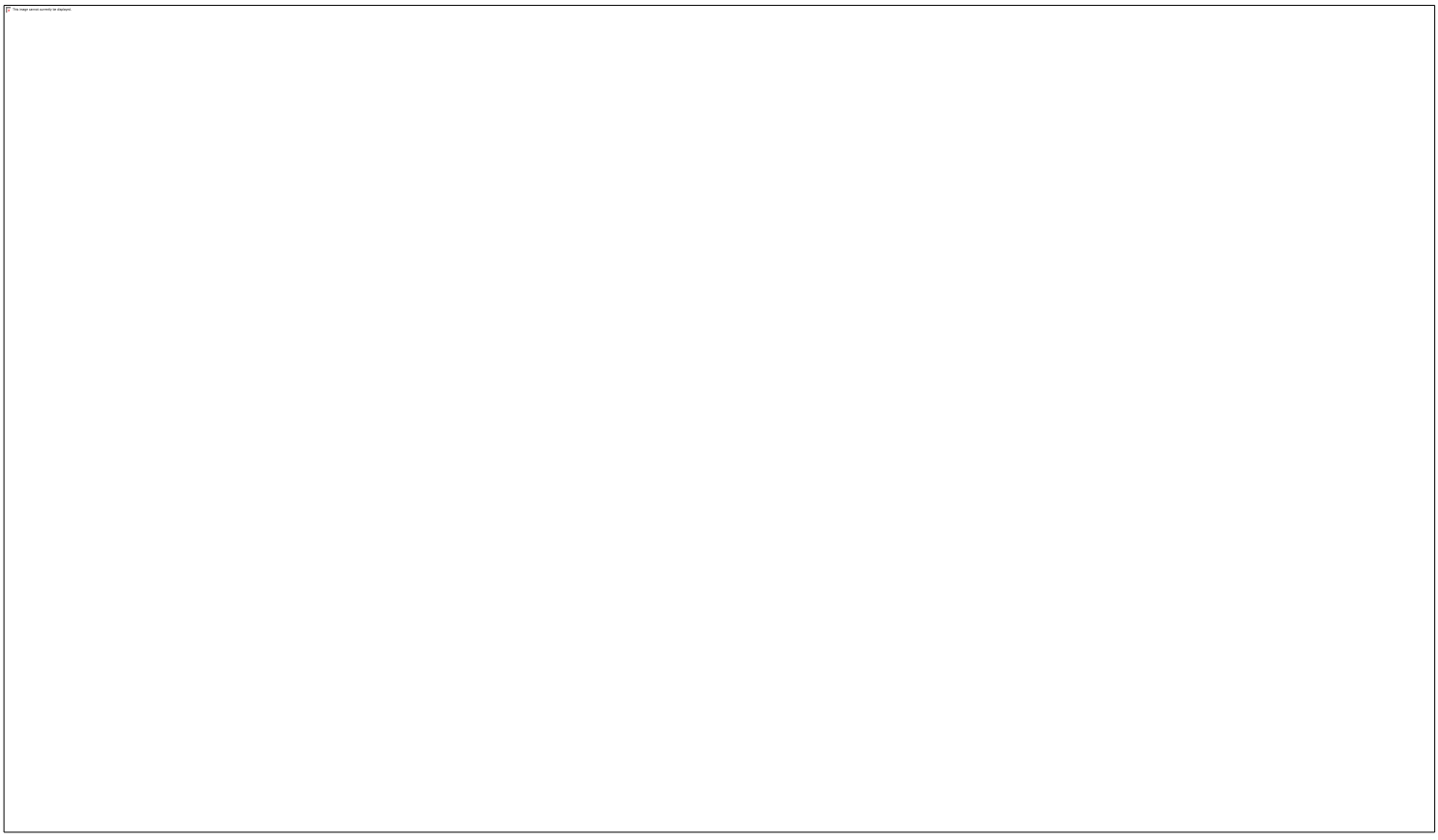
1. **Balance:** Arranging colours and shapes to create visual stability.
2. **Unity:** Ensuring all parts of the design work together.
3. **Rhythm:** Repeating patterns to create visual movement.
4. **Contrast:** Combining different colours and textures.
5. **Proportion:** Maintaining suitable relationships between design parts.

6. **Emphasis:** Creating a focal point that attracts attention.
7. **Variety:** Using different shapes, colours and textures.
8. **Harmony:** Selecting elements that complement one another.
9. **Movement:** Guiding the viewer's eye through the artwork.
10. **Repetition:** Reusing shapes, colours or lines to create consistency.

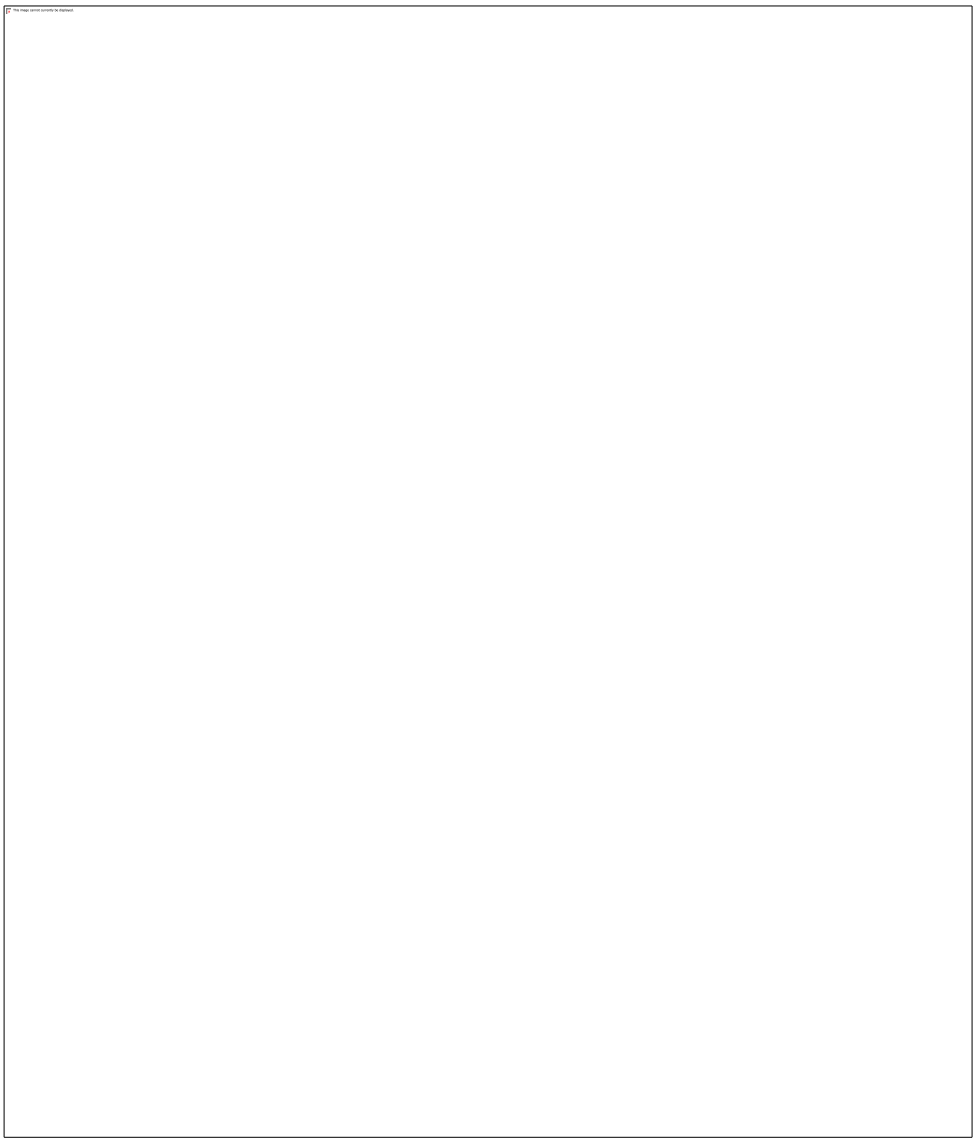
9.4 Sources of inspiration for tapestry designs

- African traditional textiles.
- Kente cloth patterns.
- Kenyan indigenous basket patterns.
- Nature.
- Plants and flowers.
- Animals.
- Landscapes.
- Buildings.
- Geometric shapes.
- Cultural symbols.
- Everyday objects.
- Personal experiences.

9.5 Developing a tapestry design







Procedure

1. Identify the purpose of the woven article.
2. Research indigenous and contemporary textile designs.
3. Select a source of inspiration.
4. Generate different design ideas.
5. Draw rough sketches.
6. Select suitable colours.
7. Plan the arrangement of shapes.
8. Decide on the tapestry techniques to be used.
9. Prepare a final design.
10. Estimate the required yarn and other materials.

10.0 PRACTICAL PROJECT: CREATING A MULTICOLOURED TAPESTRY WALL HANGING



10.1 Materials required

- Wooden frame loom.
- Cotton warp yarn.

- Coloured wool or acrylic yarn.
- Weaving needle.
- Scissors.
- Measuring tape.
- Ruler.
- Wooden dowel or hanging rod.
- Suitable finishing materials.

10.2 Tools required

- Weaving comb.
- Weaving needle.
- Scissors.
- Ruler.
- Pencil.
- Measuring tape.

10.3 Procedure

Stage 1: Research and planning

1. Study examples of African indigenous woven textiles.
2. Examine tapestry wall hangings.
3. Identify the shapes and colours to use.
4. Develop an original design.
5. Draw the proposed wall hanging.

Stage 2: Preparation of the loom

1. Select a suitable frame loom.
2. Inspect the frame for stability.
3. Attach the warp yarns.
4. Maintain even spacing.
5. Ensure appropriate tension.
6. Check that the loom is ready for weaving.

Stage 3: Preparation of yarn

1. Select different coloured yarns.
2. Sort the yarn according to colour.
3. Cut or prepare suitable lengths.
4. Wind yarn onto bobbins where necessary.
5. Select the colours according to the design.

Stage 4: Weaving the foundation

1. Begin with a suitable foundation row.
2. Pass the weft yarn through the warp.
3. Beat the weft gently into position.
4. Repeat the process to establish a stable base.

Stage 5: Creating the tapestry design

1. Introduce the first colour.
2. Weave the yarn in its designated area.
3. Introduce another colour in the adjacent section.
4. Apply the selected technique, such as interlocking or dovetailing.
5. Use the slit technique where an open boundary is intended.
6. Apply the angle technique to create diagonal shapes.
7. Continue according to the design.
8. Maintain even tension.
9. Check the pattern regularly.

Stage 6: Finishing

1. Complete the weaving to the required length.
2. Secure the weft ends.
3. Remove the woven article carefully from the loom.
4. Secure the warp ends.
5. Trim excess yarn.
6. Attach a hanging rod where required.
7. Inspect the finished wall hanging.

Stage 7: Display

1. Select a suitable display area.
2. Hang the finished tapestry securely.
3. Provide a title for the artwork.
4. Explain the inspiration behind the design.
5. Invite peers to appraise the finished work.

10.4 Qualities of a good tapestry wall hanging

- Attractive colour arrangement.
- Clear and well-organised patterns.
- Uniform warp tension.
- Neat edges.
- Securely woven sections.
- Appropriate texture.

- Well-finished ends.
- Original design.
- Good overall appearance.
- Strong hanging arrangement.

11.0 PRACTICAL PROJECT: MAKING A TWO-COLOURED SCARF USING 3/1 TWILL



11.1 Meaning of a two-coloured scarf

A two-coloured scarf is a textile accessory woven using two selected colours of yarn to create a coordinated and attractive fabric.

The two colours can be used in the warp and weft systems to create a distinctive visual effect.

11.2 Materials required

- Warp yarn.
- Two selected colours of yarn.
- Cotton or wool yarn.
- Suitable frame loom.
- Weaving needle or shuttle.
- Scissors.

- Measuring tape.
- Ruler.
- Weaving comb.

11.3 Factors to consider when selecting colours

1. Harmony between the two colours.
2. Contrast between the colours.
3. Intended wearer.
4. Purpose of the scarf.
5. Cultural inspiration.
6. Availability of yarn.
7. Appearance of the finished fabric.

11.4 Procedure for making the scarf

1. Study examples of twill-woven scarves.
2. Select two complementary or contrasting colours.
3. Sketch the proposed scarf design.
4. Determine the desired dimensions.
5. Prepare the frame loom.
6. Measure and attach the warp yarns.
7. Maintain uniform warp tension.
8. Prepare the selected weft yarn.
9. Follow the 3/1 twill weave draft.
10. Pass the weft through the appropriate sheds.
11. Beat the weft into position.
12. Shift the interlacing sequence by one warp end for each successive pick.
13. Alternate colours according to the planned design.
14. Continue weaving until the desired length is reached.
15. Maintain consistent width and tension.
16. Secure the woven structure.
17. Remove the scarf carefully from the loom.
18. Finish the ends by knotting or creating suitable fringes.
19. Inspect the scarf for weaving errors.
20. Display the finished product.

11.5 Qualities of a well-made two-coloured scarf

- Correct dimensions.
- Consistent width.

- Clear diagonal twill pattern.
- Harmonious colour combination.
- Uniform texture.
- Properly secured edges.
- Comfortable feel.
- Neat finishing.
- No loose or broken yarns.
- Attractive appearance.

11.6 Common challenges and possible solutions

Challenge	Possible solution
Uneven warp tension	Adjust and secure the warp uniformly
Irregular diagonal lines	Follow the correct 3/1 twill draft
Uneven fabric width	Maintain consistent selvedge tension
Loose weft	Beat the weft evenly
Broken yarn	Replace with a suitable yarn and secure properly
Poor colour arrangement	Prepare a colour plan before weaving
Fabric distortion	Maintain balanced tension and consistent beating
Untidy edges	Monitor selvedges throughout weaving

12.0 PILE WEAVING AND ITS APPLICATION IN EVERYDAY FABRICS

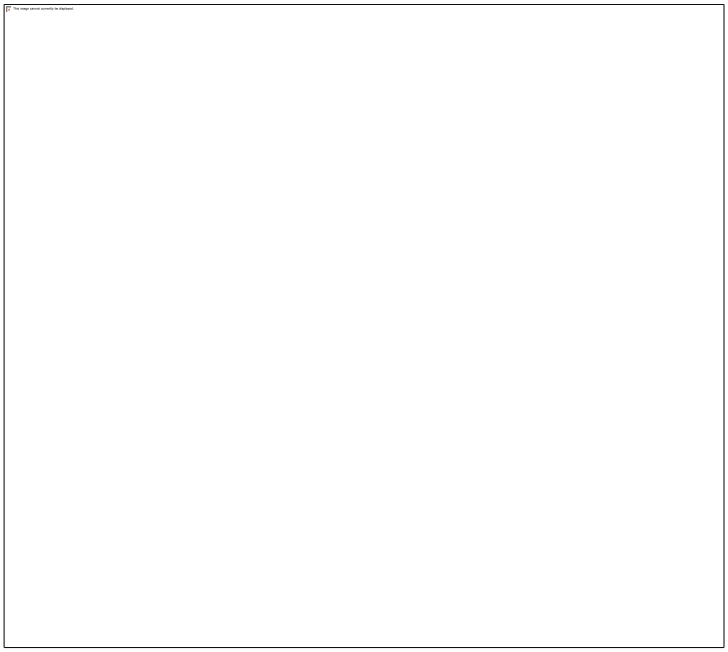
The first suggested inquiry question asks: *How has pile weaving been used in making everyday-use fabrics?*

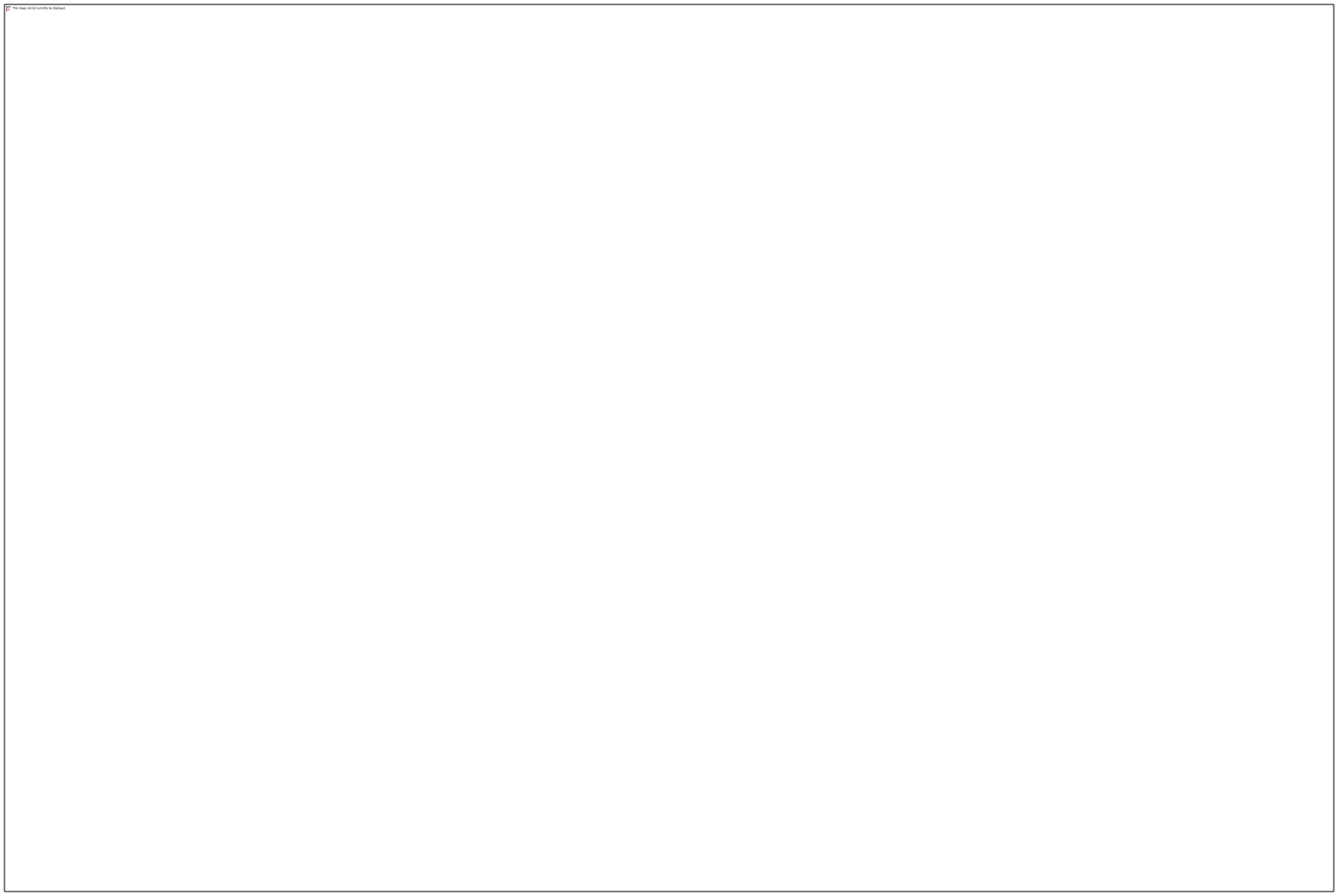
12.1 Meaning of pile weaving

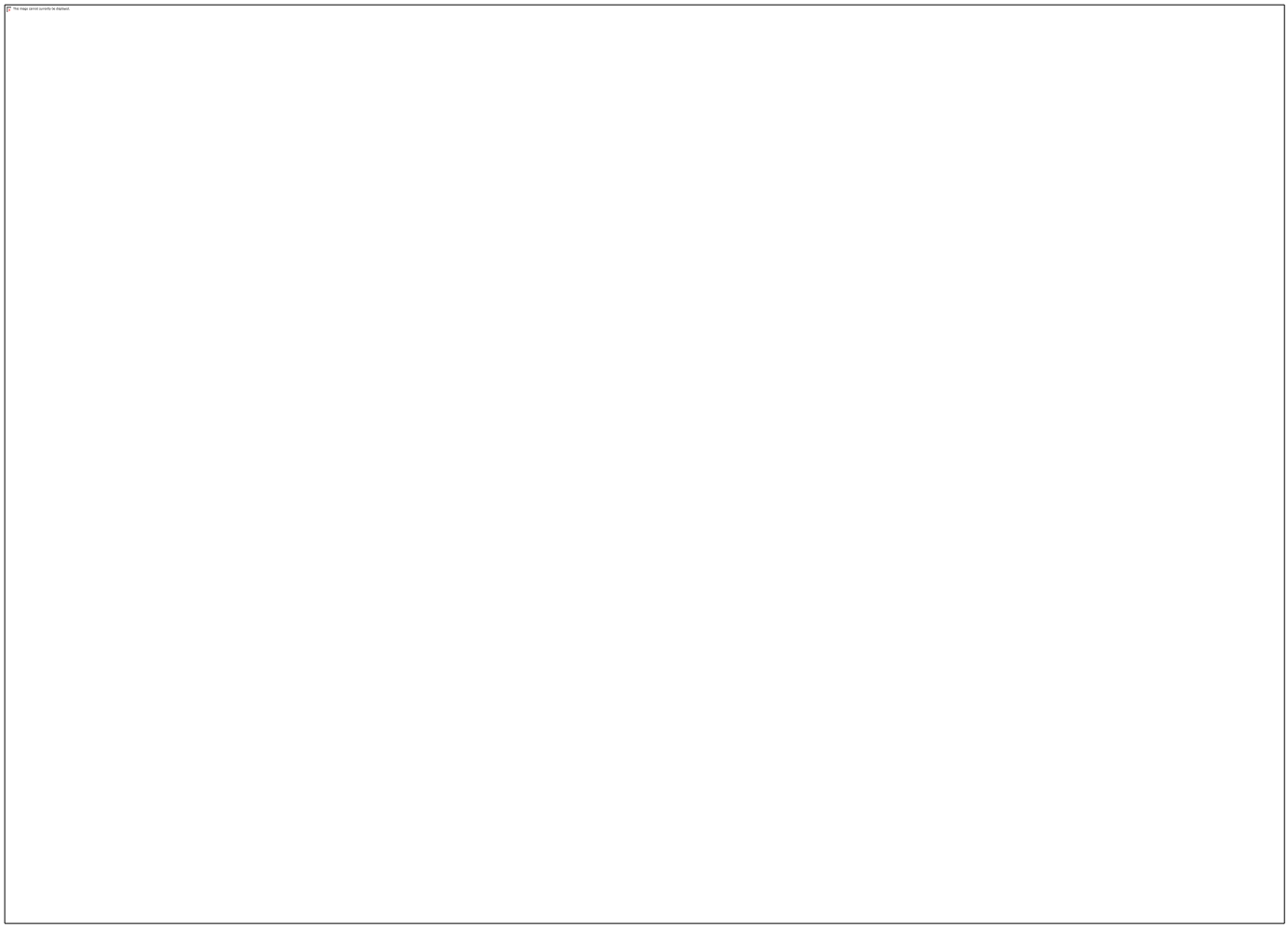
Pile weaving is a textile construction technique in which additional yarns are introduced to form loops or projecting fibres on the surface of a fabric.

These loops or fibres create a raised surface known as pile.

Pile fabrics are commonly used where softness, warmth, cushioning and decorative surface texture are required.







12.2 Types of pile weaving

1. Cut pile

- The loops formed during weaving are cut to produce upright fibres.
- The surface becomes soft and velvety.
- Examples include velvet and some carpet fabrics.

2. Loop pile

- The loops remain uncut.
- It produces a textured surface.
- It is commonly used in towels and carpets.

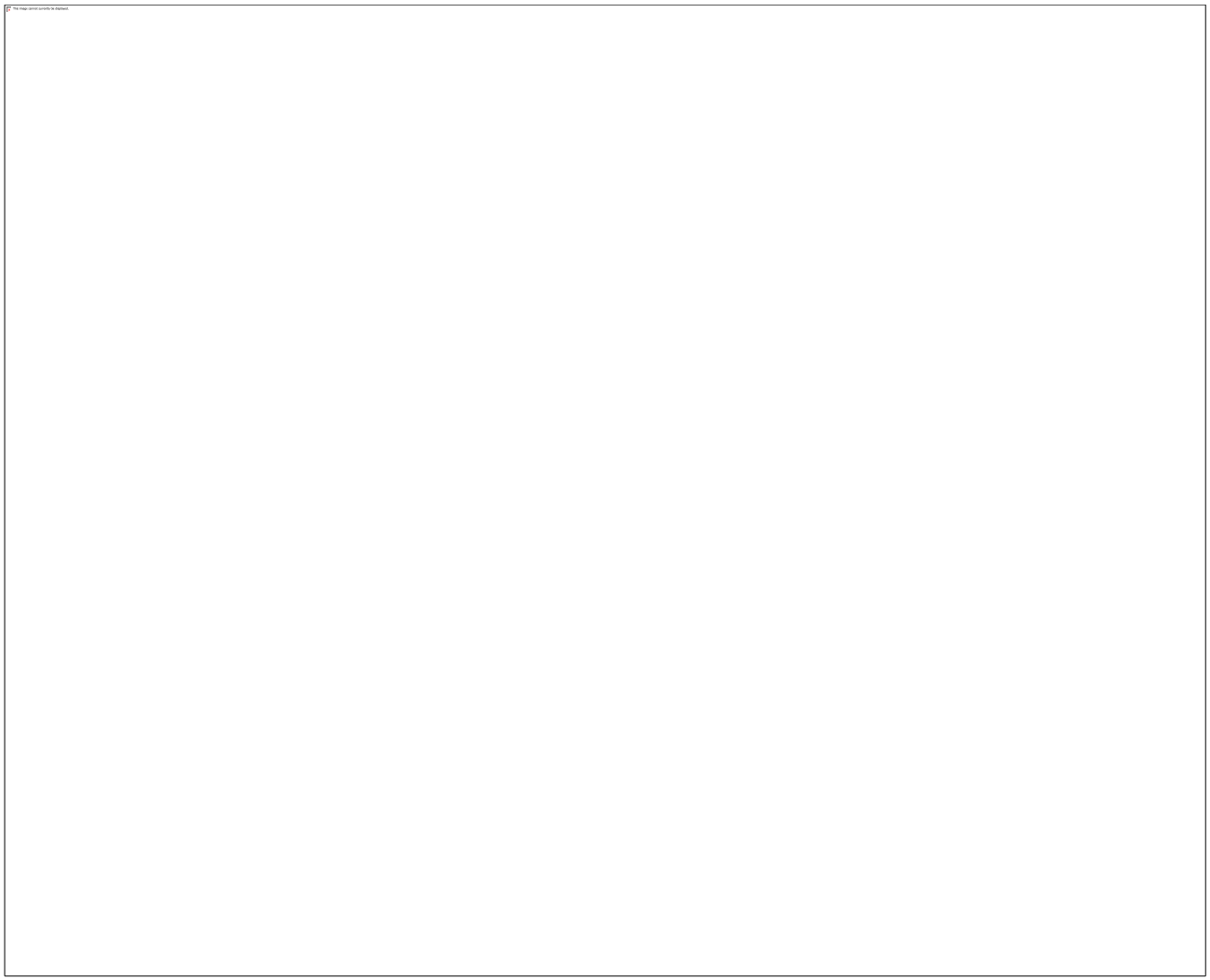
3. Warp pile

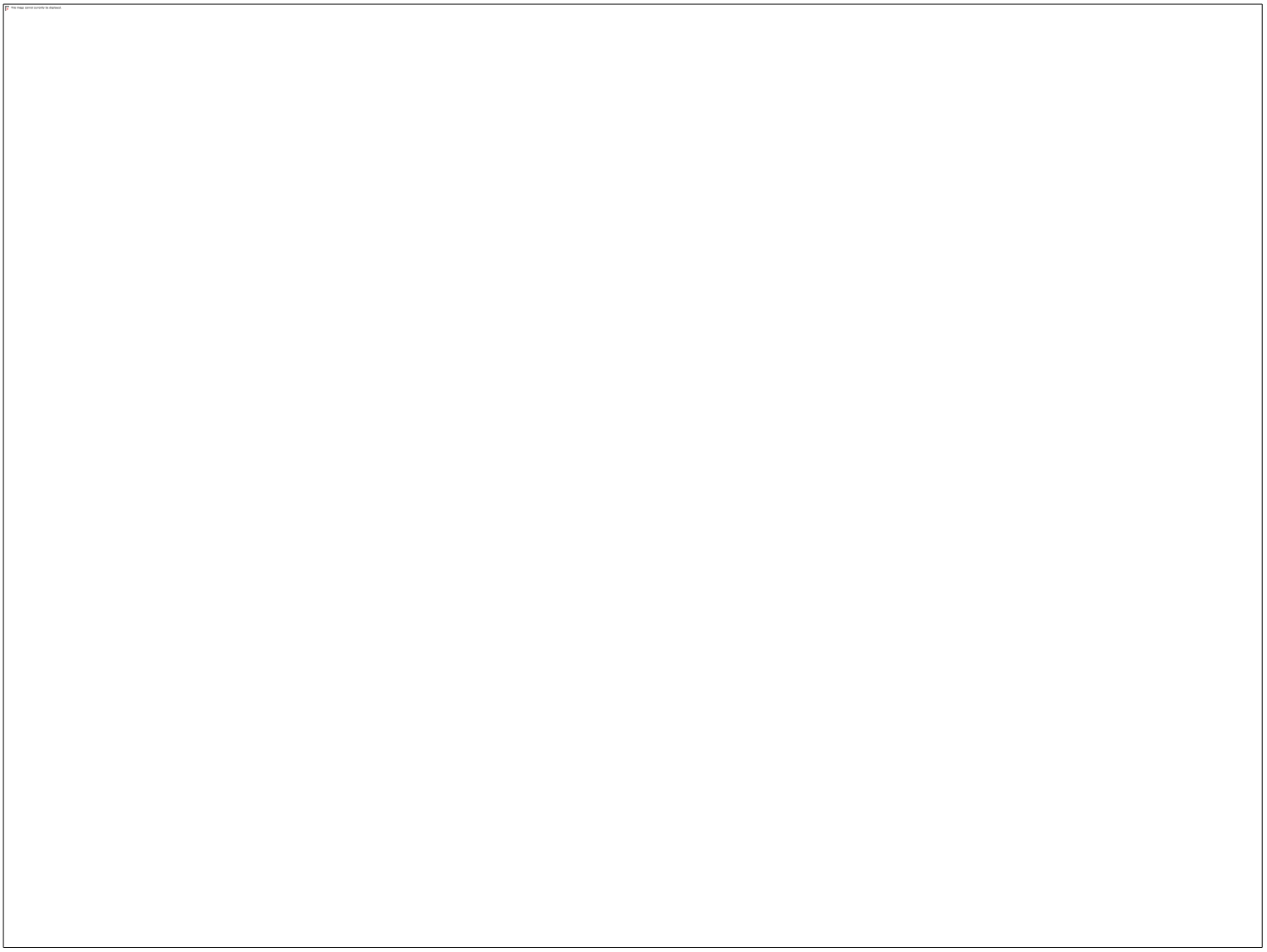
- Additional warp yarns form loops or raised fibres.
- The pile is created through the warp system.

4. Weft pile

- Additional weft yarns are used to create a raised surface.
- The construction produces textured decorative effects.

12.3 Everyday uses of pile fabrics







- Towels.

- Carpets.
- Rugs.
- Velvet clothing.
- Upholstery.
- Blankets.
- Cushion covers.
- Bathrobes.
- Decorative furnishings.

12.4 Advantages of pile fabrics

1. They provide a soft surface.
2. They can improve comfort.
3. They may provide warmth.
4. They can improve cushioning.
5. They create attractive surface textures.
6. They are useful in interior decoration.
7. They provide different aesthetic possibilities.

12.5 Limitations of pile fabrics

1. Some pile fabrics collect dust.
2. Some are difficult to clean.
3. Certain types may flatten with repeated use.
4. Some may require special care.
5. Damaged pile surfaces may be difficult to repair.

PART FOUR: FINISHING, DISPLAY AND APPRAISAL

13.0 FINISHING OF WOVEN ITEMS

13.1 Meaning of finishing

Finishing refers to the processes carried out after weaving to improve the appearance, durability, functionality and quality of a textile product.

13.2 Finishing techniques

1. Trimming

- Removing excess yarn.
- Produces neat edges.
- Improves the overall appearance.

2. Knotting

- Securing loose yarn ends.
- Prevents the woven structure from coming apart.

3. Fringing

- Creating decorative loose ends at the edges.
- Adds beauty to scarves and wall hangings.

4. Hemming

- Folding and securing the edges of a textile product.
- Prevents fraying.

5. Washing

- Removing dirt and unwanted substances.
- Must be done according to the fibre type.

6. Pressing

- Applying suitable heat and pressure to improve the appearance of certain woven products.
- Should be carried out according to the yarn's heat tolerance.

7. Blocking

- Gently shaping a textile product to its intended dimensions.
- Helps correct minor distortions where the fibre permits.

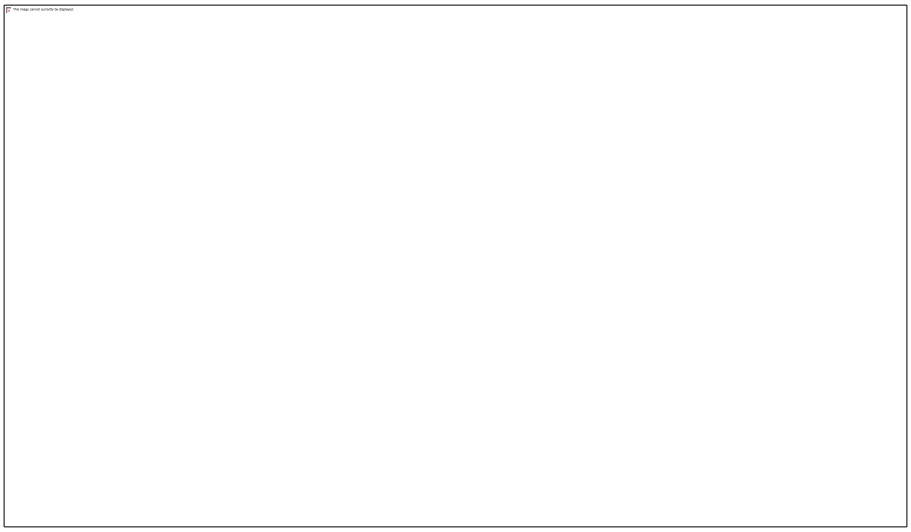
13.3 Importance of finishing

- Improves the appearance of woven products.
- Prevents loose yarns.
- Enhances durability.
- Improves functionality.
- Gives the product a professional appearance.
- Makes products suitable for display or sale.

14.0 DISPLAYING WOVEN PRODUCTS

14.1 Meaning of display

Display refers to arranging and presenting finished woven items in a manner that allows viewers to appreciate their design, construction and artistic qualities.





14.2 Methods of displaying woven items

1. Hanging wall tapestries on suitable display rods.
2. Folding and arranging scarves on display tables.
3. Mounting textile samples on display boards.
4. Placing woven mats on clean display surfaces.
5. Using mannequins to display woven clothing accessories.
6. Arranging related products together as a collection.

14.3 Factors to consider when displaying woven products

- Cleanliness.
- Visibility.
- Lighting.
- Colour arrangement.
- Security.
- Suitable background.
- Product arrangement.
- Accessibility.
- Protection from dust and moisture.
- Clear identification of the artist and artwork.

15.0 APPRAISAL OF TWILL AND TAPESTRY WEAVING

15.1 Meaning of appraisal

Appraisal is the systematic process of examining and judging the quality, artistic value, construction and functionality of a finished artwork or craft product.

In weaving, appraisal helps learners understand the strengths and weaknesses of their work and identify areas for improvement.

15.2 Criteria for appraising a 3/1 twill scarf

1. Accuracy of the 3/1 twill structure.
2. Clarity of the diagonal pattern.
3. Uniformity of warp tension.
4. Consistency of fabric width.
5. Quality of yarn selection.
6. Colour harmony.
7. Neatness of selvedges.
8. Durability.
9. Finishing quality.
10. Overall appearance.

15.3 Criteria for appraising a tapestry article

1. Creativity of the design.
2. Effective use of colours.
3. Accuracy of tapestry techniques.
4. Clarity of shapes and patterns.
5. Neatness of interlocking or dovetailing.
6. Proper management of slits.
7. Quality of diagonal and angular designs.
8. Uniform tension.
9. Neat finishing.
10. Functionality and durability.

15.4 Steps in appraising woven items

1. Display the finished woven items.
2. Allow learners to observe the different products.
3. Explain the appraisal criteria.
4. Invite learners to describe their work.
5. Examine the weaving structures.
6. Identify the strengths of each item.
7. Identify areas that need improvement.
8. Give constructive feedback.
9. Suggest possible improvements.
10. Encourage learners to reflect on what they have learned.

15.5 Giving constructive feedback

Examples:

- "Your scarf has an attractive diagonal pattern, but the edges require more attention."
- "Your tapestry demonstrates excellent colour selection. You could improve the consistency of the weft tension."
- "The geometric arrangement is creative, although the open slits need to be controlled."
- "Your use of interlocking has produced strong colour boundaries."

Learners should respect one another's opinions and avoid insulting or discouraging comments.

PART FIVE: SAFETY, ENVIRONMENTAL CONSERVATION AND ENTREPRENEURSHIP

16.0 SAFETY AND HYGIENE IN WEAVING

16.1 Safety precautions

1. Handle scissors carefully.
2. Avoid placing sharp tools on the edges of tables.
3. Use smooth and safe wooden frames.

4. Avoid splinters from unfinished wood.
5. Do not pull warp yarns excessively.
6. Keep loose yarn away from moving equipment.
7. Use tools only for their intended purposes.
8. Maintain a clean and organised working area.
9. Avoid running or playing around weaving equipment.
10. Store needles and sharp tools safely.

16.2 Hygiene practices

- Wash hands before handling yarn.
- Keep yarn clean and dry.
- Store materials in clean containers.
- Clean tools after use.
- Avoid using contaminated fibres.
- Keep food and drinks away from weaving materials.
- Dispose of waste yarn responsibly.

16.3 Environmental conservation

Weaving can contribute to environmental conservation through:

1. Reusing textile waste.
2. Recycling suitable yarns.
3. Using locally available sustainable fibres.
4. Reducing unnecessary material wastage.
5. Repairing woven products rather than discarding them.
6. Avoiding harmful dyes and chemicals.
7. Using biodegradable materials where appropriate.
8. Promoting sustainable production methods.

17.0 ENTREPRENEURSHIP IN WEAVING CRAFTS

17.1 Economic importance of weaving

- Creates employment opportunities.
- Generates income for artisans.
- Promotes cultural tourism.
- Supports local textile industries.
- Encourages innovation.
- Provides opportunities for self-employment.
- Supports the growth of creative enterprises.
- Promotes the sale of Kenyan handmade products.

17.2 Career opportunities

Learners who develop weaving skills can pursue careers as:

- Textile designers.
- Tapestry artists.
- Handloom weavers.
- Textile entrepreneurs.
- Fashion designers.
- Interior decoration artists.
- Textile instructors.
- Craft product designers.
- Textile quality assessors.
- Creative industry professionals.

17.3 Starting a small weaving enterprise in Kenya

A learner can establish a small weaving business by:

1. Identifying a market for woven products.
2. Researching customer preferences.
3. Selecting appropriate yarns and equipment.
4. Developing original designs.
5. Producing quality samples.
6. Calculating production costs.
7. Determining selling prices.
8. Packaging products attractively.
9. Advertising products through exhibitions and digital platforms.
10. Maintaining good customer relationships.

17.4 Calculating the selling price of a woven product

The selling price should cover production costs and provide a reasonable profit.

Selling Price=Total Production Cost+ProfitSelling Price=Total Production Cost+Profit

Example:

A learner produces a woven scarf.

Production item	Cost (KSh)
Yarn	250
Other materials	50
Labour	150
Packaging	50
Total production cost	500

If the learner intends to make KSh 200 profit:

Selling price = 500 + 200

Selling price = KSh 700.

PART SIX: COMPETENCY-BASED EDUCATION INTEGRATION

18.0 SPECIFIC LEARNING OUTCOMES

By the end of this sub-strand, the learner should be able to:

a) Analyse concepts of twill and tapestry weaving techniques.

The learner should be able to:

- Define twill weaving.
- Explain the structure of 3/1 twill.
- Identify the characteristics of tapestry weaving.
- Distinguish between twill and tapestry weaving.
- Explain interlocking, dovetailing, slit and angle techniques.
- Analyse examples of African indigenous woven textiles.

b) Make a woven item using the 3/1 twill weave technique.

The learner should be able to:

- Identify appropriate materials and tools.
- Construct a simple frame loom.
- Prepare warp yarns.
- Follow a 3/1 twill draft.
- Weave a two-coloured scarf.
- Finish and display the scarf.

c) Create a woven item using tapestry techniques.

The learner should be able to:

- Develop a tapestry design.
- Select appropriate colours and yarns.
- Prepare a frame loom.
- Apply the interlocking technique.
- Apply the dovetailing technique.
- Apply the slit technique.
- Apply the angle technique.
- Produce a multicoloured woven article.

d) Appreciate own and peers' tapestry and twill weave items.

The learner should be able to:

- Display completed woven items.
- Identify appraisal criteria.

- Evaluate the quality of woven products.
- Give constructive feedback.
- Accept suggestions for improvement.
- Appreciate different artistic approaches.

TOPICAL REVISION QUESTIONS

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer ALL the questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. What is weaving?

A. The process of joining wooden pieces using nails.

B. The process of interlacing warp and weft yarns to produce fabric.

C. The process of painting patterns on textiles.

D. The process of cutting fibres into small pieces.

2. Which of the following correctly describes warp yarns?

A. Threads arranged across the width of the fabric.

B. Threads used only for decoration.

C. Threads arranged lengthwise on the loom.

D. Threads used to finish fabric edges.

3. What is the main function of weft yarns?

A. To hold the loom together.

B. To pass across the warp yarns during weaving.

C. To support the wooden frame.

D. To measure the fabric.

4. Which African country is particularly associated with Kente weaving?

A. Kenya

B. Namibia

C. Ghana

D. Tanzania

5. Which of the following is a characteristic of Kente cloth?

A. It consists entirely of plain white threads.

B. It has colourful geometric patterns.

C. It is produced through leather thonging.

D. It is made exclusively from plastic strips.

6. What is twill weaving?

A. A technique of printing patterns on fabric.

B. A method of interlacing yarns to produce diagonal lines.

C. A technique of joining leather pieces.

D. A method of painting woven materials.

7. What is the characteristic appearance of a twill fabric?

A. Circular holes.

B. Diagonal lines or ribs.

C. Raised dots only.

D. Random openings.

8. What does the notation 3/1 represent in twill weaving?

A. Three warp yarns and one loom.

B. Three colours and one pattern.

C. A four-end interlacing repeat with a three-to-one distribution.

D. Three weavers and one shuttle.

9. In a 3/1 twill, how many ends are contained in the basic repeat?

A. Two

B. Three

C. Four

D. Six

10. Which of the following is a common application of twill weave?

A. Denim fabric production.

B. Glass painting.

C. Pottery decoration.

D. Wood carving.

11. What is the main function of a frame loom?

A. To cut yarns.

B. To hold warp yarns during weaving.

C. To colour textile materials.

D. To polish finished fabrics.

12. Which tool is used to push the weft yarn into position during weaving?

A. Weaving comb.

B. Paintbrush.

C. Hammer.

D. Craft knife.

13. What is a shuttle used for in weaving?

A. Measuring yarn.

B. Carrying weft yarn across the warp.

C. Cutting the fabric.

D. Supporting the loom.

14. Which of the following is an important quality of a good warp yarn?

A. It should break easily.

B. It should be extremely weak.

C. It should withstand weaving tension.

D. It should have irregular thickness.

15. What is tapestry weaving?

A. A technique of making baskets using reeds.

B. A technique of creating decorative textile designs using coloured weft yarns.

C. A method of printing images on paper.

D. A technique of decorating leather surfaces.

16. Which type of yarn arrangement is commonly used in tapestry weaving?

A. Continuous warp only.

B. Discontinuous coloured weft sections.

C. Metal strips only.

D. Plastic sheets only.

17. Which tapestry technique involves linking two adjacent coloured weft yarns around a common warp yarn?

A. Slit technique.

B. Interlocking technique.

C. Angle technique.

D. Plain weaving technique.

18. What happens in the dovetailing technique?

A. Two adjacent weft yarns turn independently around a shared warp yarn.

B. All warp yarns are removed.

C. The weft yarns are cut after every row.

D. The fabric is painted after weaving.

19. Which tapestry technique creates an opening between adjacent colour areas?

A. Interlocking. B. Dovetailing.

C. Slit technique. D. Plain weave.

20. Which tapestry technique is suitable for producing diagonal shapes and sloping boundaries?

A. Angle technique.

B. Slit technique.

C. Knotting technique.

D. Hemming technique.

21. Which of the following is a suitable product made using tapestry weaving?

A. Wooden chair.

B. Wall hanging.

C. Clay pot.

D. Leather belt.

22. What is the meaning of a shed in weaving?

A. A space used for storing yarn.

B. An opening formed between selected warp yarns for passing the weft.

C. A finished textile edge.

D. A type of weaving needle.

23. Which of the following is a principle of design used in tapestry weaving?

A. Corrosion.

B. Rhythm.

C. Evaporation.

D. Condensation.

24. What is the importance of maintaining uniform warp tension?

A. To produce an even and stable woven structure.

B. To increase the number of colours.

C. To make the yarn disappear.

D. To change the type of loom.

25. What is pile weaving?

A. A method of cutting yarn into small pieces.

B. A technique that produces loops or raised fibres on a fabric surface.

C. A technique of painting diagonal patterns.

D. A method of joining wooden frames.

26. Which of the following is an example of a loop-pile fabric?

A. Denim.

B. Cotton terry towel.

C. Plain cotton sheet.

D. Linen tablecloth.

27. What is the main purpose of fringing in woven products?

A. To weaken the fabric.

B. To create decorative loose ends at the edges.

C. To remove the warp yarns.

D. To change the loom structure.

28. Which of the following demonstrates creativity and imagination in weaving?

A. Copying every design without modification.

B. Producing an original tapestry design using different colour arrangements.

C. Refusing to experiment with yarns.

D. Using damaged tools.

29. Which of the following demonstrates responsibility during weaving activities?

A. Leaving sharp tools on the floor.

B. Wasting yarn deliberately.

C. Cleaning and storing tools after use.

D. Pulling warp yarns excessively.

30. During a critique session, a learner appreciates a peer's woven work and suggests improvements politely. Which value is demonstrated?

A. Disrespect.

B. Unity and respect.

C. Dishonesty.

D. Selfishness.

SECTION B: STRUCTURED QUESTIONS

50 MARKS

Answer ALL questions.

QUESTION 1: INTRODUCTION TO WEAVING CRAFTS (8 MARKS)

a) Define the term weaving. (2 marks)

b) Differentiate between warp and weft yarns. (2 marks)

c) Identify four products that can be produced through weaving. (4 marks)

QUESTION 2: TWILL WEAVING (8 MARKS)

a) Define twill weaving. (2 marks)

b) Explain three characteristics of a 3/1 twill weave. (3 marks)

c) Identify three products that can be produced using twill weaving. (3 marks)

QUESTION 3: MATERIALS, TOOLS AND FRAME LOOM CONSTRUCTION (8 MARKS)

a) Identify four materials used in twill and tapestry weaving. (4 marks)

b) State two functions of a frame loom. (2 marks)

c) State two precautions to observe when constructing a frame loom. (2 marks)

QUESTION 4: TAPESTRY WEAVING TECHNIQUES (10 MARKS)

a) Define tapestry weaving. (2 marks)

b) Explain the following tapestry weaving techniques:

i. Interlocking. (2 marks)

ii. Dovetailing. (2 marks)

iii. Slit technique. (2 marks)

iv. Angle technique. (2 marks)

QUESTION 5: PRODUCTION AND FINISHING OF WOVEN ITEMS (8 MARKS)

A Grade 11 learner is required to produce a multicoloured tapestry wall hanging using a frame loom.

a) Outline four stages involved in preparing the loom and materials before weaving. (4 marks)

b) State four finishing techniques that can be applied to the completed tapestry. (4 marks)

QUESTION 6: APPRAISAL, CULTURE AND ENTREPRENEURSHIP (8 MARKS)

a) Explain three criteria used when appraising a finished woven item. (3 marks)

b) State three ways in which indigenous weaving contributes to cultural and economic development in Kenya. (3 marks)

c) Identify two values demonstrated when learners work collaboratively during weaving activities. (2 marks)

24.0 SECTION A: TEACHER'S ANSWER KEY

Multiple-choice marking guide – 30 marks

No.	Answer	No.	Answer
1	B	16	B
2	C	17	B
3	B	18	A
4	C	19	C
5	B	20	A
6	B	21	B
7	B	22	B
8	C	23	B
9	C	24	A
10	A	25	B
11	B	26	B
12	A	27	B
13	B	28	B
14	C	29	C
15	B	30	B

STRAND 3.0: INDIGENOUS CRAFTS (3D ART)

SUB-STRAND 3.5: ART APPRECIATION

1.0 Introduction to Art Appreciation

Art is an important part of Kenyan society. It reflects the identity, beliefs, history, values, creativity and daily experiences of different communities. Through art, people communicate ideas, preserve cultural heritage, express emotions, earn a living and respond to contemporary issues.

Art appreciation involves looking at, examining, understanding, interpreting, evaluating and valuing artworks. It helps learners recognise the skills used by artists, understand the meaning of artworks and develop respect for different artistic traditions.

In Kenya, art appreciation involves studying both **indigenous Kenyan art and contemporary Kenyan art**. These forms of art are connected because contemporary artists often borrow ideas, symbols, techniques and materials from indigenous traditions while introducing new approaches.

1.1 Meaning of art

Art refers to the creative expression of human ideas, feelings, experiences, beliefs and observations through visual, performing or other creative forms.

Examples of visual art include:

- Paintings and drawings.
- Sculptures and carvings.
- Pottery and ceramics.
- Basketry and weaving.
- Beadwork and jewellery.
- Leatherwork.
- Metalwork.
- Textile decoration.
- Photography and digital art.

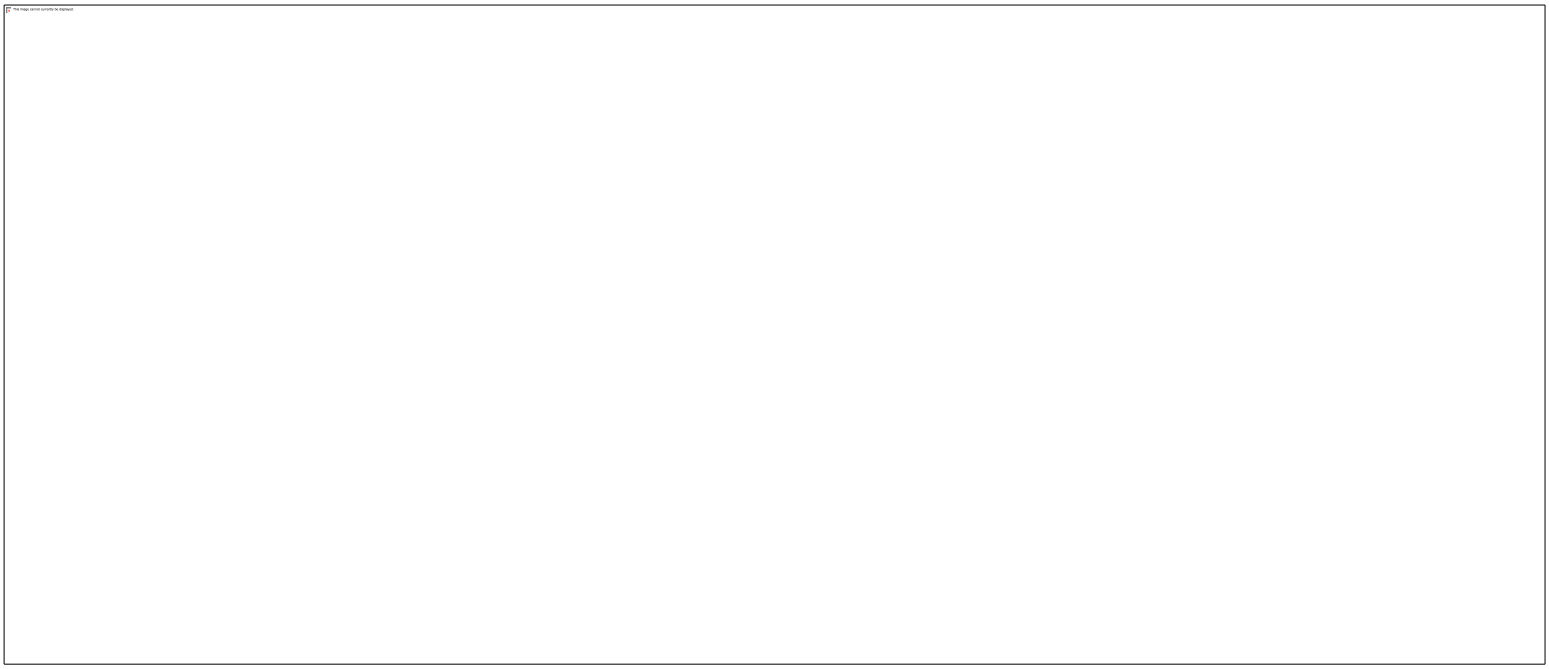
1.2 Meaning of art appreciation

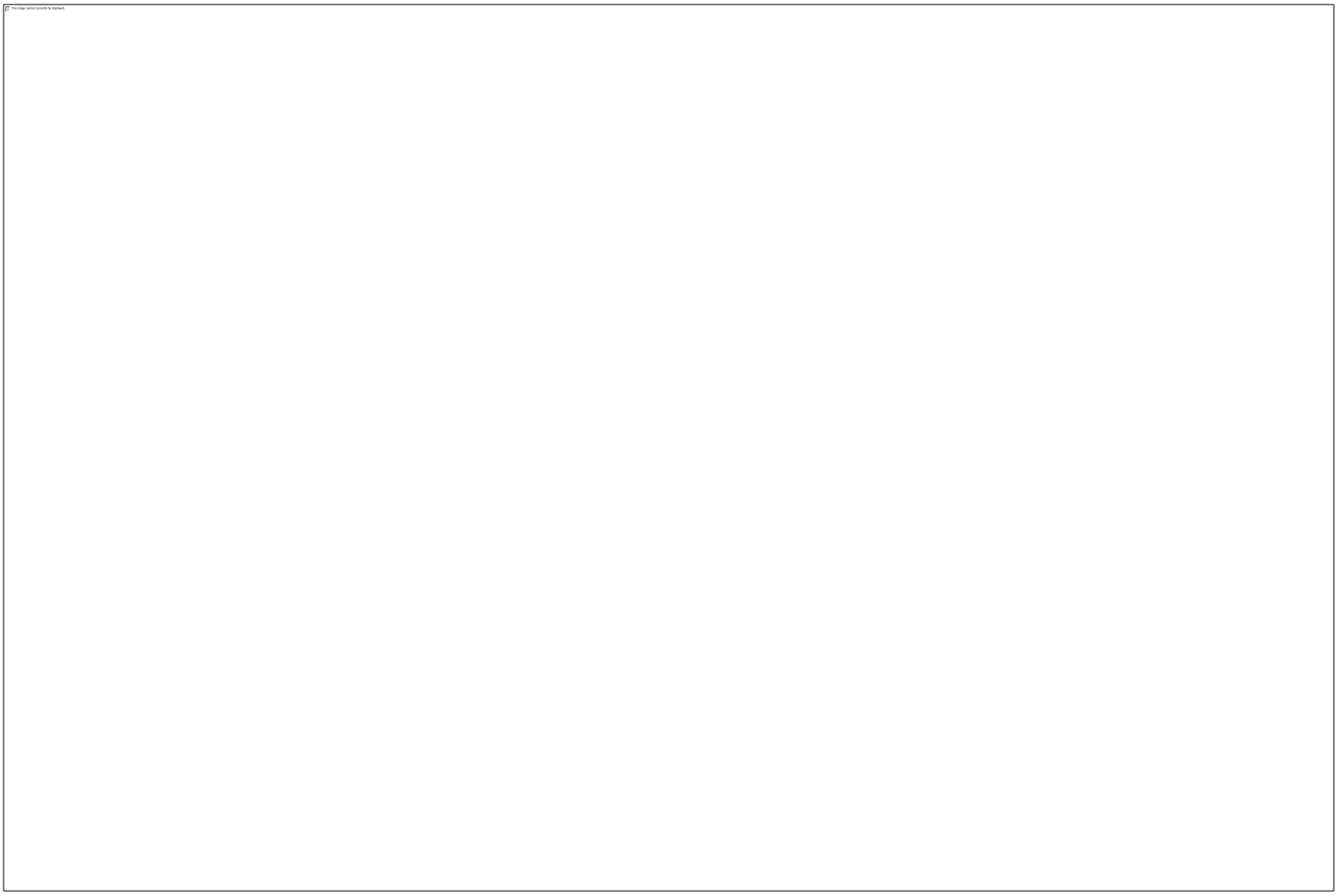
Art appreciation is the process of observing, describing, analysing, interpreting, evaluating and valuing artworks.

It involves understanding:

1. What an artwork looks like.
2. The materials and tools used to create it.
3. The techniques and processes used by the artist.
4. The meaning, message or purpose of the artwork.
5. The cultural and historical background of the artwork.
6. The quality, originality and creativity demonstrated.
7. The contribution of the artwork to society.

Example: When appreciating a traditional Maasai beadwork necklace, a learner may examine its colours, arrangement of beads, patterns, materials, craftsmanship, cultural significance and possible uses.





1.3 Meaning of indigenous Kenyan art

Indigenous Kenyan art refers to artistic expressions, objects, skills, designs and creative practices that developed among Kenyan communities and were passed from one generation to another.

It is closely associated with:

- Cultural identity.
- Traditional knowledge and skills.
- Community beliefs and values.
- Ceremonies and rituals.
- Daily activities.

- Local environments and available materials.
- Traditional occupations and ways of life.

Examples include:

- Maasai beadwork.
- Kamba wood carving.
- Kisii soapstone carving.
- Luo fish-related crafts and traditional decorative objects.
- Luhya basketry and pottery traditions.
- Kikuyu traditional stools and woodwork.
- Coastal Swahili door carving.
- Traditional pottery, weaving, leatherwork and metalwork in different Kenyan communities.

Note: Indigenous artistic practices vary within communities and change over time. They should not be treated as fixed or identical across all members of a community.

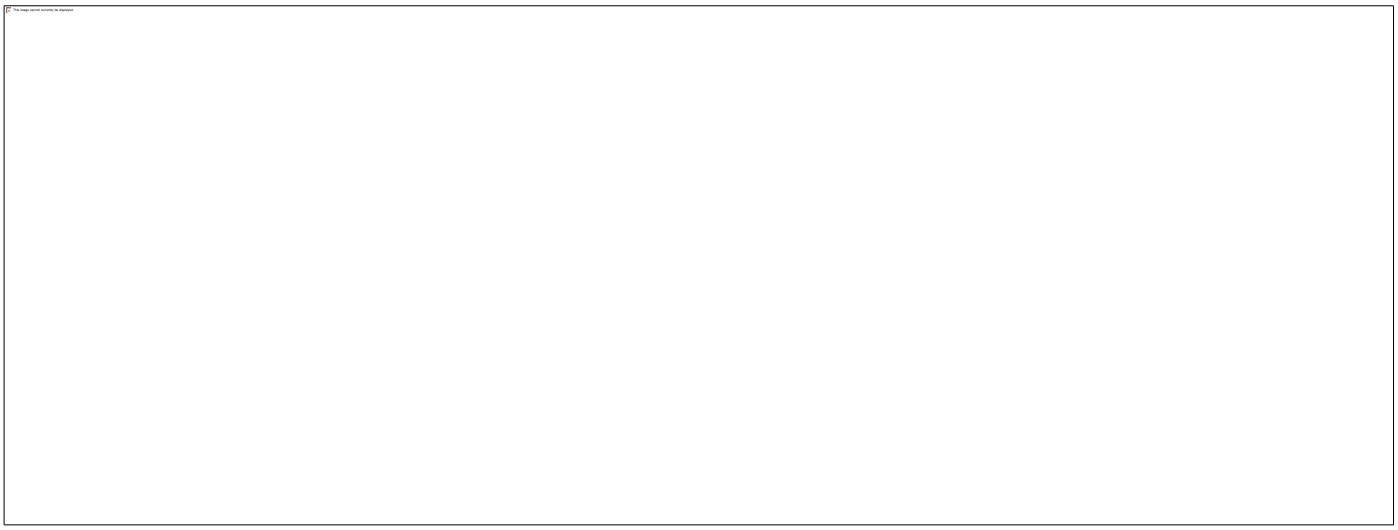
1.4 Meaning of contemporary Kenyan art

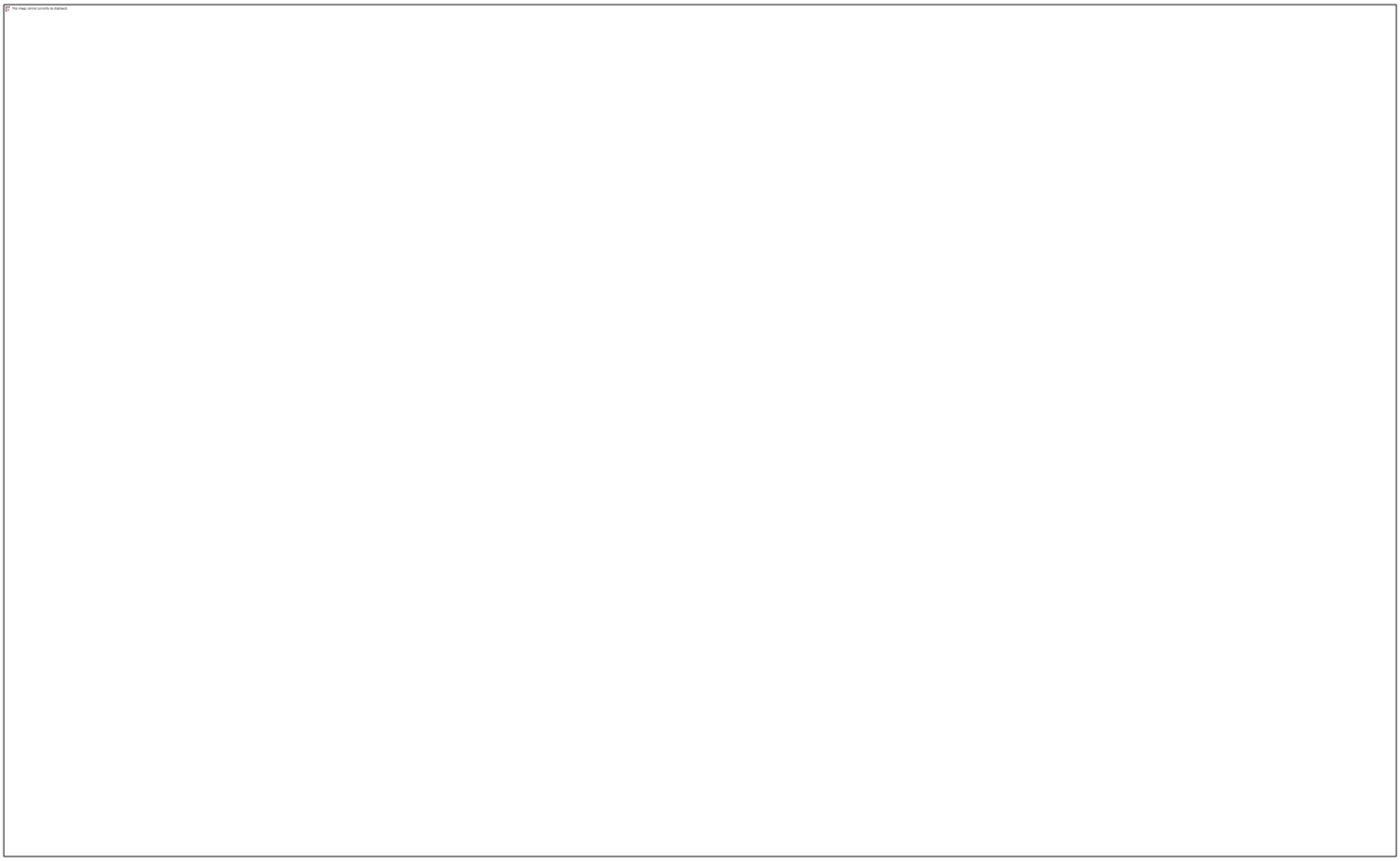
Contemporary Kenyan art refers to art produced by artists living and working in modern Kenya. It responds to present-day experiences, technologies, social issues, cultural changes and global influences.

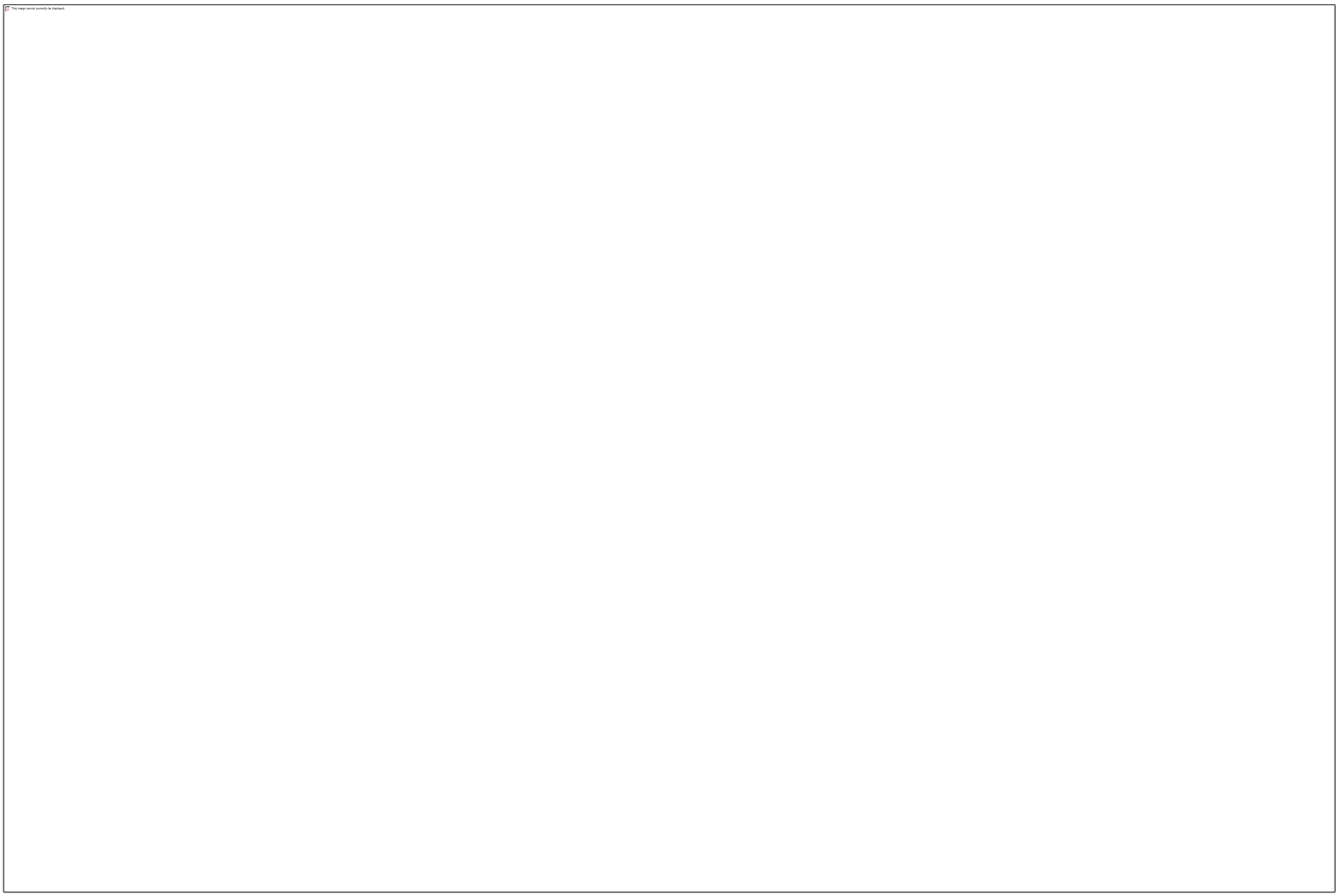
Contemporary art may use traditional or modern materials and techniques.

Examples include:

- Modern paintings depicting Kenyan life.
- Sculptures made from recycled metal.
- Digital illustrations inspired by African patterns.
- Contemporary fashion incorporating traditional beadwork.
- Photography documenting urban and rural life.
- Mixed-media artworks addressing environmental conservation.
- Modern ceramics and decorative objects.
- Installations exploring identity, gender, technology or social change.







1.5 Differences between indigenous and contemporary Kenyan art

Indigenous Kenyan art	Contemporary Kenyan art
Often developed within traditional community settings.	Often developed in modern artistic settings.
Preserves inherited cultural practices and knowledge.	Explores current experiences and new ideas.
Frequently uses locally available traditional materials.	May use traditional, industrial, digital or recycled materials.
Techniques are often passed from one generation to another.	Techniques may be learned through formal training, experimentation or independent practice.
Often serves cultural, ceremonial and practical purposes.	May serve decorative, commercial, educational, political or experimental purposes.
Designs may reflect established cultural symbols and patterns.	Designs may combine traditional symbols with new styles and concepts.

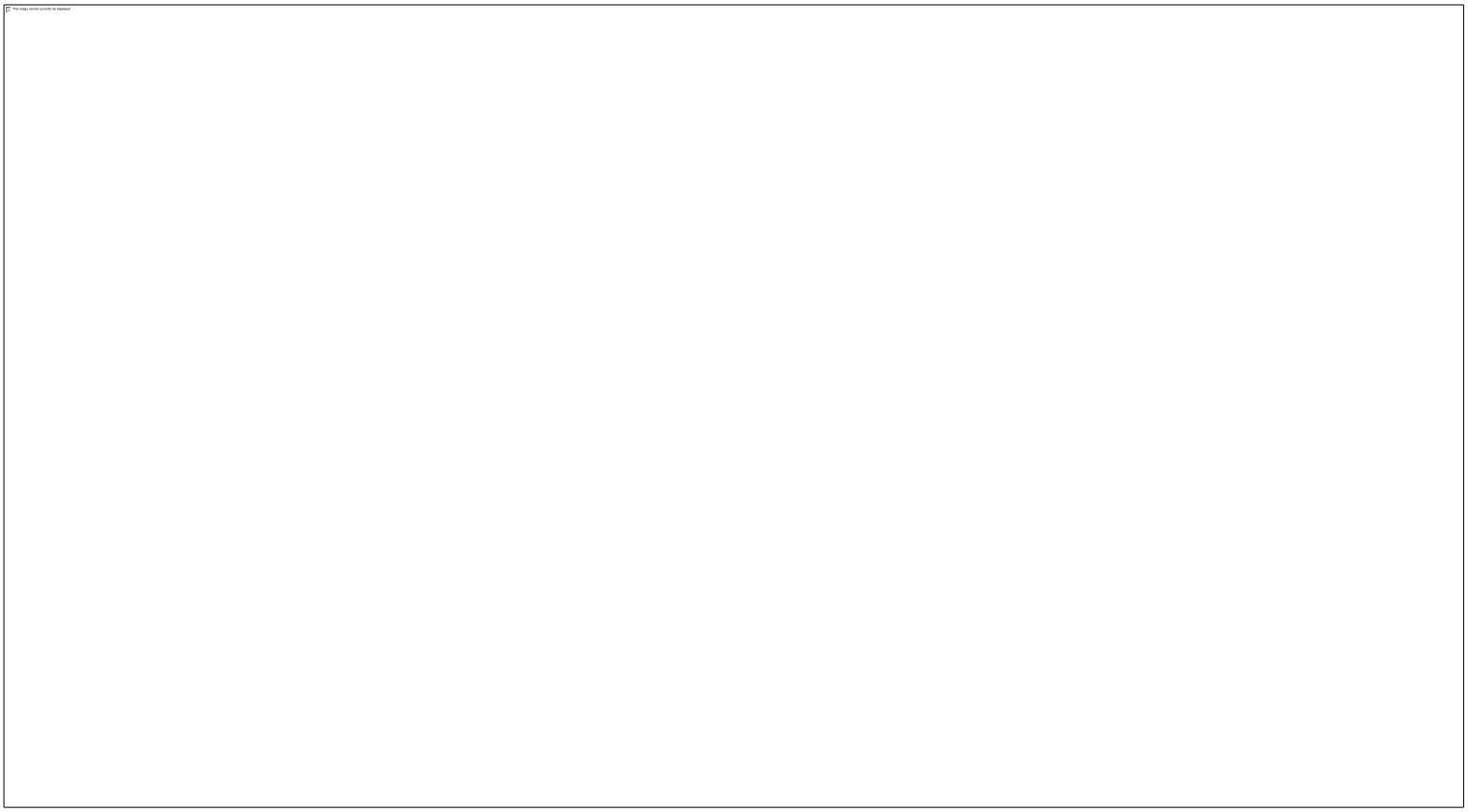
Relationship: Contemporary Kenyan artists may reinterpret indigenous designs, materials and techniques to create new artworks. This helps maintain cultural continuity while encouraging innovation.

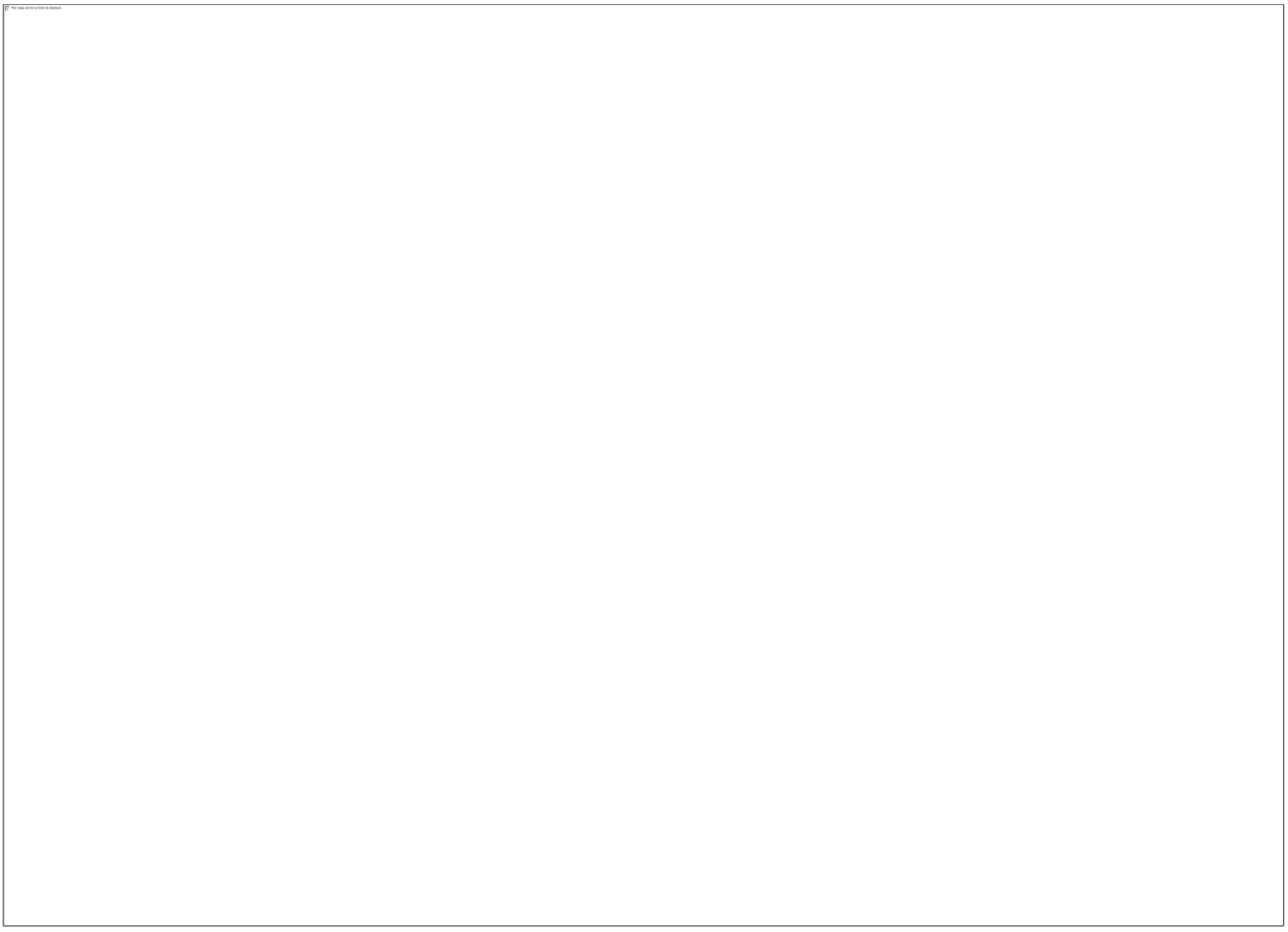
2.0 Categories and Types of Indigenous Kenyan Arts and Crafts

Indigenous Kenyan arts and crafts can be grouped according to the materials used, techniques applied, form of the finished product and its purpose.

2.1 Pottery and ceramics







Meaning: Pottery is the art and craft of making objects from clay by shaping, drying and firing them.

Common pottery products include:

- Cooking pots.
- Water storage pots.
- Cooking vessels.
- Bowls and plates.
- Decorative containers.
- Flower pots.
- Ceremonial vessels.

Materials used

1. Clay – the main material used to form pottery objects.
2. Water – used to soften clay and make it workable.
3. Sand or grog – may be added to improve workability and reduce cracking.
4. Natural pigments – used to decorate pottery.
5. Slips – liquid clay mixtures applied to the surface for decoration.

Tools and equipment

- Hands and fingers.
- Wooden paddles.
- Scrapers.
- Modelling tools.
- Smooth stones.
- Pottery wheels, where available.
- Kilns or suitable firing structures.

Techniques used

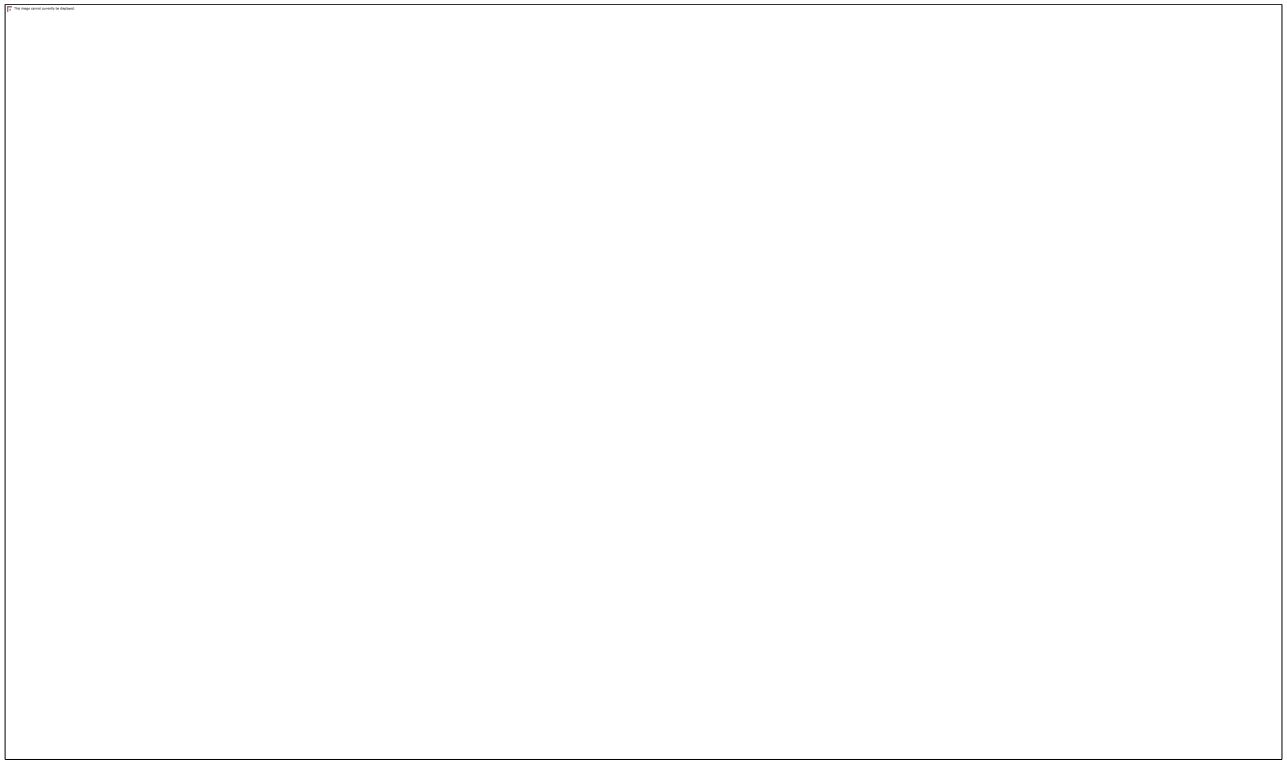
- Pinching: shaping clay by pressing it between the fingers and thumb.
- Coiling: building an object by arranging and joining long rolls of clay.
- Slab construction: joining flat pieces of clay to create a form.
- Moulding: pressing clay into or over a mould.
- Wheel throwing: shaping clay on a rotating pottery wheel.
- Surface decoration: creating patterns through incising, impressing, painting or applying slip.

Importance of indigenous pottery

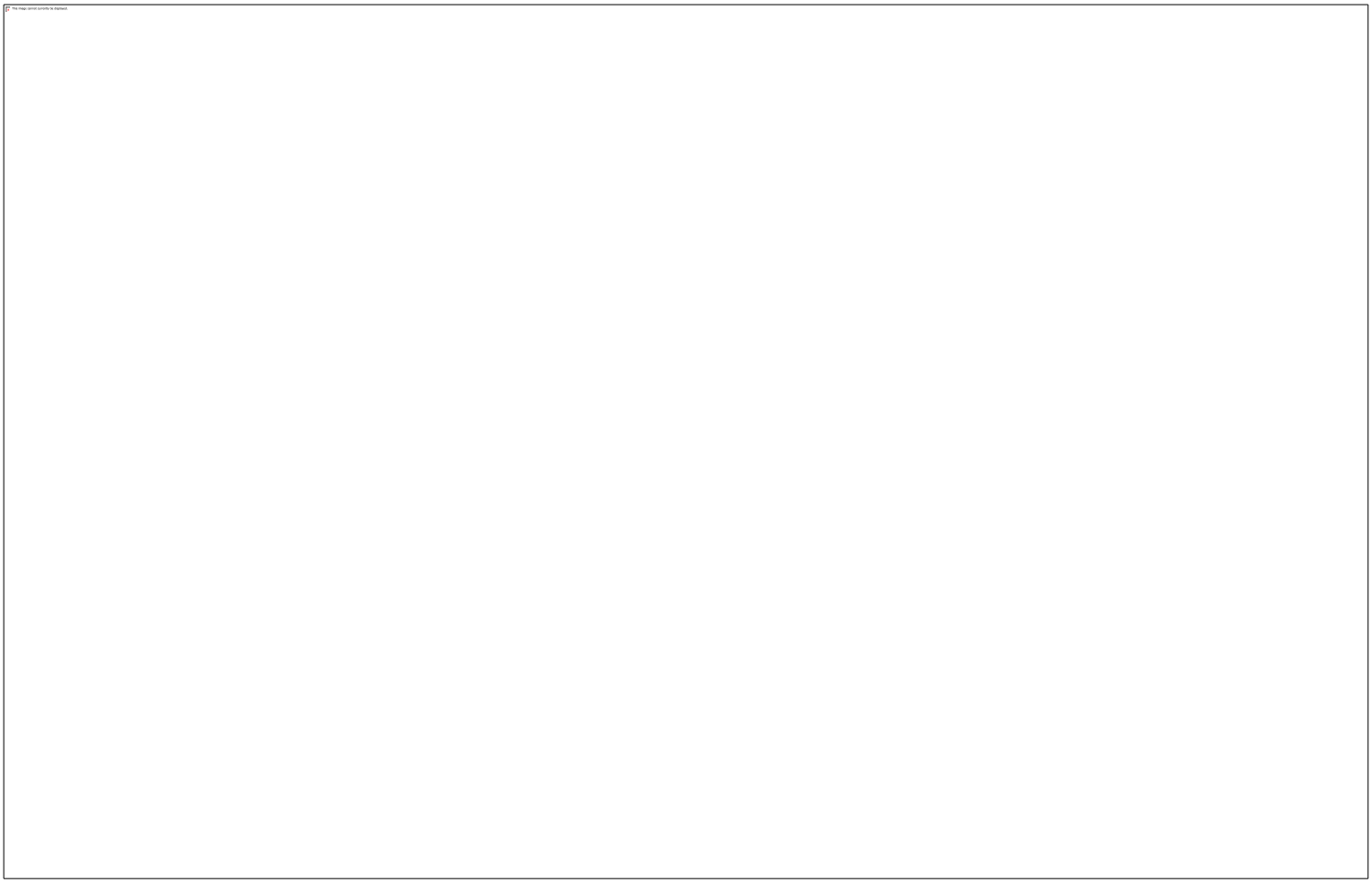
- Provides containers for storing water and food.
- Supports cooking and domestic activities.
- Preserves traditional skills.
- Provides opportunities for income generation.
- Reflects community identity and creativity.

- Supports cultural ceremonies and heritage.

2.2 Basketry and weaving







Meaning: Basketry is the art of making functional and decorative objects by interlacing, plaiting, coiling or weaving flexible materials.

Materials

- Sisal fibres.
- Papyrus reeds.
- Palm leaves.
- Grass.
- Banana fibres.
- Raffia.
- Flexible twigs.
- Strips of bark from suitable plant sources.

Products

- Shopping baskets.
- Storage baskets.
- Trays.
- Mats.
- Food covers.
- Decorative wall hangings.
- Containers for farm produce.

- Household organisers.

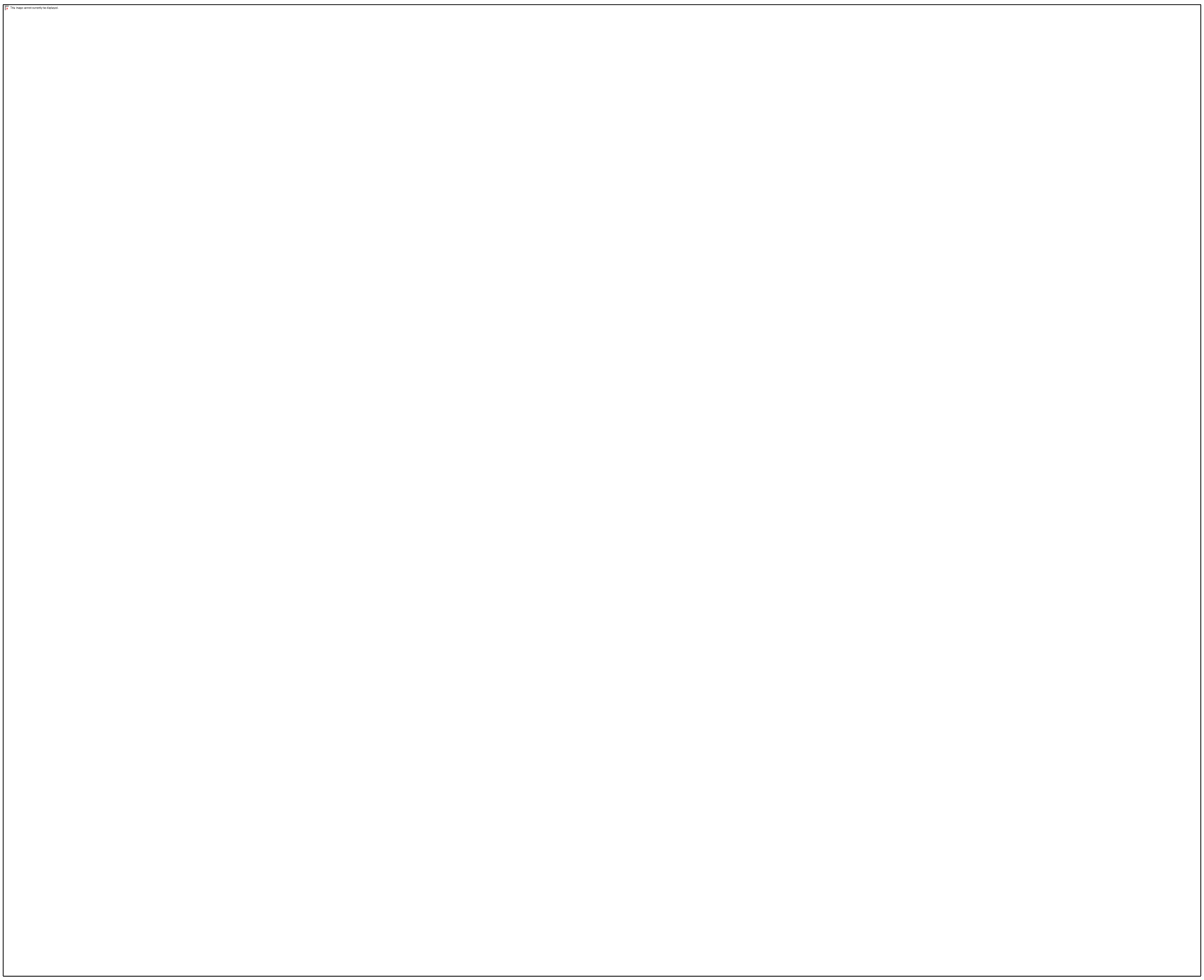
Techniques

- Coiling: wrapping and stitching a continuous flexible material around a growing structure.
- Plaiting: interlacing three or more strands in an organised pattern.
- Twining: twisting two weavers around stationary elements.
- Over-and-under weaving: passing flexible strands alternately above and below other strands.

Importance

- Supports household storage and transportation.
- Provides employment and income.
- Encourages use of locally available materials.
- Promotes environmental awareness when materials are harvested responsibly.
- Preserves traditional knowledge and design patterns.

2.3 Wood carving







Meaning: Wood carving is the process of shaping wood by cutting, removing or engraving parts of it to create functional or decorative objects.

Materials

- Suitable hardwoods and softwoods.
- Natural oils and finishes.
- Paints and pigments.
- Sandpaper.
- Adhesives, where required.

Tools

- Carving knives.
- Chisels.
- Gouges.
- Mallets.
- Saws.
- Rasps and files.
- Sandpaper.

Products

- Animal sculptures.
- Human figures.
- Walking sticks.
- Stools and furniture.
- Decorative panels.
- Bowls.
- Masks.
- Household utensils.

Techniques

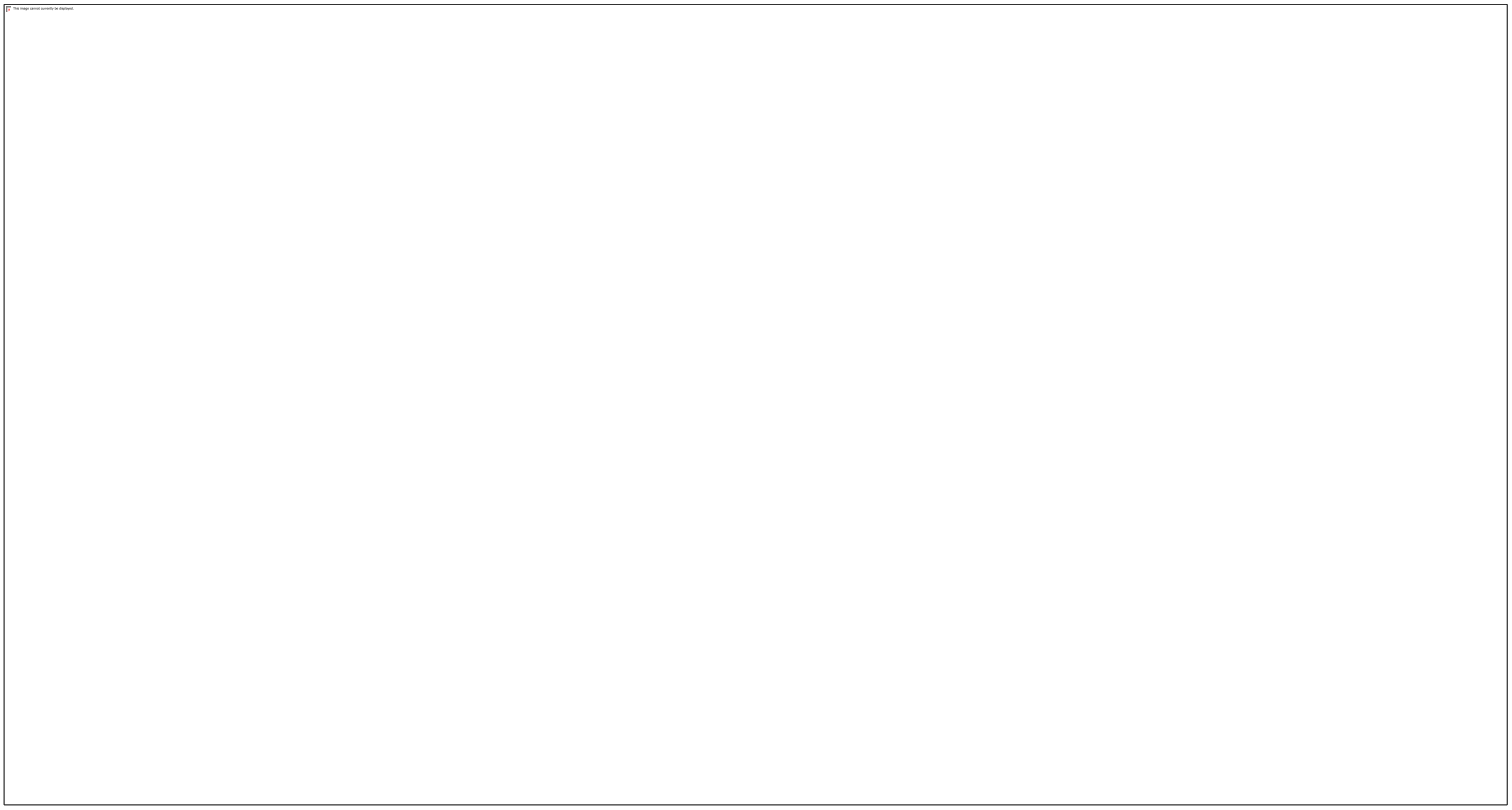
1. Relief carving – figures or patterns are carved so that they project from a flat background.
2. In-the-round carving – a three-dimensional object is carved so that it can be viewed from different sides.
3. Incised carving – lines and patterns are cut into the wood surface.
4. Chip carving – small pieces of wood are removed to form decorative patterns.

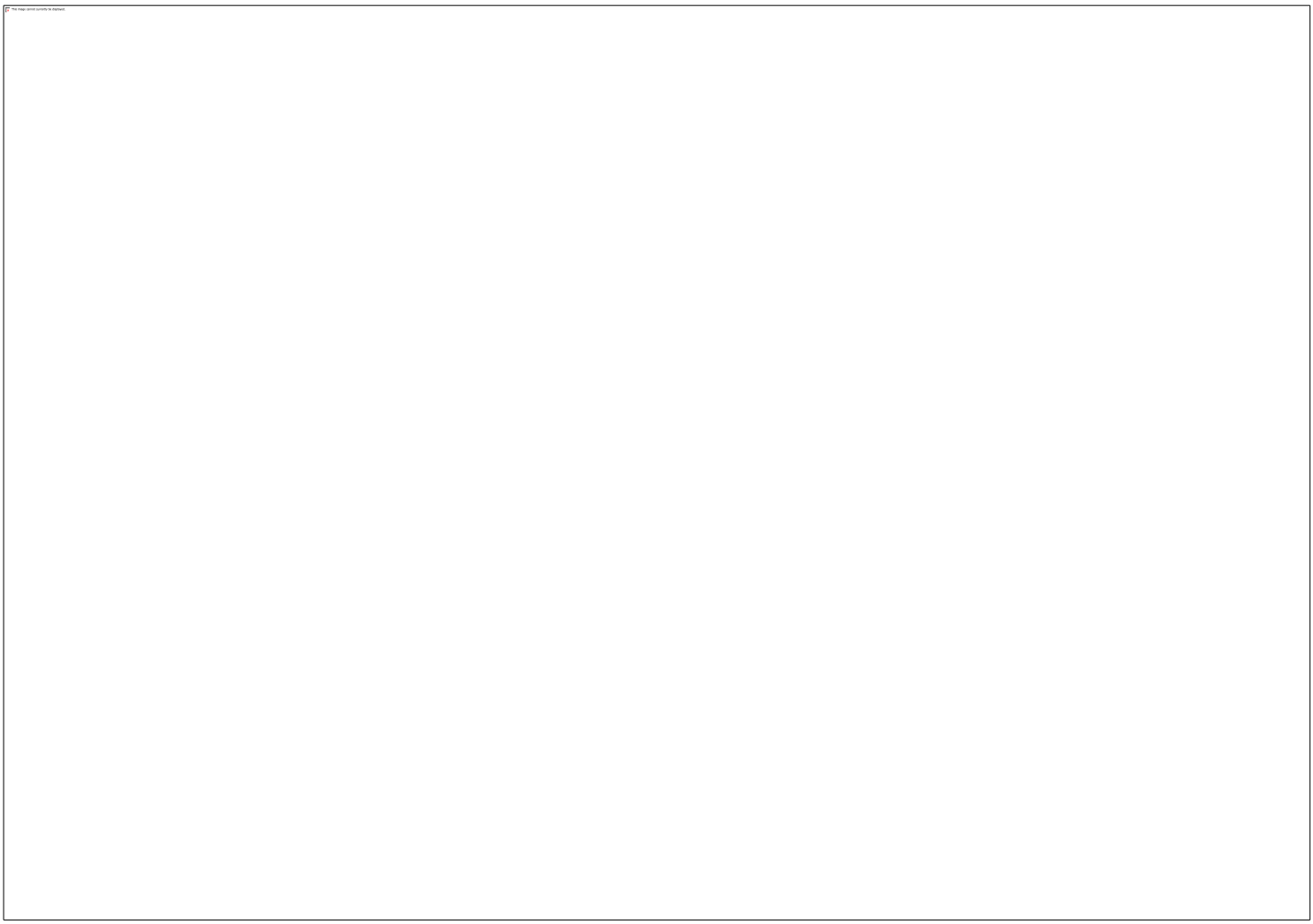
Importance

- Preserves artistic traditions.
- Creates useful household objects.
- Supports tourism and cultural exchange.
- Provides employment.

- Encourages creativity and technical skills.

2.4 Beadwork and jewellery





Meaning: Beadwork is the art of arranging and joining beads to make decorative or functional objects.

Materials

- Glass beads.
- Plastic beads.
- Wooden beads.
- Seeds.
- Shells.

- Metal beads.
- Strong thread, wire or leather strips.
- Clasps and fasteners.

Products

- Necklaces.
- Bracelets.
- Earrings.
- Anklets.
- Belts.
- Head ornaments.
- Decorative clothing accessories.
- Bags and other fashion accessories.

Techniques

- Stringing: threading beads onto a cord or wire.
- Stitching: sewing beads onto fabric or leather.
- Netting: arranging beads into connected mesh patterns.
- Weaving: interlacing threads and beads to form a structured design.
- Embroidery: attaching beads to a surface to create decorative patterns.

Appreciation of beadwork

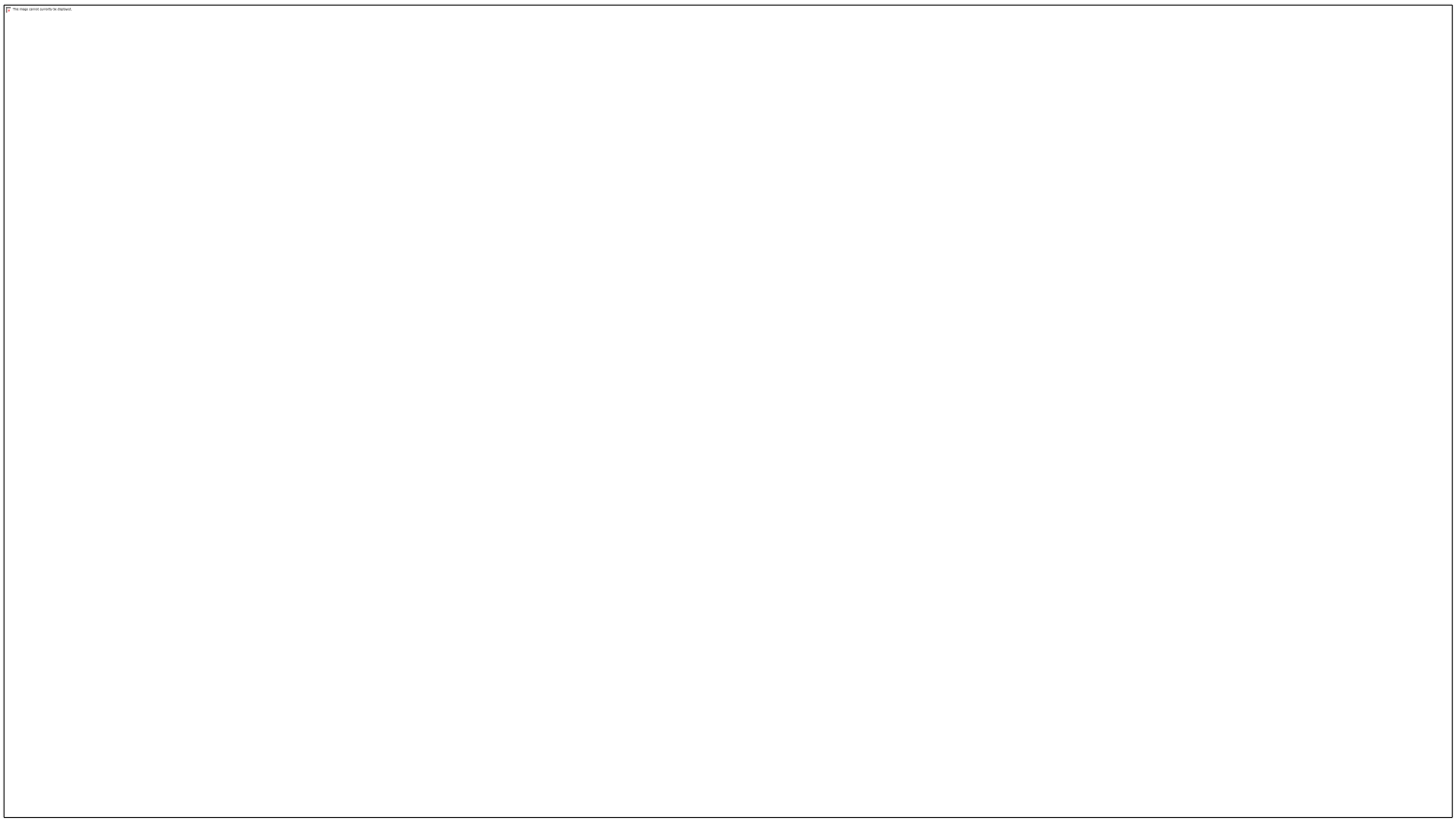
When examining beadwork, consider:

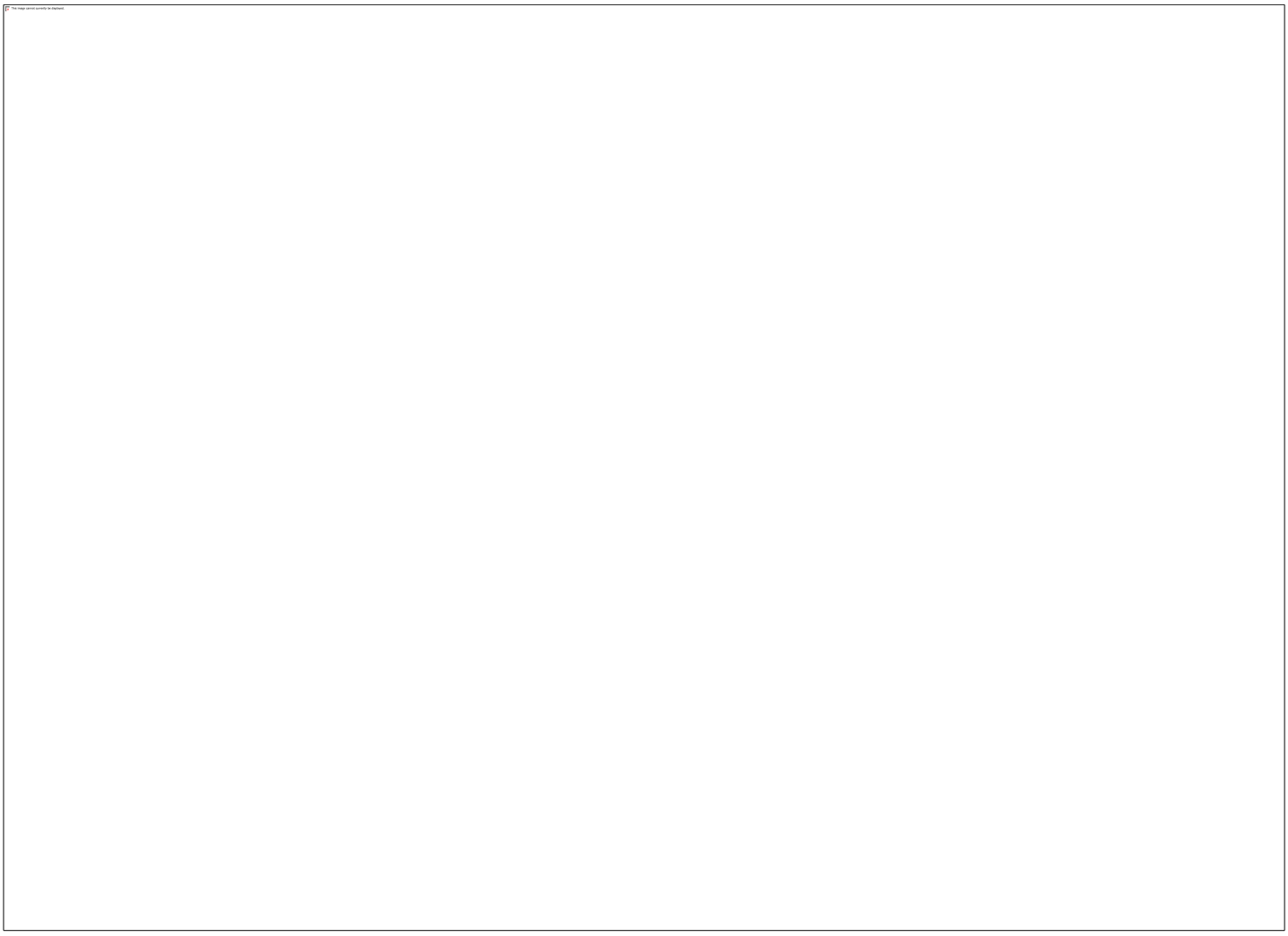
- Colour combinations.
- Arrangement of beads.
- Repetition of patterns.
- Symmetry and balance.
- Quality of finishing.
- Cultural meaning.
- Function and suitability.
- Creativity and originality.

Importance

- Enhances personal appearance.
- Communicates cultural identity.
- Supports ceremonies and celebrations.
- Creates employment.
- Promotes tourism.
- Provides opportunities for contemporary fashion design.

2.5 Leatherwork







Meaning: Leatherwork is the process of making useful and decorative objects from animal hides and skins that have been processed into leather.

Materials

- Tanned leather.
- Leather strips.
- Thread.
- Beads.
- Dyes.
- Metal fasteners.
- Adhesives.

Tools

- Cutting knives.
- Awls.
- Needles.
- Punches.
- Measuring tools.

- Cutting boards.
- Hammers.

Products

- Sandals.
- Belts.
- Bags.
- Wallets.
- Pouches.
- Straps.
- Decorative items.
- Traditional accessories.

Techniques

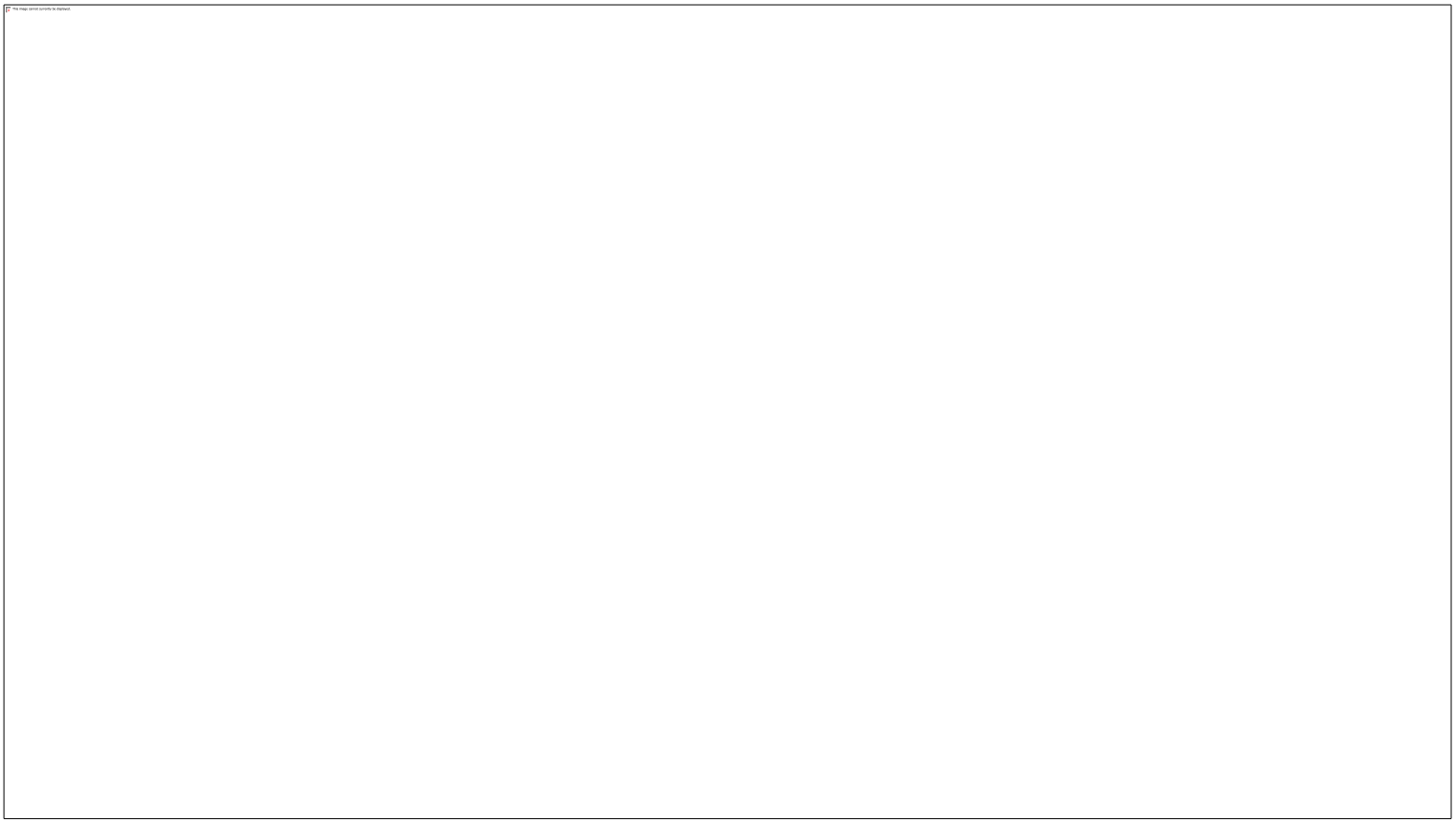
- Cutting.
- Stitching.
- Lacing.
- Embossing.
- Stamping.
- Dyeing.
- Bead decoration.
- Joining and finishing.

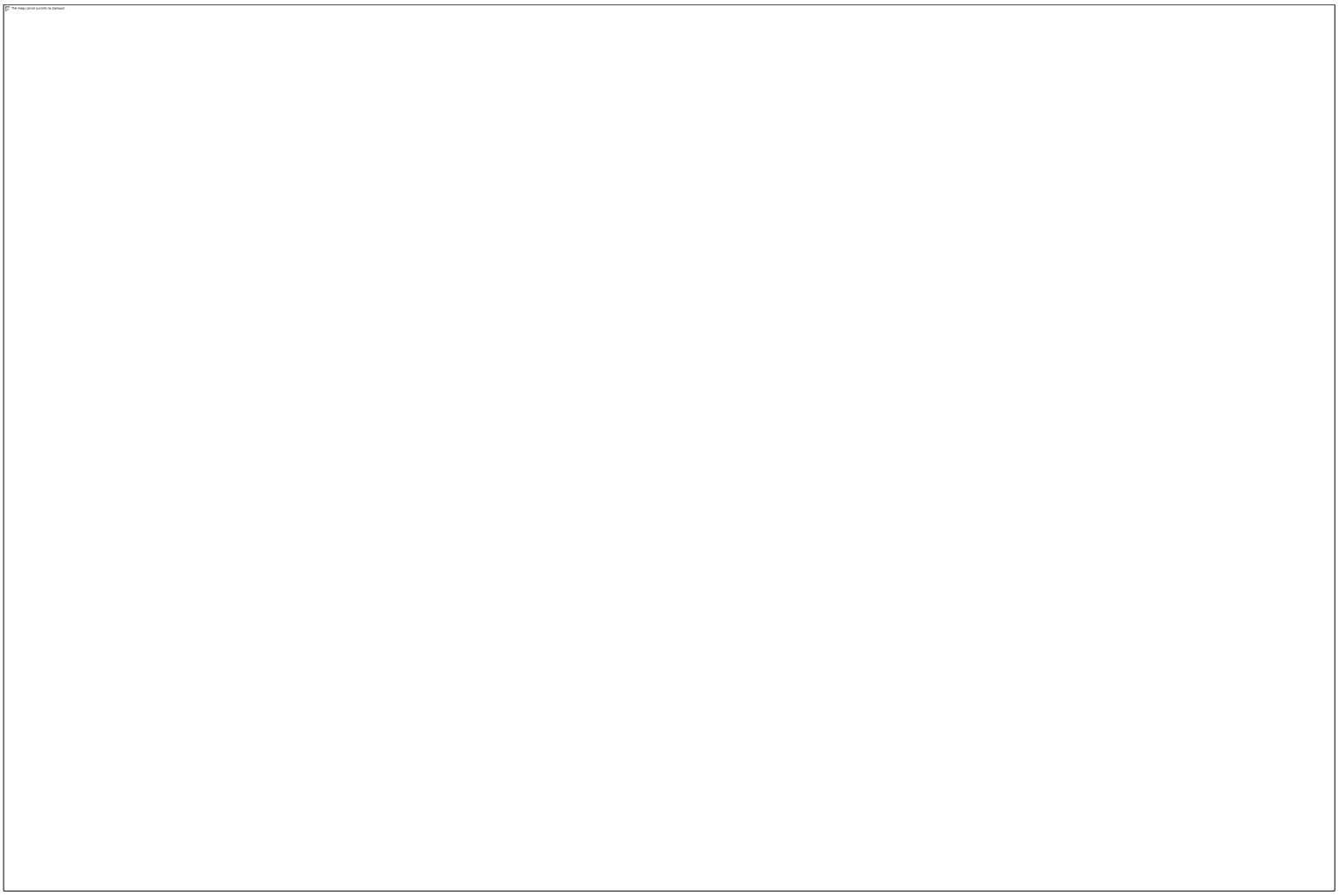
Importance

- Produces useful personal accessories.
- Supports small-scale enterprises.
- Preserves traditional craftsmanship.
- Encourages innovation in fashion and product design.

2.6 Metalwork







Meaning: Metalwork is the art and craft of shaping metals to produce functional, decorative or artistic objects.

Materials

- Iron.
- Copper.
- Brass.
- Aluminium.
- Recycled metal.
- Suitable metal wire and sheets.

Products

- Bangles.
- Necklaces.
- Rings.
- Household tools.
- Decorative ornaments.
- Sculptures.
- Bells.
- Metal containers.

Techniques

- Forging – shaping heated metal through hammering.
- Casting – pouring molten metal into a mould.
- Cutting – separating metal into required shapes.
- Bending – changing the shape of metal by applying force.
- Joining – connecting metal parts through suitable processes.
- Engraving – cutting patterns into a metal surface.
- Polishing – smoothing and improving the appearance of the surface.

Importance

- Produces functional objects.
- Supports cultural expression.
- Encourages technical and artistic skills.
- Creates business opportunities.
- Supports recycling through creative reuse of suitable metal materials.

2.7 Textile crafts and traditional clothing decoration



Textile crafts involve producing, decorating or manipulating fabrics and fibres to create useful and decorative items.

Examples

- Traditional woven fabrics.
- Decorated cloth.
- Beaded garments.
- Embroidered fabrics.
- Tie-dyed textiles.
- Printed fabrics.
- Contemporary clothing inspired by traditional designs.

Techniques

- Weaving.
- Embroidery.
- Tie-dyeing.
- Batik.
- Appliqué.
- Printing.
- Bead decoration.
- Stitching.

Importance

- Provides clothing and household materials.
- Preserves traditional patterns and motifs.
- Supports fashion and textile industries.
- Encourages creative expression.
- Provides income-generating opportunities.

3.0 Skills, Techniques and Processes in Indigenous Kenyan Arts and Crafts

Artists use different skills and processes depending on the material, intended product and artistic purpose.

3.1 Artistic skills

Artistic skills are abilities developed through practice, observation, experimentation and instruction to produce artworks.

Important skills include:

1. **Observation skills:** Ability to study objects, forms, patterns and details before creating an artwork.
2. **Drawing and designing skills:** Ability to communicate ideas through sketches and plans.
3. **Measuring skills:** Ability to determine correct dimensions and proportions.
4. **Material-handling skills:** Ability to select and manipulate materials safely.
5. **Tool-handling skills:** Ability to use tools correctly and carefully.
6. **Shaping skills:** Ability to form materials into the intended shapes.
7. **Joining skills:** Ability to connect different parts securely.
8. **Decorating skills:** Ability to improve appearance through patterns, colours and textures.
9. **Finishing skills:** Ability to smooth, polish, seal or otherwise improve the final product.
10. **Evaluation skills:** Ability to judge quality and suggest improvements.

3.2 General process of producing an indigenous craft item

Although processes vary, most craft production follows these stages:

Stage 1: Identifying a need or purpose

- Determine the intended use of the object.
- Identify the people who will use it.
- Consider whether the product is functional, decorative or both.
- Example: designing a basket for carrying vegetables.

Stage 2: Research and inspiration

- Study existing examples.
- Observe designs from local communities.
- Examine the work of experienced artists.
- Research traditional patterns and their meanings.
- Consider how the design can be adapted responsibly.

Stage 3: Designing

- Prepare sketches.
- Choose the shape, size and form.
- Select colours and decorative patterns.
- Decide on materials and techniques.
- Consider the strength and usability of the product.

Stage 4: Selecting and preparing materials

- Choose materials suitable for the intended purpose.
- Check quality and availability.
- Clean and prepare materials.
- Ensure materials are safe and environmentally responsible.

Stage 5: Making the artwork

- Follow the selected technique.
- Use tools correctly.
- Observe measurements and proportions.
- Work carefully to achieve the intended form.
- Make adjustments where necessary.

Stage 6: Decorating

- Apply suitable patterns, colours or textures.
- Maintain balance and unity.
- Ensure decoration does not interfere with the function of the item.

Stage 7: Finishing

- Remove rough edges.
- Smooth surfaces.
- Strengthen weak joints.

- Apply suitable finishes.
- Inspect the completed work.

Stage 8: Evaluation and presentation

- Examine the final product.
- Compare it with the original design.
- Identify strengths and weaknesses.
- Make improvements.
- Display or present the work appropriately.

4.0 Evaluating Indigenous Kenyan Arts and Crafts

4.1 Meaning of evaluation in art

Evaluation is the process of examining an artwork systematically to determine its quality, effectiveness, meaning, originality and suitability for its intended purpose.

Evaluating indigenous art involves looking beyond physical appearance to understand the cultural knowledge, skills and functions represented by the artwork.

4.2 Factors to consider when evaluating indigenous Kenyan artworks

1. Craftsmanship

Craftsmanship refers to the level of skill and care demonstrated in producing an artwork.

Consider:

- Neatness of construction.
- Accuracy of shaping.
- Strength of joints.
- Quality of finishing.
- Consistency of patterns.
- Attention to detail.

2. Materials

Consider:

- Type of materials used.
- Suitability of materials.
- Availability of materials.
- Durability.
- Environmental impact.
- Safety of the materials.

3. Techniques and processes

Examine:

- Whether the artist used appropriate techniques.
- The level of technical skill.

- The complexity of the process.
- The effectiveness of the technique.
- Whether the technique reflects a recognised tradition or a new interpretation.

4. Design and composition

Consider:

- Arrangement of shapes.
- Balance.
- Proportion.
- Unity.
- Rhythm.
- Repetition.
- Contrast.
- Colour harmony.
- Texture.

5. Cultural significance

Examine:

- Community associations.
- Traditional knowledge represented.
- Cultural symbols and patterns.
- Ceremonial or social uses.
- Historical importance.
- Whether the artwork communicates cultural identity respectfully.

6. Function and utility

Determine:

- What the object is used for.
- Whether it performs its intended function.
- Whether it is comfortable and convenient to use.
- Whether it is strong and durable.
- Whether it is also decorative.

7. Originality and creativity

Consider:

- Uniqueness of the design.
- Evidence of personal expression.
- Creative use of materials.
- New interpretations of traditional ideas.

- Innovation in construction and decoration.

8. Economic value

Consider:

- Cost of materials.
- Labour involved.
- Demand for the product.
- Market suitability.
- Potential income for the artist.
- Contribution to local livelihoods.

9. Environmental responsibility

Examine:

- Whether materials are obtained responsibly.
- Whether waste is minimised.
- Whether recycled materials are used appropriately.
- Whether production damages natural resources.

4.3 Example of evaluating a Kenyan craft item

Artwork: A handmade sisal basket.

Evaluation aspect	**Observation**
Materials	Sisal fibres and other suitable natural fibres.
Technique	Coiling, plaiting or twining, depending on the basket.
Design	Repeated patterns and organised arrangement of colours.
Craftsmanship	Neat weaving and secure construction.
Function	Storage, shopping or carrying farm produce.
Cultural value	Reflects traditional knowledge and local craft practices.
Economic value	Can be sold in local markets and tourist centres.
Environmental consideration	Responsible harvesting and use of sustainable fibres.

Conclusion: The basket may be valued for its functionality, durability, attractive design, cultural importance and potential to generate income.

5.0 Utility and Heritage of Indigenous Kenyan Arts and Crafts

5.1 Meaning of utility in art

Utility refers to the practical usefulness or function of an artwork or craft item.

Some indigenous artworks are mainly functional, while others are decorative. Some serve both purposes.

Examples of utility

- Clay pots are used for storing water and preparing food.
- Baskets are used for carrying and storing goods.
- Wooden stools provide seating.
- Leather sandals protect the feet.
- Beadwork is used for personal adornment and cultural expression.
- Carved objects may be used for decoration or as ceremonial objects.
- Woven mats are used for sitting, sleeping and decoration.

5.2 Meaning of cultural heritage

Cultural heritage refers to the traditions, knowledge, beliefs, skills, practices, objects and artistic expressions inherited from previous generations and valued by a community.

Indigenous Kenyan arts and crafts form part of the country's cultural heritage.

5.3 Importance of indigenous arts and crafts as cultural heritage

1. **Preservation of cultural identity:** Artworks communicate the identity and experiences of communities.
2. **Transmission of knowledge:** Traditional skills are passed from older generations to younger people.
3. **Historical documentation:** Objects and designs provide evidence of past ways of life.
4. **Promotion of cultural diversity:** Different communities contribute unique artistic traditions.
5. **Education:** Learners understand traditional technologies, materials and ways of life.
6. **Tourism promotion:** Visitors learn about Kenyan culture through craft products and exhibitions.
7. **Economic development:** Artists and craft producers earn income through selling their products.
8. **Community pride:** Artistic achievements strengthen appreciation of local identity.
9. **Innovation:** Traditional techniques inspire new products and contemporary designs.
10. **Intergenerational connection:** Craft activities create opportunities for elders and young people to share knowledge.

5.4 Examples of Kenyan indigenous crafts and their cultural or practical value

Craft	Example of product	Utility or heritage value
Beadwork	Necklaces and bracelets	Personal adornment, cultural expression and identity.
Pottery	Clay pots	Cooking, storage and traditional knowledge.
Basketry	Woven baskets	Carrying and storing goods.

Wood carving	Stools and sculptures	Household use, decoration and artistic heritage.
Leatherwork	Sandals and belts	Clothing accessories and practical use.
Metalwork	Ornaments and tools	Personal adornment and functional use.
Textile crafts	Decorated cloth	Clothing, decoration and cultural expression.
Soapstone carving	Figurines and decorative objects	Artistic expression and income generation.

5.5 Challenges facing indigenous Kenyan arts and crafts

- Declining interest among some young people in traditional craft skills.
- Competition from mass-produced factory goods.
- Limited access to markets.
- High cost or shortage of suitable materials.
- Inadequate capital for craft businesses.
- Limited access to modern equipment and training.
- Unfair pricing and exploitation of craft producers.
- Imitation of traditional designs without acknowledgement.
- Loss of traditional knowledge when skilled practitioners pass away without passing on their skills.
- Environmental degradation affecting the availability of natural materials.
- Limited documentation of some artistic practices.
- Changing consumer preferences.

5.6 Ways of preserving indigenous Kenyan arts and crafts

1. Teaching traditional craft skills in schools and training centres.
2. Encouraging young people to learn from experienced craft practitioners.
3. Organising cultural exhibitions and craft fairs.
4. Documenting techniques, designs and oral histories with the consent of knowledge holders.
5. Establishing community craft groups and cooperatives.
6. Promoting locally made products.
7. Supporting artists through fair prices and reliable markets.
8. Using digital platforms to promote Kenyan crafts.
9. Encouraging responsible harvesting of natural materials.
10. Respecting community ownership, cultural protocols and intellectual property.
11. Including indigenous art in museums, galleries and educational programmes.
12. Supporting innovation that preserves cultural meaning while responding to modern needs.

6.0 Contemporary Kenyan Art

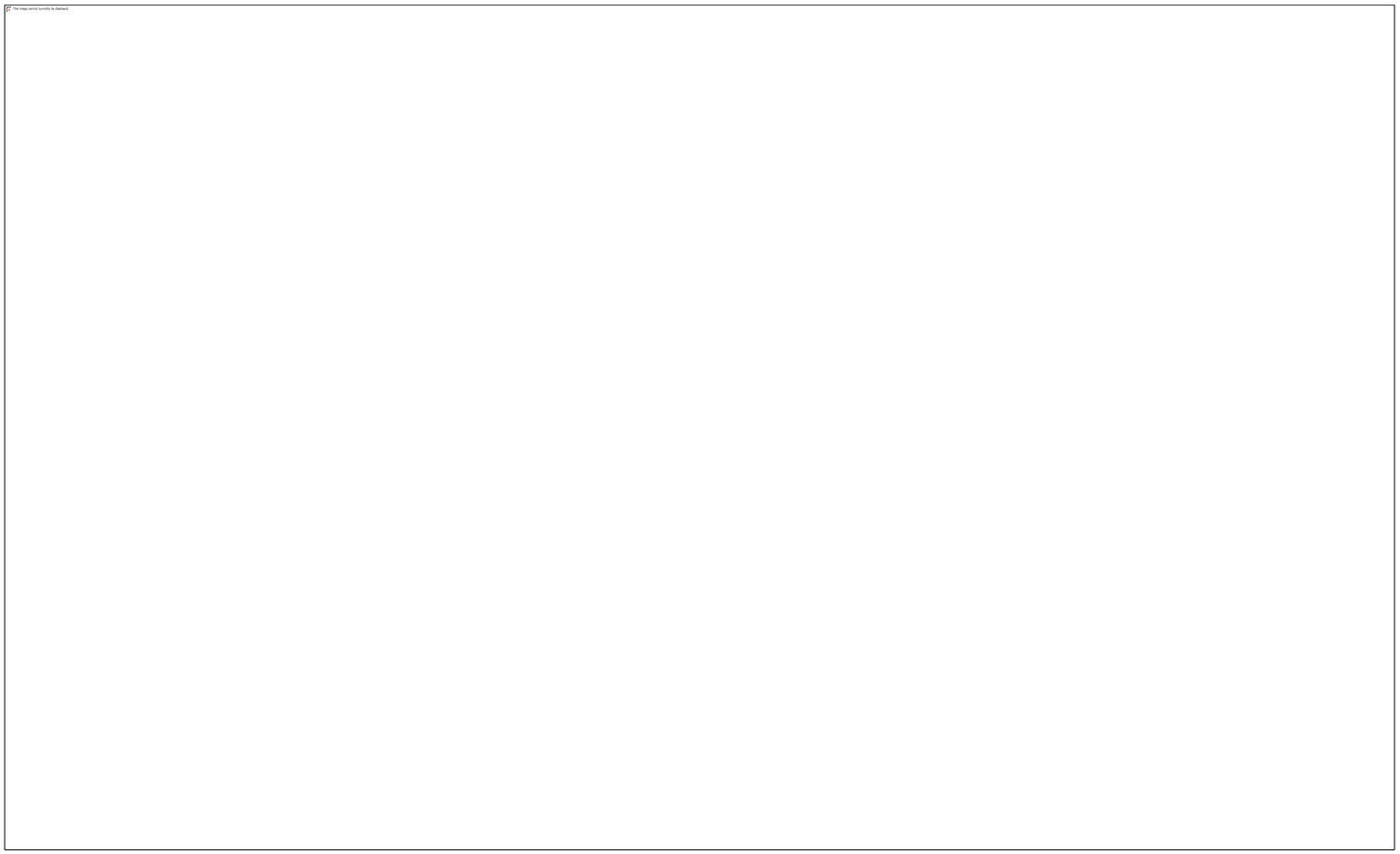
6.1 Meaning of contemporary art

Contemporary art is art produced in the present period or recent times. It reflects current ideas, experiences, technologies, concerns and cultural influences.

Contemporary Kenyan art includes works created by artists using traditional, modern and experimental approaches.

It may be produced by professionally trained artists, self-taught artists, community groups, designers, photographers, digital creators and craft practitioners.





6.2 Characteristics of contemporary Kenyan art

1. **Diversity of materials:** Artists use paint, canvas, wood, metal, clay, fabric, plastic, digital media and recycled materials.
2. **Experimentation:** Artists explore new ways of making and presenting artworks.
3. **Cultural influence:** Many artworks draw inspiration from Kenyan cultures and traditions.
4. **Social commentary:** Art may address poverty, corruption, inequality, education, identity and other social issues.
5. **Environmental awareness:** Some artists use recycled materials or communicate messages about conservation.
6. **Technological influence:** Digital illustration, photography, animation and computer-based design are increasingly used.

7. **Global connections:** Artists may combine local themes with international artistic influences.
8. **Personal expression:** Artworks may communicate the artist's feelings, beliefs and experiences.
9. **Innovation:** Artists develop new forms, styles and techniques.
10. **Commercial opportunities:** Art can be sold through galleries, exhibitions, online platforms and commissions.

6.3 Major forms of contemporary Kenyan art

A. Contemporary painting

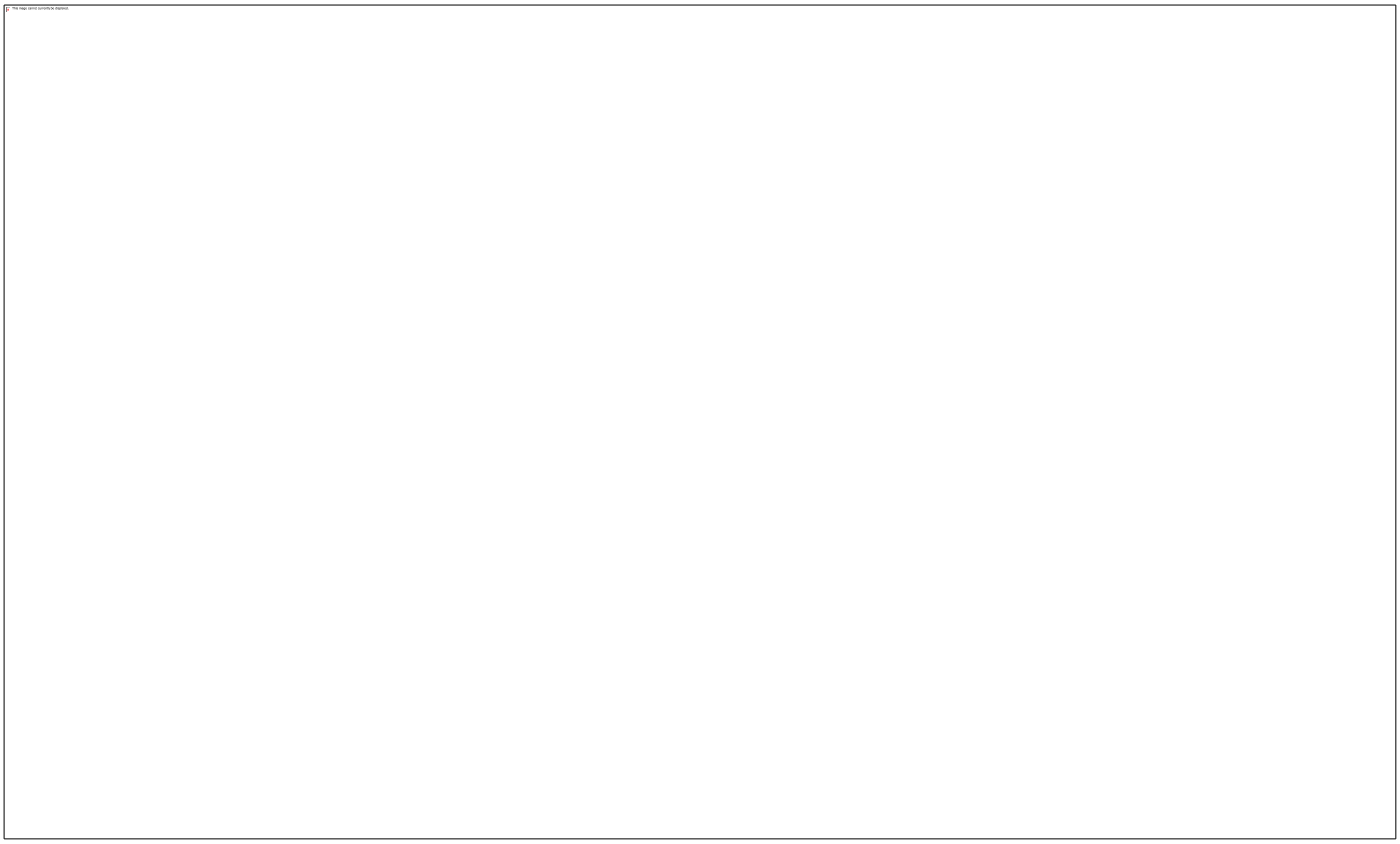
Painting involves applying colour to a surface to communicate ideas or create images.

Materials include:

- Acrylic paint.
- Watercolour.
- Oil paint.
- Canvas.
- Paper.
- Brushes.
- Palette knives.

Common subjects:

- Kenyan landscapes.
- Urban life.
- Wildlife.
- Cultural activities.
- Portraits.
- Social issues.
- Abstract forms.



B. Contemporary sculpture

Sculpture is a three-dimensional art form created by shaping, assembling, carving, modelling or casting materials.

Materials include:

- Wood.
- Stone.
- Metal.
- Clay.
- Plaster.
- Wire.
- Recycled materials.

Examples:

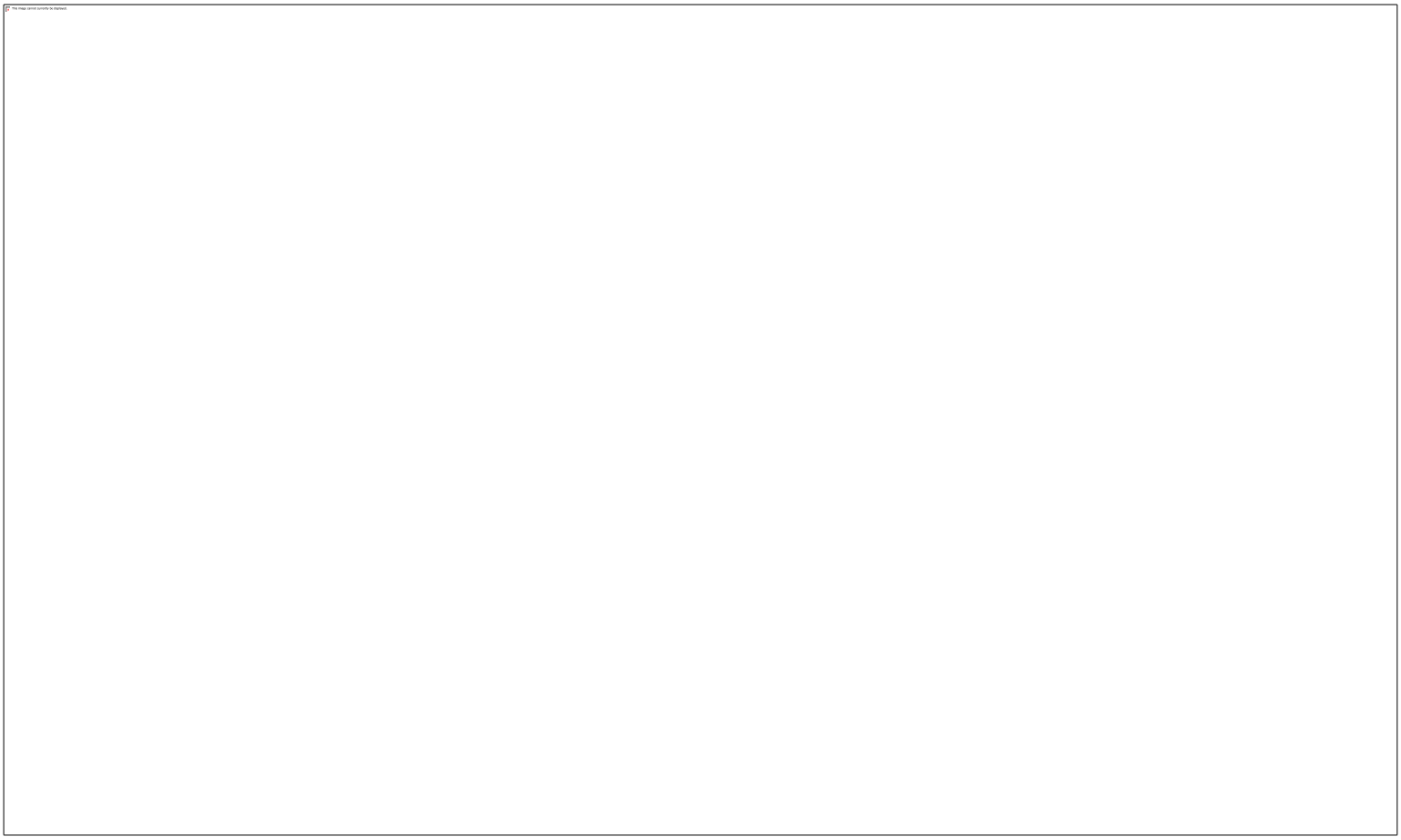
- Abstract sculptures.
- Human figures.
- Animal forms.
- Public monuments.
- Recycled-metal sculptures.
- Installation sculptures.

C. Contemporary photography

Photography is the art and practice of creating images using cameras or digital devices.

It may be used to:

- Document community activities.
- Record cultural events.
- Capture landscapes and wildlife.
- Communicate social messages.
- Preserve historical moments.
- Support advertising and commercial activities.



D. Digital art

Digital art is artwork created or manipulated using digital devices and software.

Examples:

- Digital illustrations.
- Computer-generated patterns.
- Digital painting.
- Graphic design.
- Photo manipulation.
- Digital collages.
- Animation.
- Visual communication designs.

E. Mixed-media art

Mixed-media art combines two or more materials or artistic methods in one artwork.

For example, an artist may combine:

- Fabric and paint.
- Wood and metal.
- Paper and photographs.
- Beads and wire.
- Clay and recycled objects.

F. Contemporary craft and product design

This involves developing functional or decorative products using artistic skills and modern design approaches.

Examples:

- Modern baskets.
- Decorative lamps.
- Jewellery.
- Fashion accessories.
- Home décor.
- Handmade furniture.

- Contemporary ceramics.

6.4 Importance of contemporary Kenyan art

- Provides a platform for self-expression.
- Communicates current social issues.
- Promotes Kenyan culture locally and internationally.
- Creates employment opportunities.
- Supports the creative economy.
- Encourages innovation and experimentation.
- Promotes tourism and cultural exchange.
- Preserves and reinterprets indigenous artistic traditions.
- Provides educational and communication resources.
- Encourages environmental awareness.
- Develops skills in design and technology.
- Creates opportunities for collaboration between artists and other professionals.

7.0 Evaluating Contemporary Kenyan Art

7.1 Factors to consider

When examining contemporary artworks, learners should consider:

1. **Concept:** The main idea or message communicated by the artist.
2. **Originality:** The uniqueness of the artist's approach.
3. **Materials:** The suitability and effectiveness of the materials.
4. **Technique:** The methods used to create the artwork.
5. **Composition:** The arrangement of elements in the artwork.
6. **Visual appeal:** The way the artwork attracts and holds attention.
7. **Creativity:** Evidence of imagination and innovation.
8. **Relevance:** The relationship between the artwork and contemporary experiences.
9. **Cultural sensitivity:** Whether cultural symbols and ideas are represented respectfully.
10. **Technical quality:** The skill and accuracy demonstrated.
11. **Presentation:** How effectively the artwork is displayed or communicated.
12. **Impact:** The effect the artwork may have on viewers or society.

7.2 Appreciating contemporary art: an example

Artwork: A sculpture made from recycled metal.

A learner may appreciate it by examining:

- The artist's choice of recycled metal.
- The way different metal pieces are joined.
- The balance and stability of the sculpture.

- The forms and shapes created.
- The message about waste management.
- The creativity involved in transforming discarded materials.
- The quality of finishing.
- Its potential to inspire environmental responsibility.

7.3 Differences between evaluating indigenous and contemporary art

Indigenous art evaluation	Contemporary art evaluation
Considers traditional knowledge and cultural continuity.	Considers innovation and present-day relevance.
Examines traditional materials and methods.	Examines traditional, modern and experimental materials.
Considers community practices and cultural protocols.	Considers individual, community and global perspectives.
Examines traditional functions and symbolism.	Examines new functions, concepts and messages.
Considers preservation of heritage.	Considers experimentation and changing artistic practices.

Both require attention to craftsmanship, creativity, meaning, materials, design and social value.

8.0 Trends and Styles in Kenyan Art

8.1 Meaning of an artistic trend

An artistic trend is a pattern or direction in art that becomes noticeable during a particular period. It may involve common subjects, materials, techniques, styles or ideas.

8.2 Meaning of artistic style

Artistic style refers to the distinctive way an artist or group of artists creates and presents artworks.

Style may be recognised through:

- Use of colour.
- Treatment of shapes and forms.
- Choice of materials.
- Brushwork or carving methods.
- Patterns and textures.
- Subject matter.
- Composition.
- Personal expression.

8.3 Examples of trends in contemporary Kenyan art

1. Use of recycled materials

Artists transform discarded materials into sculptures and decorative objects.

Examples:

- Metal sculptures.
- Plastic-based installations.
- Reused wood furniture.
- Decorative objects made from discarded packaging.

2. Digital creativity

Artists use computers, tablets and smartphones to create illustrations, designs and photographic compositions.

3. Cultural fusion

Artists combine indigenous patterns, symbols and techniques with modern forms of presentation.

4. Environmental art

Artists create works that raise awareness about pollution, climate change, conservation and sustainable living.

5. Urban and social themes

Artists explore city life, youth culture, migration, inequality, technology and changing lifestyles.

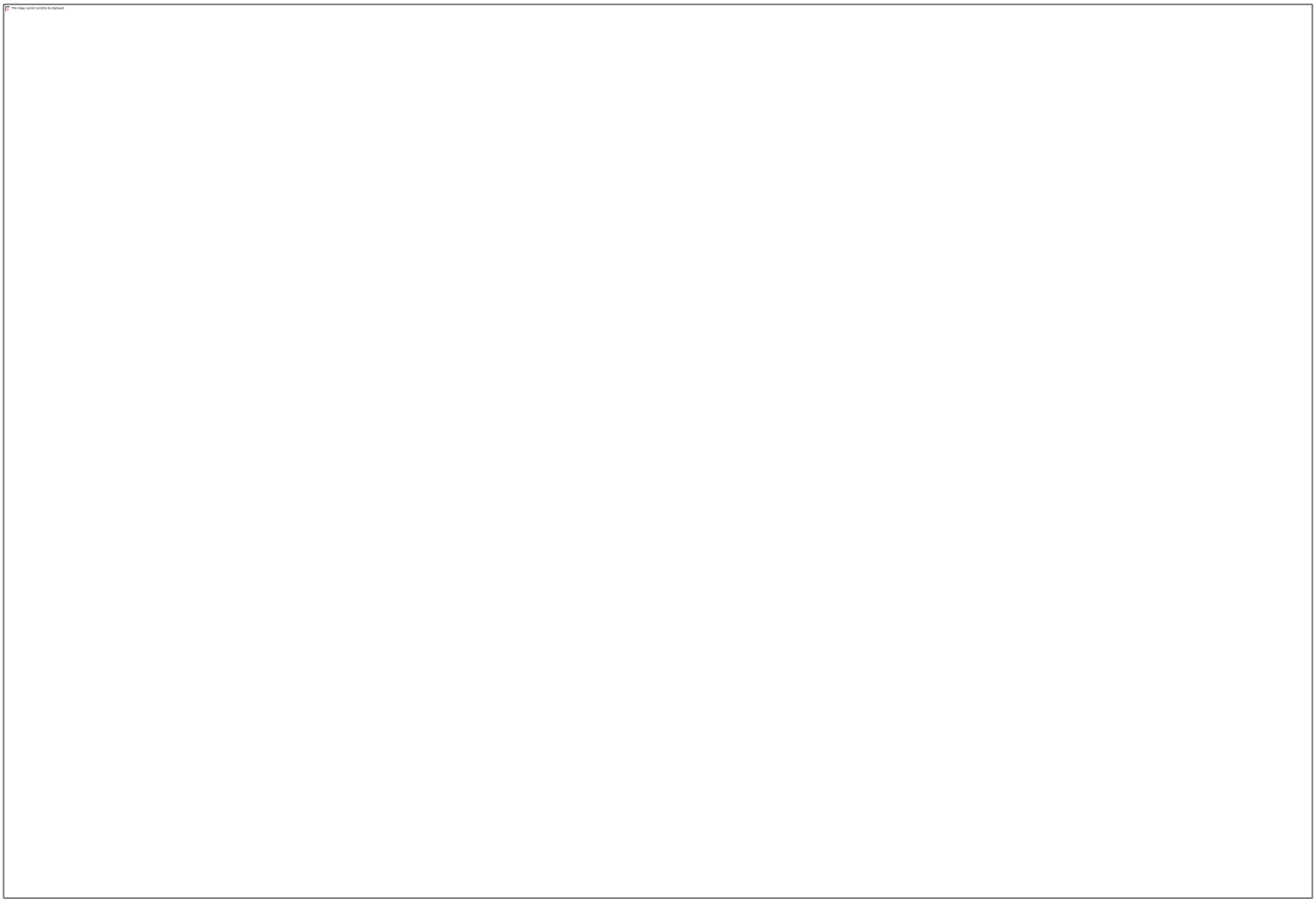
6. Contemporary fashion and accessories

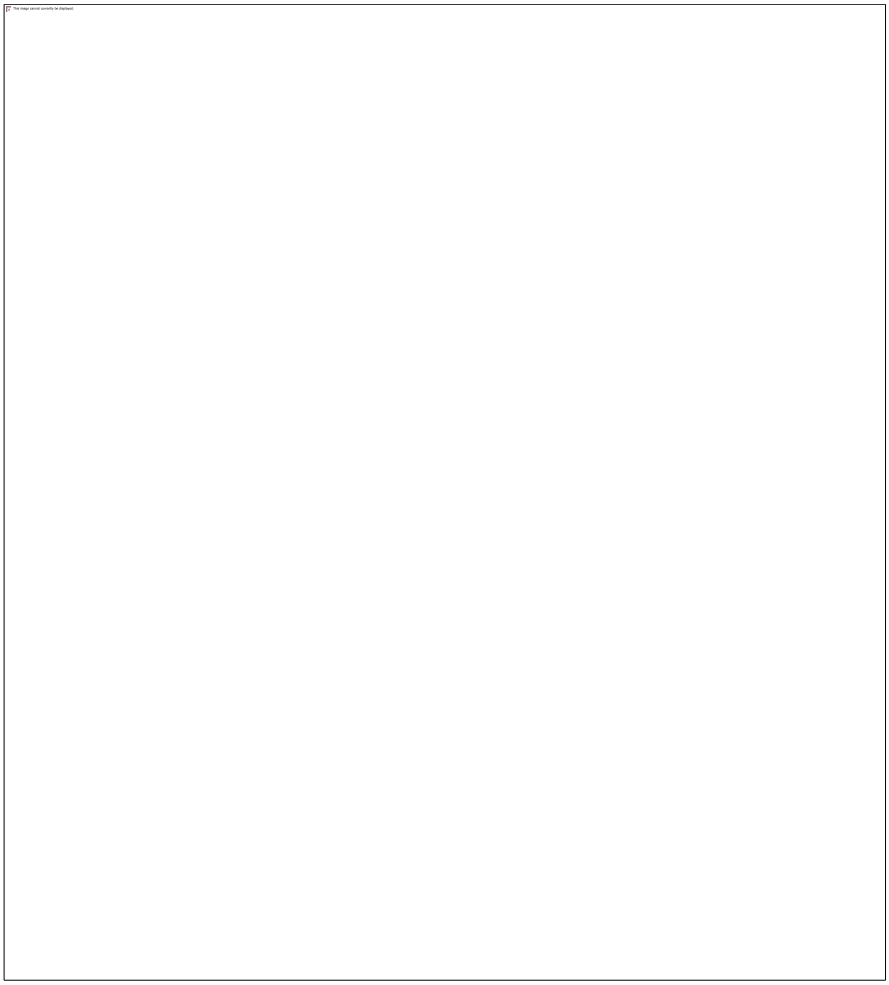
Designers incorporate beadwork, textiles, leatherwork and traditional motifs into modern clothing and accessories.

7. Public and community art

Artists create murals, installations and community projects that communicate messages in public spaces.







8.4 Factors influencing trends and styles

- Cultural exchange.
- Technological developments.
- Availability of materials.
- Education and artistic training.
- Social and political events.
- Economic conditions.
- Environmental concerns.
- Global communication.
- Consumer preferences.
- Artists' personal experiences.
- Exhibitions and art competitions.
- Influence of galleries, museums and online platforms.

8.5 Importance of studying artistic trends and styles

- Helps learners understand changes in art.
- Encourages experimentation.
- Develops critical thinking.
- Helps learners identify artistic influences.
- Supports innovation.
- Encourages appreciation of diverse artistic approaches.
- Helps artists respond to changing market needs.
- Promotes cultural dialogue.

9.0 Kenyan Art Centres, Studios, Galleries and Craft Markets

9.1 Meaning of an art centre

An art centre is a place or institution where artistic activities such as learning, making, displaying, discussing and promoting art take place.

Activities may include:

- Art training.
- Craft production.
- Exhibitions.
- Workshops.
- Demonstrations.
- Artist discussions.
- Sales of artworks.
- Community cultural activities.

9.2 Meaning of an art studio

An art studio is a workspace used by an artist or group of artists to create, develop, experiment with or store artworks.

Examples include:

- Painting studios.
- Sculpture studios.
- Pottery studios.
- Textile studios.
- Photography studios.
- Digital art studios.
- Jewellery-making workshops.





9.3 Meaning of an art gallery

An art gallery is a space where artworks are displayed for viewing, appreciation, discussion and sometimes sale.

A gallery may display:

- Paintings.
- Drawings.
- Sculptures.
- Photographs.
- Ceramics.
- Textiles.
- Mixed-media artworks.
- Digital art.

9.4 Meaning of a craft market

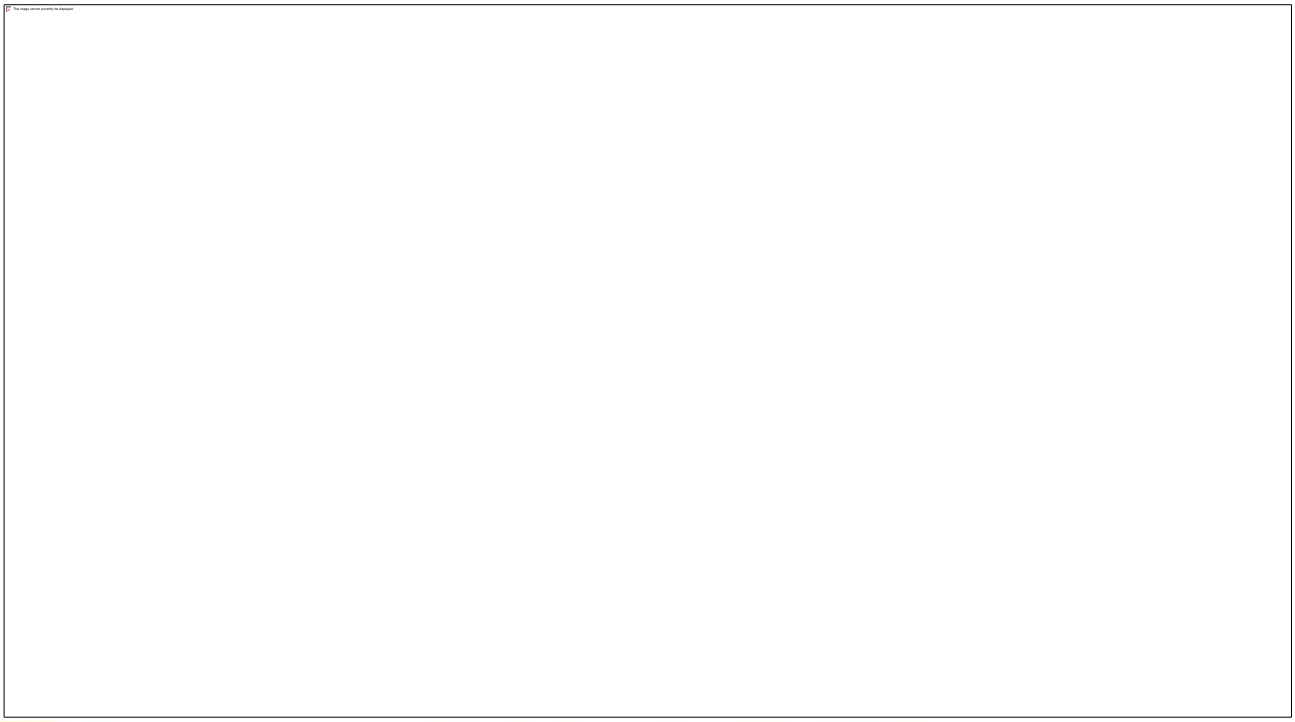
A craft market is a place where artists and craft producers display and sell handmade products.

Products may include:

- Baskets.
- Beadwork.
- Jewellery.
- Carvings.
- Pottery.
- Leather goods.
- Textiles.
- Souvenirs.
- Decorative objects.

9.5 Examples of places in Kenya for art and craft research

The following are possible research destinations. Learners and teachers should confirm current access arrangements, operating hours and permission before organising visits.





1. **Nairobi National Museum** – provides opportunities to explore Kenyan history, culture, heritage and collections.
2. **Maasai Market** – provides opportunities to observe and study locally produced crafts, jewellery, carvings and decorative items. Its location and operating arrangements can vary.
3. **Banana Hill Art Gallery** – an art space associated with contemporary visual art and exhibitions.
4. **Karen Blixen Museum** – offers opportunities to study historical and cultural objects and the presentation of heritage.
5. **Kuona Artists Collective** – associated with artist development, creative practice and visual arts.
6. **Local community craft markets and workshops** – learners can observe craftspeople making and selling products in their own counties.

9.6 Importance of visiting craft markets

Visiting craft markets helps learners to:

- Identify different types of Kenyan crafts.
- Observe materials used by artists.
- Examine production techniques.
- Compare traditional and contemporary products.
- Understand the functions of craft items.
- Study product prices and market demand.
- Interact with craft producers.
- Appreciate the creativity of local artists.
- Learn about challenges faced by craft businesses.
- Identify opportunities for self-employment.

9.7 Guidelines for visiting an art studio or gallery

Before the visit

1. Identify the purpose of the visit.
2. Research the studio, gallery or craft market.
3. Prepare observation questions.
4. Seek permission where necessary.
5. Plan transport and safety arrangements.
6. Carry notebooks and approved recording devices.
7. Agree on respectful conduct.

During the visit

1. Observe artworks carefully.
2. Identify materials and techniques.
3. Listen to explanations from artists or guides.
4. Ask relevant questions politely.

5. Record observations accurately.
6. Respect artworks and studio equipment.
7. Obtain permission before taking photographs or recording interviews.
8. Avoid touching displayed artworks unless permitted.

After the visit

1. Organise the information collected.
2. Compare different artworks.
3. Identify similarities and differences.
4. Prepare a report or presentation.
5. Reflect on the knowledge gained.
6. Suggest ways of supporting local artists.

10.0 Studying Master Artists and Their Artistic Niches

10.1 Meaning of a master artist

A master artist is an experienced and highly skilled practitioner recognised for expertise, quality, knowledge or contribution in a particular artistic field.

A master artist may be formally trained or may have developed expertise through years of practice and mentorship.

10.2 Meaning of an artistic niche

An artistic niche is a specialised area or particular market in which an artist concentrates their creative work.

Examples:

- A potter specialising in decorative ceramics.
- A sculptor specialising in wildlife sculptures.
- A painter specialising in portraits.
- A photographer specialising in wildlife photography.
- A jewellery maker specialising in beadwork.
- A designer specialising in traditional-inspired fashion.
- A digital artist specialising in illustration.

10.3 Areas to investigate when studying a master artist

1. Artistic background

- Training and experience.
- How the artist developed their skills.
- Sources of inspiration.
- Important influences.

2. Materials

- Main materials used.
- Reasons for selecting those materials.
- Availability and cost.
- Preparation and storage methods.

3. Techniques

- Methods used to create artworks.
- Tools and equipment.
- Special skills demonstrated.
- New techniques introduced.

4. Artistic style

- Preferred colours.
- Patterns and forms.
- Subject matter.
- Composition.
- Distinctive features.

5. Artistic niche

- Specialised area of production.
- Main customers.
- Type of products made.
- Market opportunities.

6. Contemporary issues

- Social messages in the artist's work.
- Environmental concerns.
- Cultural identity.
- Technological influence.
- Economic challenges.

7. Opportunities and challenges

- Sources of income.
- Exhibition opportunities.
- Online marketing.
- Access to materials.
- Competition.
- Copyright and design protection.
- Availability of training and mentorship.

10.4 Sample interview questions for a Kenyan craft artist

1. How did you begin working as an artist?
2. Which type of art or craft do you specialise in?
3. What materials do you commonly use?
4. Where do you obtain your materials?
5. Which techniques do you use?
6. What inspires your designs?
7. How do you preserve traditional designs and techniques?
8. How do you introduce new ideas into your work?
9. Who are your main customers?
10. How do you determine the prices of your products?
11. What challenges do you face?
12. How do you market your work?
13. How has technology influenced your artistic practice?
14. What advice would you give young artists?

11.0 Contemporary Issues in Kenyan Art

Contemporary issues are current matters affecting individuals, communities and society. Artists use artworks to communicate, question, interpret or respond to such issues.

11.1 Environmental conservation

Artists may address:

- Deforestation.
- Plastic pollution.
- Climate change.
- Water conservation.
- Wildlife protection.
- Sustainable use of natural resources.

Artistic responses

- Sculptures made from safe recycled materials.
- Paintings depicting environmental challenges.
- Posters encouraging tree planting.
- Installations communicating the effects of pollution.

11.2 Cultural identity and preservation

Artists explore:

- Community traditions.
- Indigenous patterns.

- Traditional clothing.
- Languages and symbols.
- Cultural change.
- Intergenerational knowledge.

Artistic responses: Creating artworks that document cultural practices, reinterpret traditional motifs or celebrate Kenyan cultural diversity.

11.3 Technology and digital transformation

Technology influences:

- Digital drawing.
- Graphic design.
- Photography.
- Animation.
- Online exhibitions.
- Digital marketing.
- Electronic sales platforms.

Artists must also consider responsible use of digital tools, privacy and intellectual property.

11.4 Social and economic challenges

Art may communicate concerns about:

- Poverty.
- Unemployment.
- Inequality.
- Education.
- Health awareness.
- Urbanisation.
- Community development.

11.5 Gender and inclusion

Artists may explore:

- Equal opportunities.
- Representation of women and men.
- Disability inclusion.
- Access to creative education.
- Recognition of diverse artistic voices.

11.6 Globalisation and cultural exchange

Globalisation allows artists to interact with ideas, styles, technologies and markets from different parts of the world.

Benefits include:

- Exposure to new techniques.
- Access to international markets.
- Cultural exchange.
- Collaboration.
- Wider recognition.

Possible challenges include:

- Loss of cultural distinctiveness.
- Unacknowledged borrowing of designs.
- Competition from imported products.
- Misrepresentation of cultural symbols.

12.0 Authenticity and Preservation of Artworks in Digital Formats

12.1 Meaning of authenticity in art

Authenticity refers to the genuineness, originality and truthful representation of an artwork, its creator, source or cultural background.

An authentic artwork should be accurately attributed and should not be falsely presented as an original work by another artist or community.

12.2 Meaning of digital documentation

Digital documentation is the process of recording and preserving information about artworks using electronic devices and digital systems.

It may include:

- Digital photographs.
- Scanned images.
- Video recordings.
- Audio interviews.
- Digital drawings.
- Written descriptions.
- Online catalogues.
- Digital archives.

12.3 Challenges of maintaining authenticity in digital formats

1. **Unauthorised copying:** Images may be downloaded and reproduced without the artist's permission.
2. **False attribution:** A digital artwork may be presented under the wrong artist's name.
3. **Image manipulation:** Editing may change the appearance or meaning of an original artwork.
4. **Loss of context:** A photograph may be shared without information about its cultural background.
5. **Poor image quality:** Low-resolution photographs may fail to represent important details.
6. **Unauthorised commercial use:** Digital images may be used to produce products without permission.

7. **Cultural misrepresentation:** Traditional symbols may be presented inaccurately or without community context.
8. **File deterioration or loss:** Digital files may become inaccessible due to damage, deletion or outdated technology.

12.4 Ways of maintaining authenticity

- Record the artist's correct name and relevant details.
- Include the title, date, medium and dimensions of the artwork where known.
- Obtain permission before photographing or publishing artworks.
- Use accurate descriptions of cultural origins and meanings.
- Preserve original high-quality files.
- Keep copies of original photographs and documentation.
- Record changes made during digital editing.
- Use appropriate copyright notices and licensing information.
- Apply watermarks where appropriate, while recognising that watermarks do not guarantee protection.
- Store digital files securely with backup copies.
- Use reliable cataloguing and archival systems.
- Respect community protocols when documenting culturally sensitive works.

12.5 Important information to record when documenting an artwork

Information	Description
Artist	Name of the artist or maker, where known and permitted.
Title	Name given to the artwork.
Date	Year or approximate period of production.
Medium	Materials used to make the artwork.
Dimensions	Height, width and depth where relevant.
Technique	Process used to create the artwork.
Cultural context	Relevant cultural background, recorded accurately and respectfully.
Ownership	Owner or collection information, where appropriate.
Photograph	Clear image showing the artwork.
Permission	Record of relevant consent for photography, recording or publication.

12.6 Difference between an original artwork and a digital reproduction

Original artwork	Digital reproduction
The physical or original creative work.	A digital representation of the original work.
May contain physical textures and materials.	Shows visual information through pixels.
Can be examined directly from different angles.	May not show every physical detail.
Has physical dimensions and material qualities.	Has digital dimensions and file properties.
May be displayed physically.	Can be shared electronically.

A digital reproduction can help preserve and share knowledge about an artwork, but it does not automatically replace the original object.

13.0 Contemporary Issues in the Ownership and Use of Indigenous Designs

13.1 Meaning of intellectual property

Intellectual property refers to creations of the mind, including artistic works, designs, inventions and other creative expressions, which may receive legal protection.

13.2 Why protection of indigenous designs matters

- It respects the creators and communities associated with the designs.
- It discourages unauthorised copying and commercial exploitation.
- It supports fair recognition and compensation.
- It helps preserve cultural knowledge.
- It encourages responsible artistic innovation.
- It promotes respect for cultural identity.

13.3 Responsible use of indigenous designs

Learners and artists should:

1. Research the cultural background of a design.
2. Avoid falsely claiming ownership of another person's work.
3. Acknowledge sources and artists where appropriate.
4. Seek permission where required.
5. Respect community protocols and restrictions.
6. Avoid using sacred or sensitive symbols in disrespectful ways.
7. Distinguish between inspiration and direct copying.
8. Avoid misleading claims about the origin of an artwork.

13.4 How to be inspired by indigenous art without copying

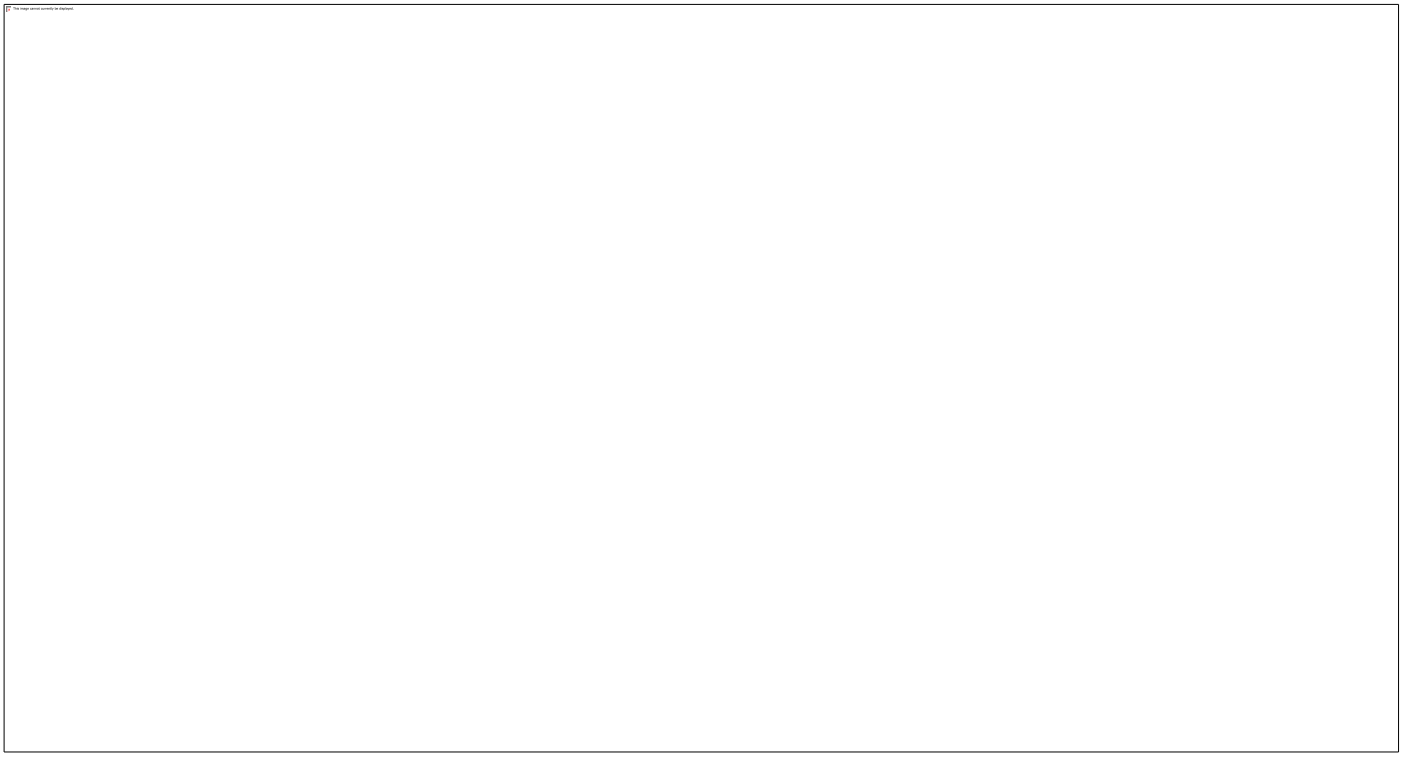
- Study the principles of the design rather than reproducing the exact artwork.
- Develop original arrangements and compositions.
- Experiment with different materials.
- Create new forms based on personal experiences.
- Acknowledge the sources of inspiration.
- Respect cultural meanings and restrictions.
- Consult relevant artists or communities when appropriate.

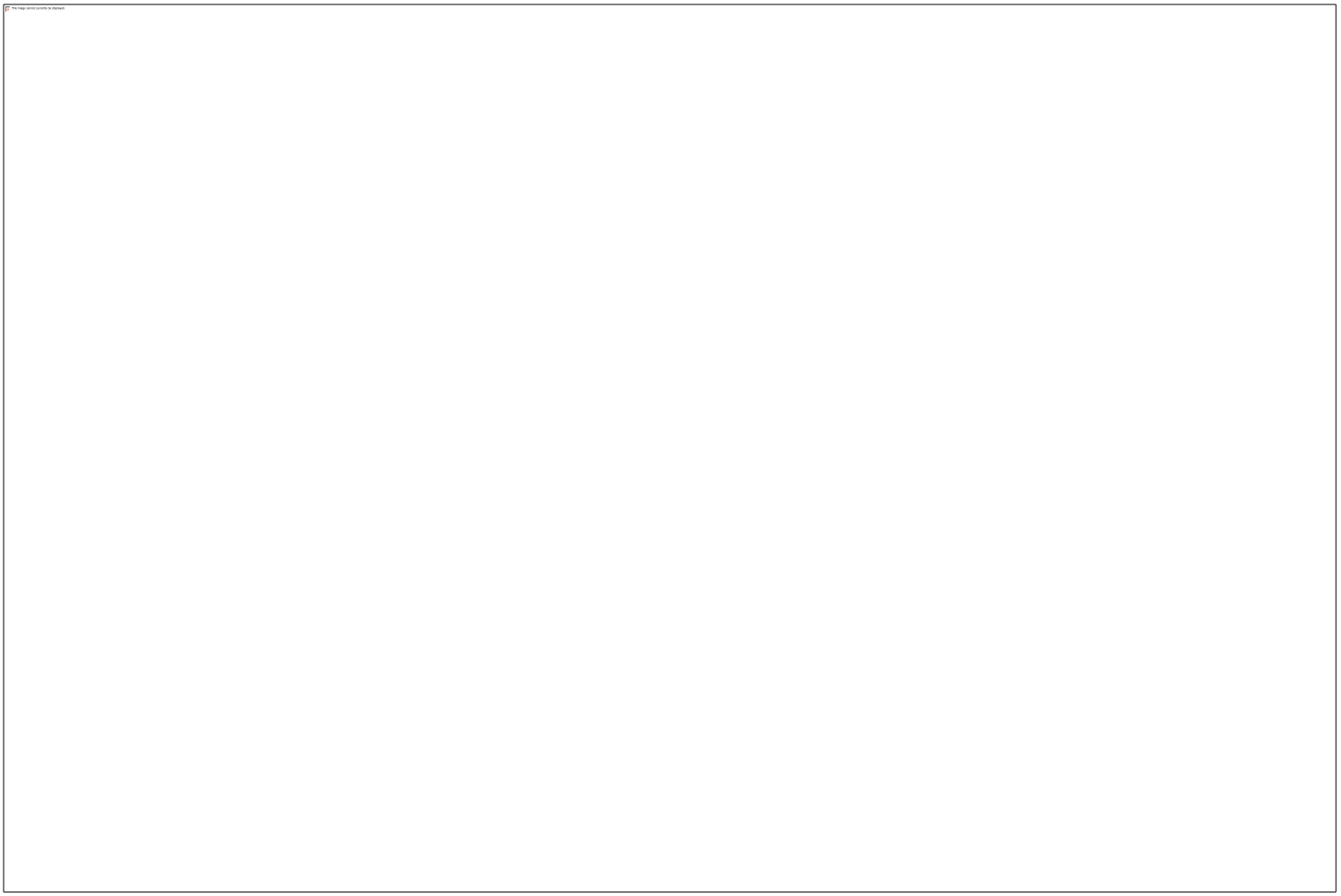
14.0 Opportunities Available in the Kenyan Art and Craft Industry

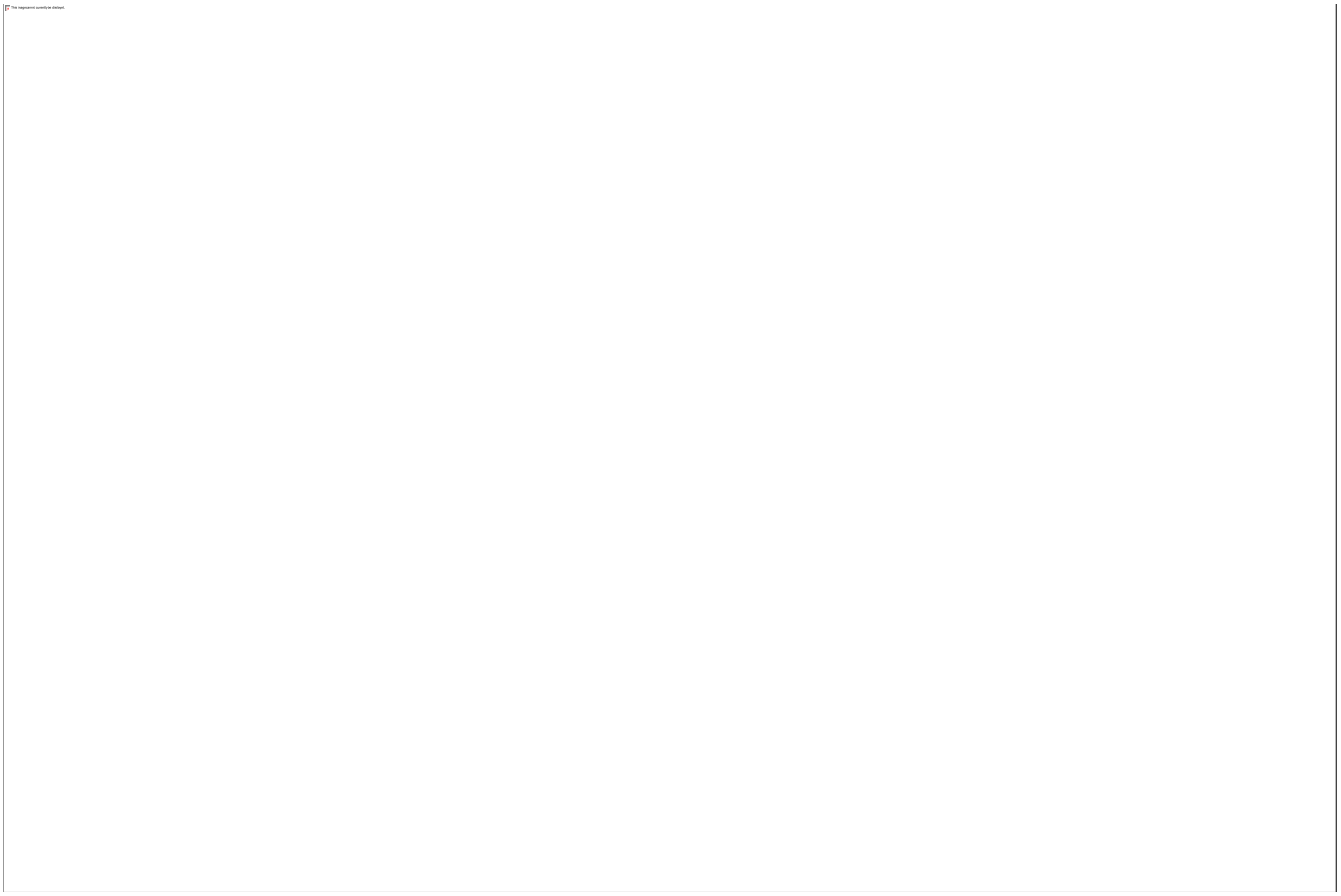
14.1 Employment and self-employment opportunities

Learners with artistic skills may pursue careers or businesses in:

1. Painting and illustration.
2. Sculpture and carving.
3. Pottery and ceramics.
4. Basketry and weaving.
5. Jewellery making.
6. Fashion and textile design.
7. Leatherwork.
8. Graphic design.
9. Photography.
10. Digital illustration.
11. Art teaching and training.
12. Exhibition and gallery management.
13. Art restoration and conservation.
14. Interior decoration.
15. Product design.
16. Art marketing and sales.
17. Cultural tourism.
18. Animation and multimedia design.







14.2 Ways artists can earn income

- Selling completed artworks.
- Taking orders from customers.
- Producing commissioned artworks.
- Teaching art skills.
- Participating in exhibitions.
- Selling products through craft markets.
- Selling through online platforms.
- Working with fashion and interior designers.
- Producing souvenirs for tourists.
- Offering photography and graphic design services.
- Collaborating with schools and organisations.

14.3 Importance of entrepreneurship in art

Entrepreneurship helps artists to:

- Identify market opportunities.
- Develop products that meet customer needs.
- Manage materials and production costs.
- Set appropriate prices.
- Promote their work.
- Maintain good customer relationships.
- Manage income and expenditure.
- Develop sustainable creative businesses.

14.4 Basic steps in starting a craft business

1. Identify a product or service.
2. Research customer needs.
3. Study competing products.
4. Identify suitable materials and suppliers.
5. Develop sample products.
6. Calculate production costs.
7. Determine selling prices.
8. Choose a business name and suitable identity.
9. Identify sales channels.
10. Promote products.
11. Maintain quality.
12. Keep proper financial records.

14.5 Example of calculating the selling price of a craft item

A learner makes a decorated basket and incurs the following costs:

Item	Cost (KSh)
Sisal fibres and other materials	250
Dye and decoration	80
Labour	200
Transport and other expenses	70
Total production cost	600

If the learner wishes to make a profit of KSh 200:

Selling price = Total production cost + Desired profit

Selling price = 600 + 200

Selling price = KSh 800

The learner should also consider customer demand, quality, competition and market conditions when setting the final price.

15.0 Art Presentation, Exhibition and Display

15.1 Meaning of art presentation

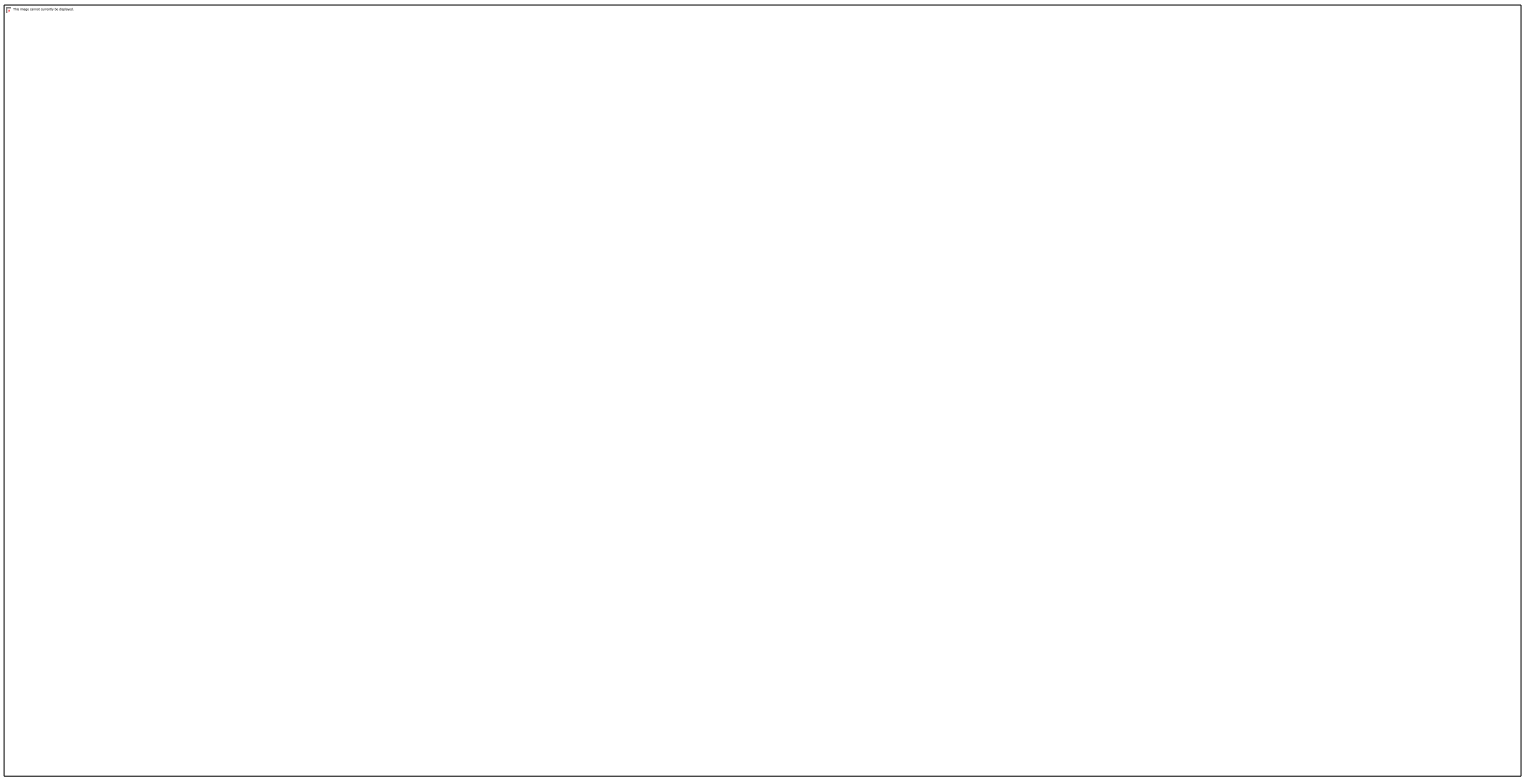
Art presentation is the process of arranging and communicating artworks to an audience in a clear, attractive and meaningful way.

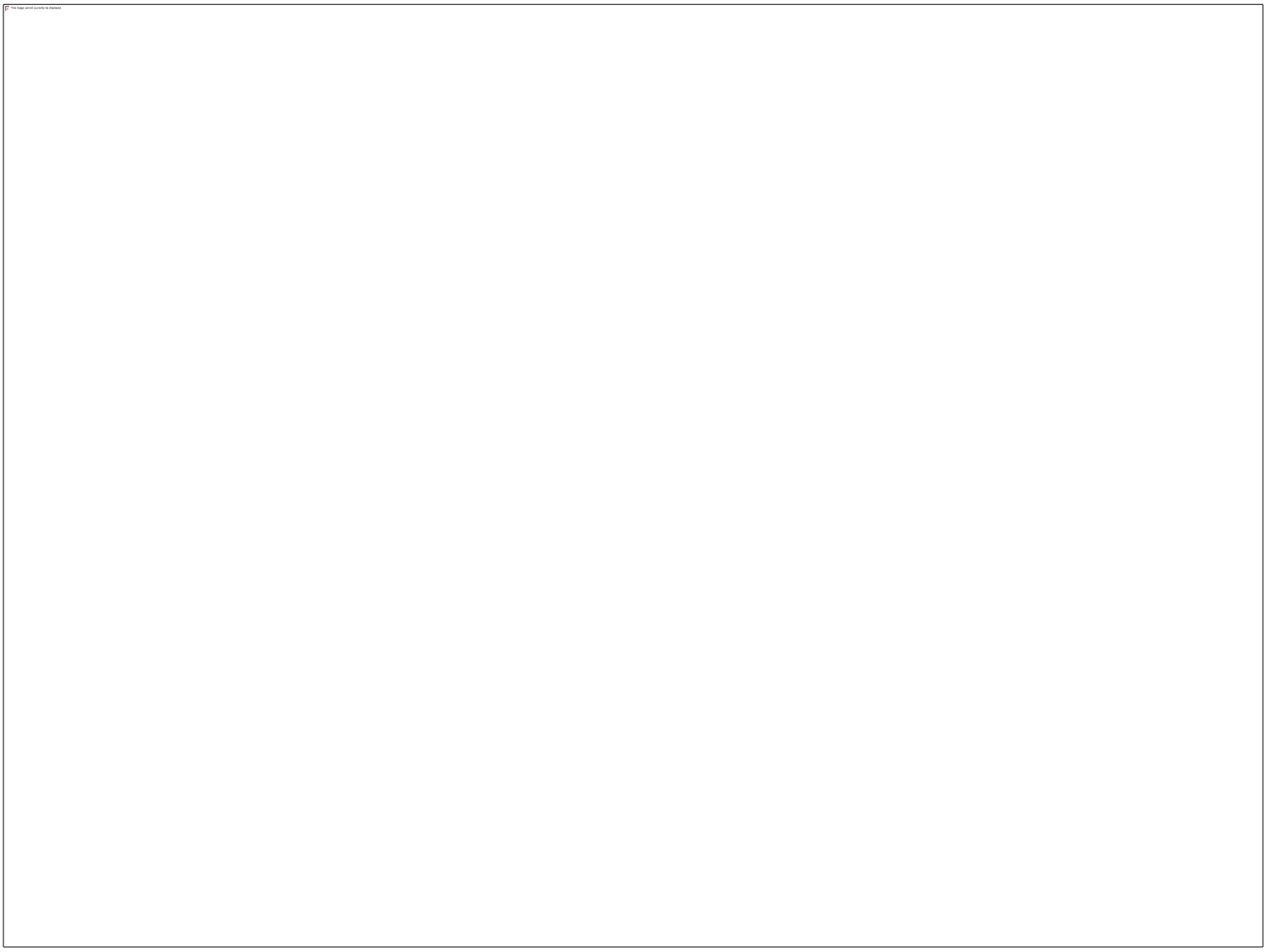
15.2 Meaning of an art exhibition

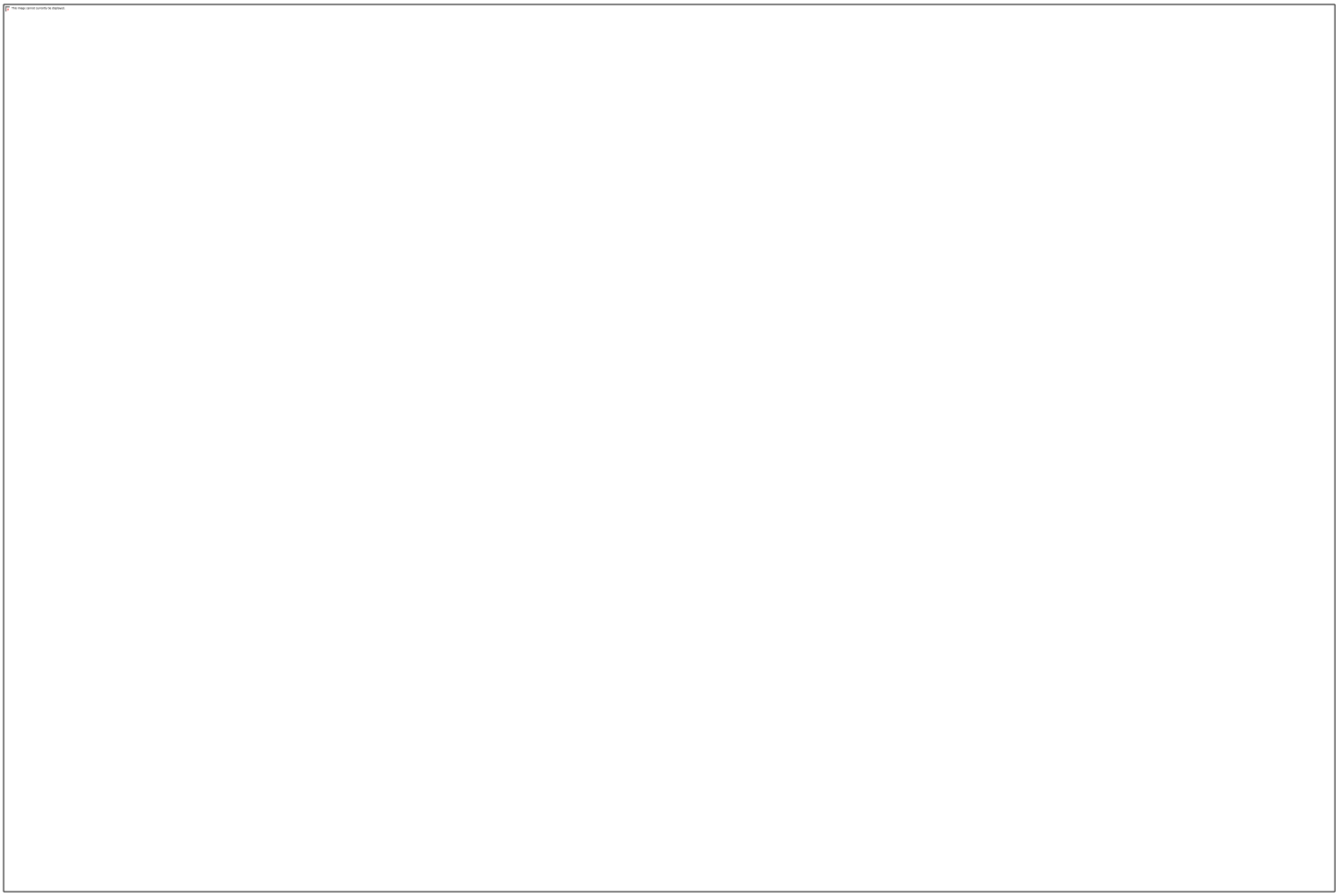
An art exhibition is an organised display of artworks for viewing, appreciation, learning, discussion or sale.

15.3 Methods of presenting artworks

- Wall display.
- Display shelves.
- Display stands.
- Glass display cases.
- Pedestals for sculptures.
- Digital slideshows.
- Online galleries.
- Photographic catalogues.
- Demonstrations by artists.







15.4 Factors to consider when displaying artworks

1. **Lighting:** Ensure artworks are clearly visible without exposing delicate materials to damaging light.
2. **Space:** Provide adequate space for viewers to move around.
3. **Arrangement:** Group related artworks logically.
4. **Safety:** Secure artworks to prevent falling or damage.
5. **Labels:** Include titles, artists' names and relevant descriptions.
6. **Height:** Display artworks at suitable viewing levels.
7. **Background:** Use backgrounds that do not distract from the artworks.
8. **Accessibility:** Arrange displays so that different viewers can access them.
9. **Protection:** Protect delicate works from dust, moisture and unnecessary handling.
10. **Theme:** Arrange artworks around a clear exhibition theme.

15.5 Information to include on an artwork label

- Title of the artwork.
- Artist's name.
- Date of production.
- Materials used.
- Technique.

- Dimensions, where relevant.
- Short description or message.

15.6 Importance of art exhibitions

- Provide opportunities for artists to display their work.
- Promote cultural appreciation.
- Encourage interaction between artists and audiences.
- Support learning and feedback.
- Create marketing and sales opportunities.
- Build artists' confidence.
- Promote collaboration.
- Preserve and communicate cultural heritage.

16.0 Documenting Activities of a Local Art Studio or Gallery

16.1 Meaning of documentation

Documentation is the systematic recording of information, activities, observations and experiences for future reference, presentation or study.

16.2 Activities that may be documented

- Preparation of materials.
- Drawing and designing.
- Carving and modelling.
- Weaving and basketry.
- Pottery production.
- Painting.
- Jewellery making.
- Finishing and decoration.
- Packaging.
- Exhibition preparation.
- Marketing and sales.
- Artist demonstrations.
- Workshops and training sessions.

16.3 Methods of documenting studio activities

A. Written notes

Record the artist's explanations, materials, techniques, observations and findings.

B. Photography

Take photographs of activities and completed products with permission.

C. Video recording

Record demonstrations and production processes with permission.

D. Audio recording

Record interviews or explanations where the participants consent.

E. Sketching

Draw objects, tools, designs and processes observed during the visit.

F. Digital presentation

Organise photographs, notes and other information into a slideshow or digital report.

16.4 Sample studio documentation report

Title: A visit to a local craft studio.

1. Introduction

State the name and location of the studio, date of visit and purpose of the activity.

2. Activities observed

Describe the artistic activities witnessed, such as carving, weaving, painting or pottery.

3. Materials and tools

Identify the materials and tools used by the artists.

4. Techniques and processes

Explain the methods used to produce the artworks.

5. Artistic style

Describe the features that make the artist's work distinctive.

6. Contemporary issues

Explain how the artist responds to current social, cultural, environmental or economic issues.

7. Opportunities

Identify possible employment, business and learning opportunities.

8. Challenges

Record challenges mentioned by the artists.

9. Personal reflection

Explain what you learned and how the visit influenced your appreciation of Kenyan art.

10. Conclusion

Summarise the importance of the visit and suggest ways of supporting local artists.

17.0 Making an Engaging Presentation on Indigenous and Contemporary Kenyan Art

17.1 Meaning of a presentation

A presentation is an organised way of communicating information, findings or ideas to an audience using speech, images, demonstrations, written material or digital media.

17.2 Content of an art appreciation presentation

A presentation may include:

1. Introduction to the selected artwork or craft.
2. Community or artist associated with the work.
3. Materials used.
4. Tools and equipment.
5. Techniques and production processes.
6. Types and categories of artwork.
7. Artistic style and trends.
8. Cultural and historical significance.
9. Utility and heritage value.
10. Contemporary issues.
11. Personal inspiration.
12. Opportunities in the art industry.
13. Challenges and possible solutions.
14. Conclusion and recommendations.

17.3 Qualities of an effective presentation

- Clear and accurate information.
- Logical organisation.
- Appropriate use of images.
- Good communication skills.
- Relevant examples.
- Respectful representation of cultural information.
- Appropriate timing.
- Confidence.
- Correct pronunciation.
- Ability to respond to questions.
- Proper acknowledgement of sources.

17.4 Giving and receiving feedback

Feedback is information given to a person about the strengths and areas for improvement in their work or performance.

Constructive feedback should:

- Be respectful.
- Be specific.
- Focus on the work rather than attacking the person.
- Identify strengths.
- Suggest practical improvements.

- Encourage further learning.

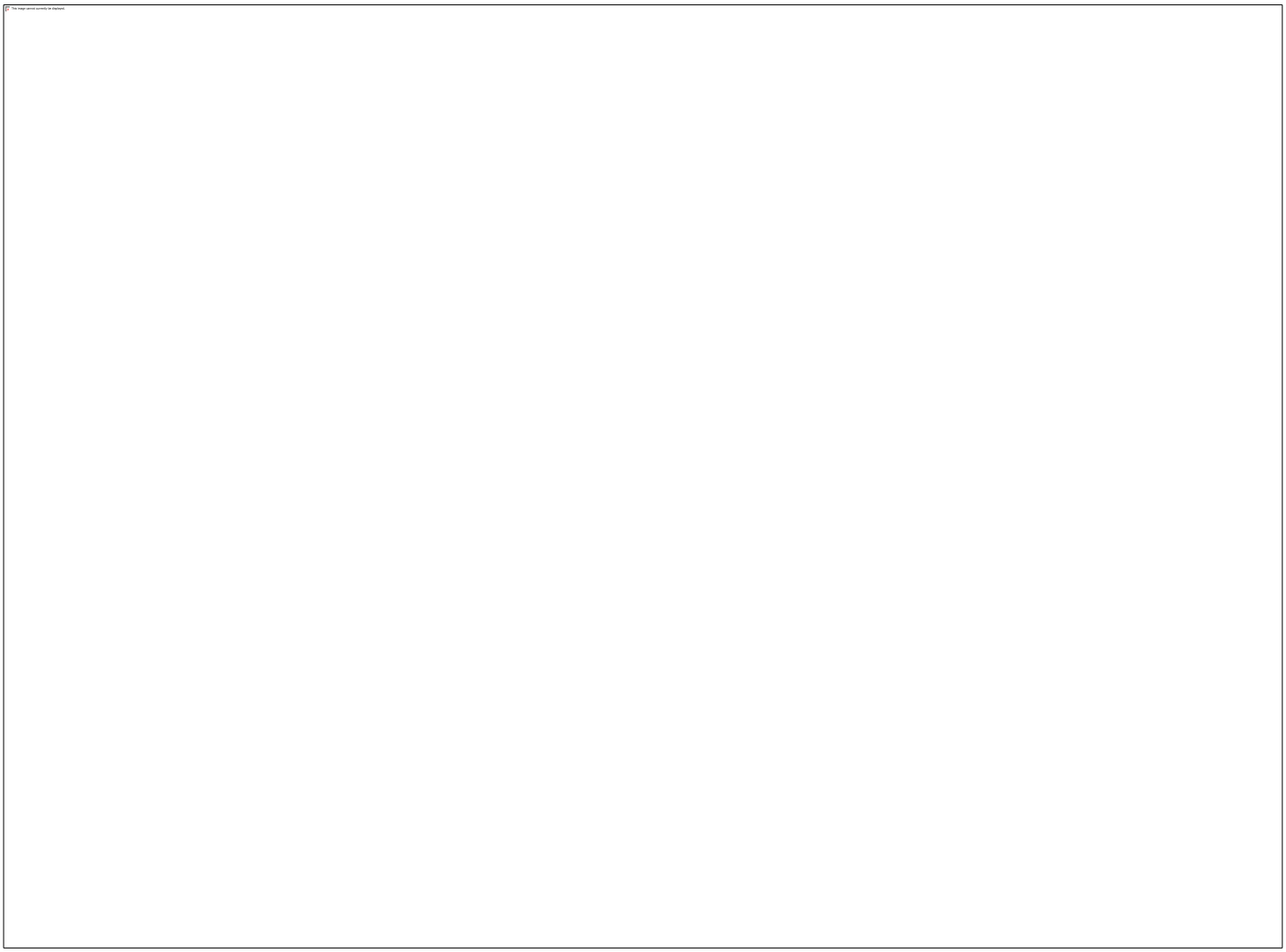
Examples of constructive feedback

- "The presentation explains the materials clearly, but it would be stronger with photographs showing the production process."
- "The beadwork has an attractive colour arrangement. The finishing around the edges could be improved."
- "The cultural background is interesting. Include the artist's explanation to support the interpretation."

18.0 Practical Learning Activities and Projects

The following activities help learners develop practical skills, creativity, appreciation and collaboration.

Practical Activity 1: Research and appreciate a Kenyan indigenous craft



Objective: To investigate and appreciate an indigenous Kenyan craft.

Requirements

- Notebook.
- Pen or pencil.
- Approved camera or smartphone.
- Access to craft objects, an artist or reliable reference material.

Procedure

1. Select one indigenous Kenyan craft.
2. Identify the community or cultural context associated with it, where appropriate.
3. Research its history and uses.
4. Identify materials and tools.
5. Investigate the techniques and production processes.
6. Examine patterns, colours, forms and textures.
7. Interview a craft practitioner where possible.
8. Record the information.
9. Evaluate the craft item.
10. Present the findings to the class.

Expected outcome: A well-organised report or presentation explaining the craft's materials, techniques, utility and heritage value.

Practical Activity 2: Visit and document a local art studio or gallery

Objective: To observe the activities of artists and document their creative processes.

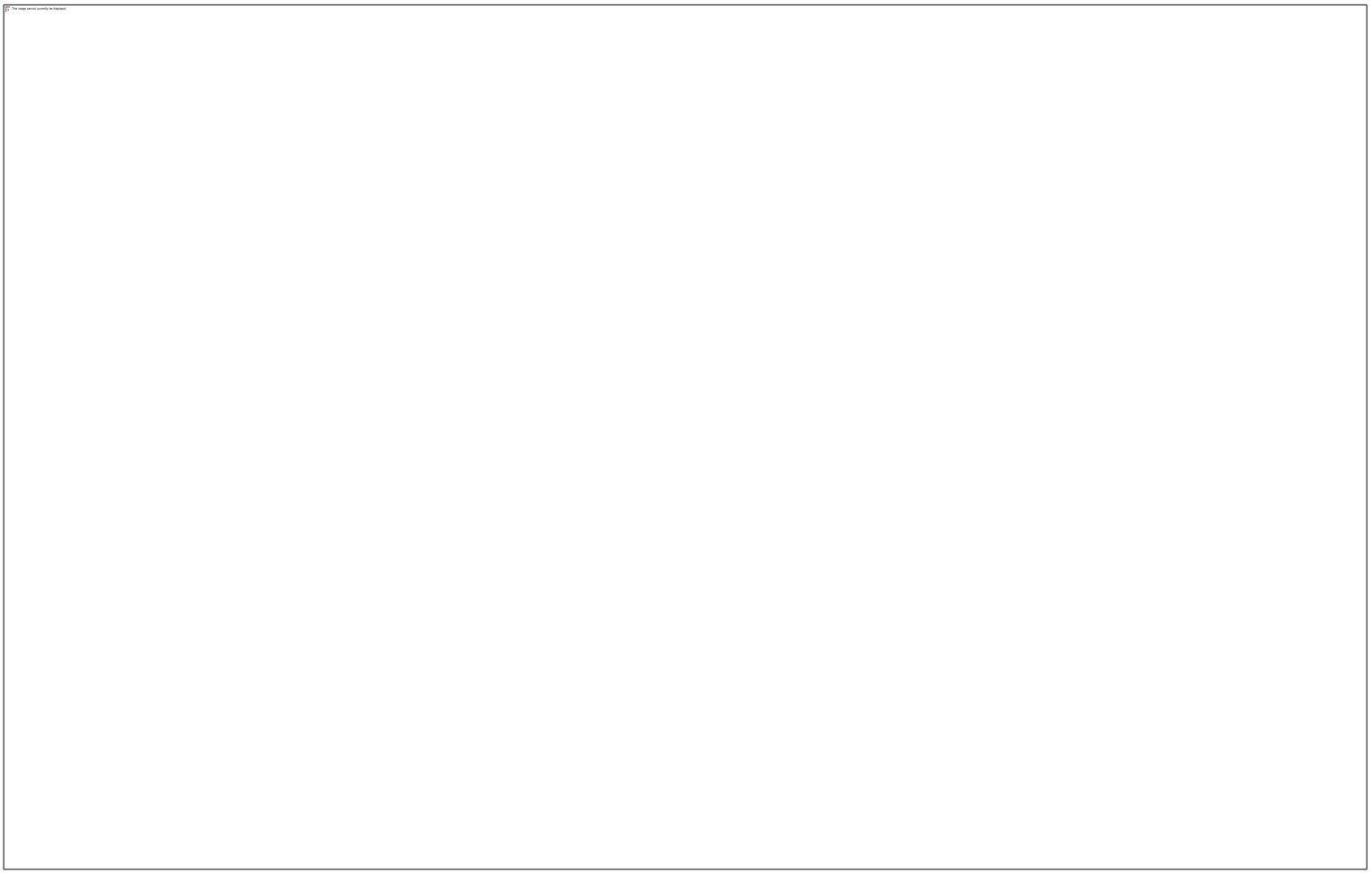
Procedure

1. Identify an accessible art studio, gallery or workshop.
2. Obtain the necessary permission.
3. Prepare observation questions.
4. Visit the studio or gallery.
5. Observe different categories of art.
6. Identify the artists' preferred materials and techniques.
7. Record the activities observed.
8. Take photographs or videos only with permission.
9. Prepare a written report.
10. Present the findings to classmates.

Expected outcome: A documented report showing understanding of artistic skills, techniques, styles and opportunities.

Practical Activity 3: Compare indigenous and contemporary artworks





Objective: To identify similarities and differences between indigenous and contemporary art.

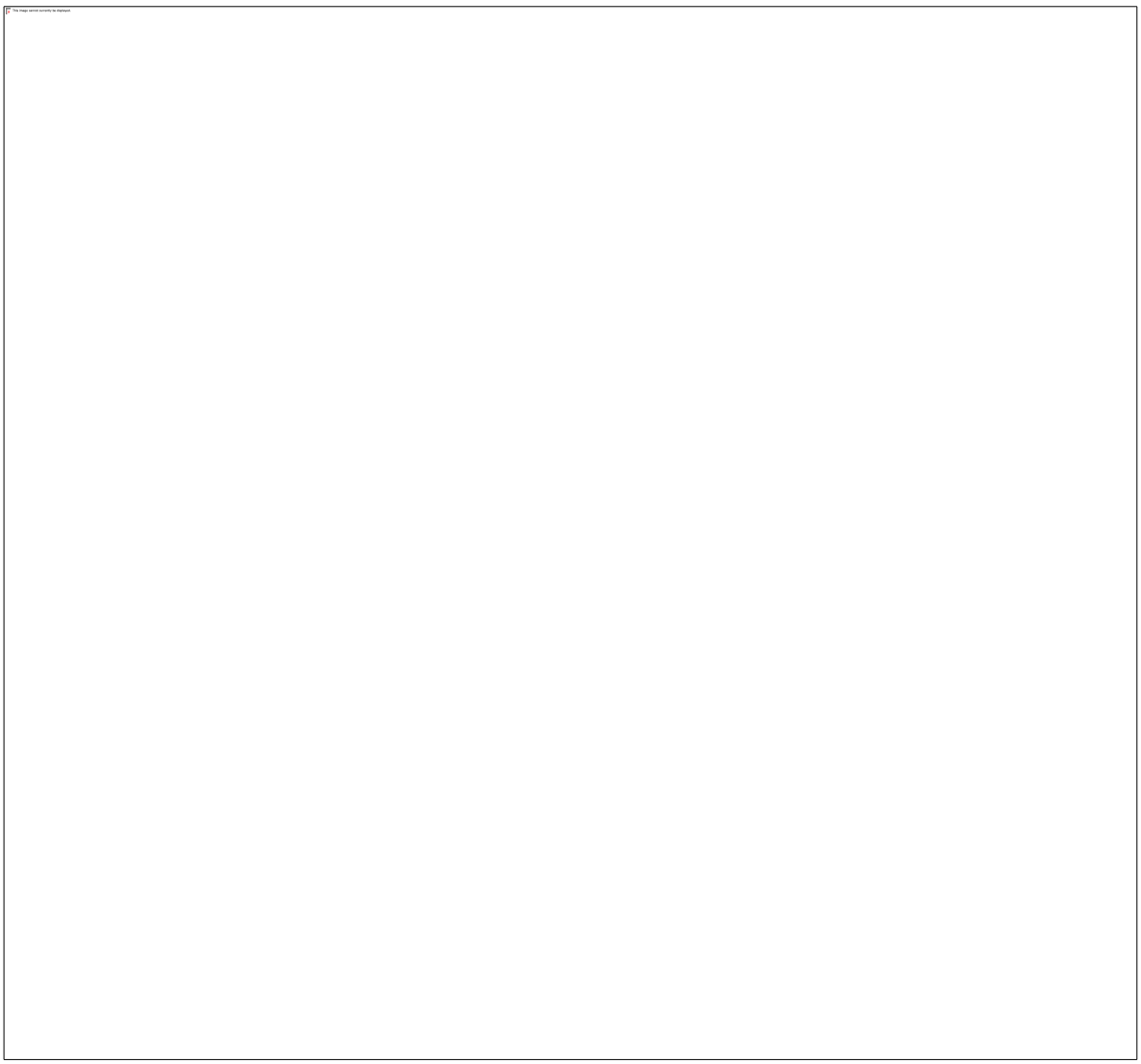
Procedure

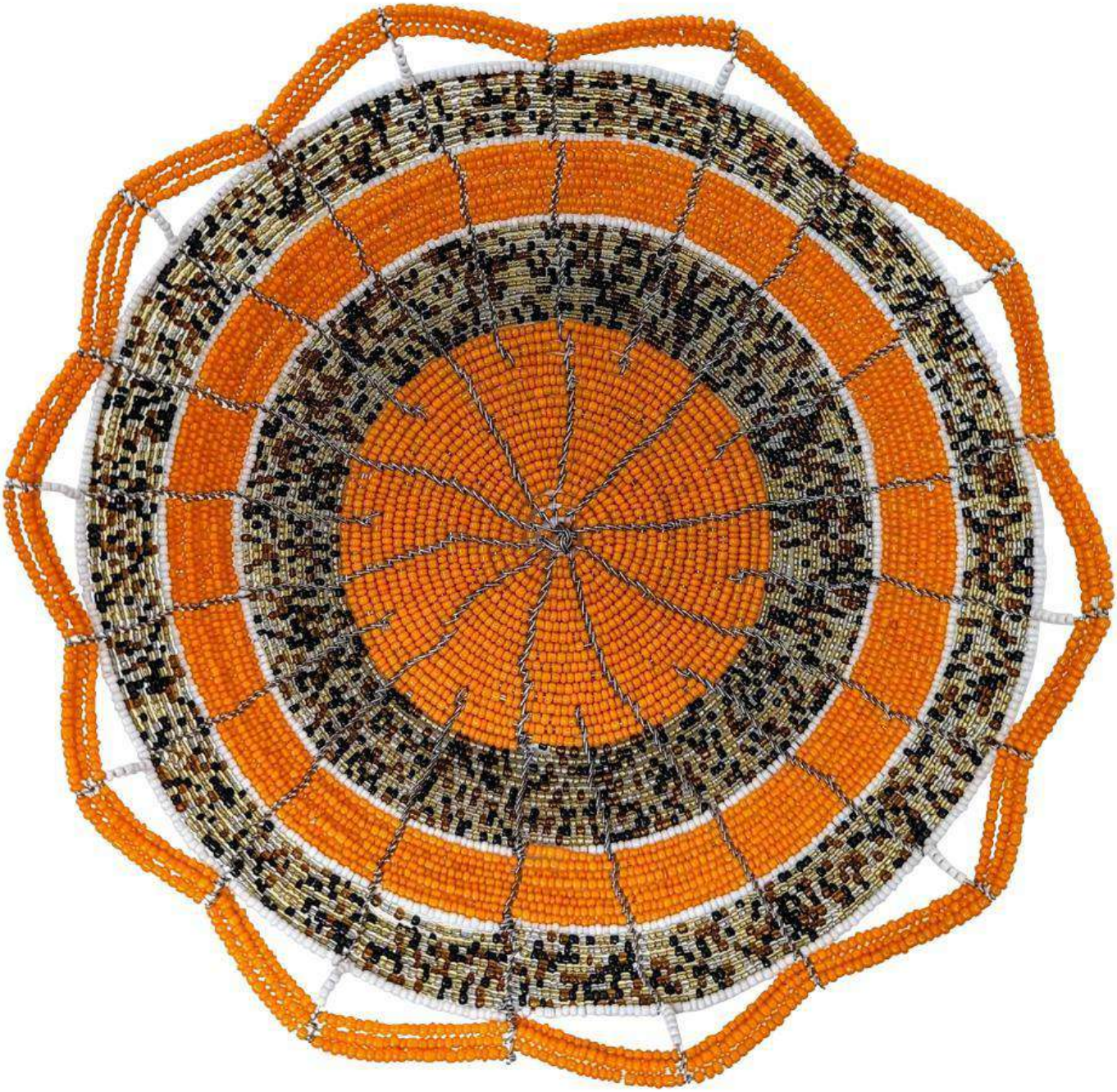
1. Select one indigenous artwork.
2. Select one contemporary artwork.
3. Observe both carefully.
4. Identify the materials used.
5. Compare the techniques.
6. Examine the design and artistic style.
7. Identify their functions.
8. Compare cultural and social meanings.
9. Discuss the influence of indigenous art on contemporary art.
10. Present the findings.

Expected outcome: A comparison chart and an oral or written presentation.

Practical Activity 4: Create an artwork inspired by Kenyan cultural heritage

Objective: To apply inspiration from indigenous Kenyan art in producing an original contemporary artwork.





Possible materials

- Paper or cardboard.
- Fabric.
- Beads.
- Recycled materials.
- Natural fibres.
- Paint.
- Wire.
- Suitable adhesives.

- Locally available safe materials.

Procedure

1. Research a Kenyan indigenous art form.
2. Identify an element that inspires you, such as pattern, shape, colour or technique.
3. Record its cultural background.
4. Develop an original design.
5. Select suitable materials.
6. Produce the artwork.
7. Decorate and finish it.
8. Evaluate the finished product.
9. Explain the source of inspiration.
10. Display the work and receive feedback.

Expected outcome: An original artwork that demonstrates cultural appreciation, creativity and responsible use of indigenous inspiration.

Practical Activity 5: Prepare a class art exhibition

Objective: To develop collaboration, presentation and appreciation skills.

Procedure

1. Select an exhibition theme, for example, "Our Kenyan Artistic Heritage".
2. Identify the artworks to be displayed.
3. Group artworks according to categories.
4. Prepare display spaces.
5. Produce labels for the artworks.
6. Arrange the display safely.
7. Prepare short explanations.
8. Invite the intended audience.
9. Present the artworks.
10. Collect feedback and evaluate the exhibition.

Expected outcome: A well-organised exhibition that celebrates indigenous and contemporary Kenyan art.

Key Terms and Definitions

Term	Meaning
Art	Creative expression of ideas, feelings and experiences.
Art appreciation	Observing, analysing, interpreting, evaluating and valuing artworks.
Indigenous art	Art associated with traditional knowledge and practices of local communities.
Contemporary art	Art produced in the present period or recent times.
Craftsmanship	Skill and care demonstrated in producing an object.
Utility	Practical usefulness of an object.
Heritage	Traditions, knowledge, objects and practices inherited from previous generations.
Gallery	A place where artworks are displayed for viewing and appreciation.
Studio	A workspace where artists create artworks.
Craft market	A place where craft products are displayed and sold.
Artistic style	The distinctive way an artist creates and presents work.
Artistic trend	A noticeable direction or pattern in artistic practice.
Artistic niche	A specialised area in which an artist concentrates.
Authenticity	Genuineness and truthful representation of an artwork.
Documentation	Systematic recording of information and activities.
Exhibition	An organised display of artworks.
Evaluation	Judging the quality, effectiveness and value of an artwork.
Mixed media	Use of two or more materials or methods in one artwork.
Intellectual property	Legal rights associated with creations of the mind.
Digital reproduction	A digital representation of an original artwork.

REVISION EXERCISES

SECTION A: MULTIPLE-CHOICE QUESTIONS (30 MARKS)

Instructions: Answer all the questions. Choose the correct answer from the alternatives A, B, C and D. Each question carries one mark.

1. Art appreciation is best described as the process of:

A. Selling artworks to customers.

B. Observing, analysing, interpreting and valuing artworks.

C. Copying artworks from other artists.

D. Producing artworks without planning.

2. Which of the following best describes indigenous Kenyan art?

A. Art produced only using imported materials.

B. Art that has no relationship with cultural traditions.

C. Artistic practices associated with local communities and inherited knowledge.

D. Art produced exclusively using computers.

3. Which of the following is an example of indigenous Kenyan beadwork?

A. A computer keyboard.

B. A Maasai beaded necklace.

C. A plastic storage tank.

D. A printed newspaper.

4. The main material used in traditional pottery is:

A. Clay.

B. Glass.

C. Rubber.

D. Copper.

5. Which technique involves joining long rolls of clay to form a pottery object?

A. Casting.

B. Coiling.

C. Forging.

D. Engraving.

6. The process of shaping wood by removing unwanted parts using carving tools is known as:

A. Weaving.

B. Carving.

C. Casting.

D. Dyeing.

7. Which of the following is commonly used in basketry?

A. Sisal fibres.

B. Cement.

C. Glass sheets.

D. Petrol.

8. Which technique involves interlacing three or more strands?

A. Plaiting.

B. Casting.

C. Modelling.

D. Forging.

9. Contemporary Kenyan art is mainly concerned with:

A. Reproducing all traditional objects without change.

B. Responding to current experiences, ideas and issues.

C. Avoiding technological developments.

D. Using only materials from the past.

10. Which of the following is an example of contemporary digital art?

A. A traditionally woven basket.

B. A hand-carved wooden stool.

C. A computer-generated illustration.

D. An unfired clay pot.

11. A work of art made by combining fabric, photographs and paint is an example of:

A. Mixed-media art.

B. Pottery.

C. Forging.

D. Basketry.

12. The distinctive way an artist creates and presents artworks is known as:

A. Utility.

B. Artistic style.

C. Documentation.

D. Marketing.

13. A noticeable direction or pattern in artistic practice is referred to as:

A. An artistic trend.

B. A studio visit.

C. A craft tool.

D. An exhibition label.

14. Which of the following is an important factor when evaluating craftsmanship?

A. The artist's age only.

B. The price of the artist's clothes.

C. Neatness and quality of finishing.

D. The distance travelled by the artist.

15. The practical usefulness of an artwork is referred to as:

A. Utility.

B. Rhythm.

C. Contrast.

D. Originality.

16. Which of the following best explains cultural heritage?

A. Imported products sold in shops.

B. Traditions, knowledge and practices inherited from previous generations.

C. Modern machines used in factories.

D. Temporary advertising messages.

17. A place where artworks are displayed for public viewing is called a:

A. Gallery.

B. Warehouse.

C. Classroom store.

D. Construction site.

18. An artist's workspace is known as a:

A. Studio.

B. Market.

C. Stadium.

D. Library.

19. Which of the following is a major purpose of visiting a craft market?

A. To discourage local artists.

B. To observe materials, techniques and products.

C. To damage displayed products.

D. To copy every design without permission.

20. A highly experienced and skilled artist recognised for expertise in a particular field is referred to as:

A. A master artist.

B. A customer.

C. A tourist.

D. A salesperson.

21. A specialised area in which an artist concentrates their creative work is called:

A. An artistic niche.

B. An art exhibition.

C. A cultural festival.

D. A digital archive.

22. Which of the following is an example of environmental art?

A. A sculpture made from suitable recycled materials to communicate a conservation message.

B. A drawing that encourages littering.

C. A painting that promotes destruction of forests.

D. An artwork made by wasting materials deliberately.

23. Which practice helps maintain the authenticity of artworks in digital formats?

A. Removing the artist's name.

B. Publishing artworks without permission.

C. Recording correct details and acknowledging the artist.

D. Changing the artwork's meaning during editing.

24. A digital reproduction is:

A. Always the physical original artwork.

B. A digital representation of an artwork.

C. A traditional carving tool.

D. A type of pottery technique.

25. Which of the following is an appropriate way of documenting a studio visit?

A. Recording activities without considering permission.

B. Taking notes and photographs with permission.

C. Removing artists' labels from their work.

D. Publishing false information about the studio.

26. Which of the following should be included on an artwork label?

A. The artist's name and title of the artwork, where known.

B. The artist's private passwords.

C. Unverified claims about the artwork.

D. Unrelated personal information.

27. A learner who gives respectful and specific suggestions about a friend's artwork is demonstrating:

A. Constructive feedback.

B. Unfair criticism.

C. Plagiarism.

D. Cultural discrimination.

28. Which of the following is an opportunity in the Kenyan art industry?

A. Digital illustration and graphic design.

B. Destruction of cultural heritage.

C. Unauthorised copying of designs.

D. Wasteful use of materials.

29. A craft producer who adds the cost of materials, labour and other expenses before determining a selling price is applying:

A. Production costing.

B. Digital manipulation.

C. Artistic distortion.

D. Cultural imitation.

30. Which value is promoted when learners work together to organise a class art exhibition?

A. Dishonesty.

B. Unity.

C. Negligence.

D. Discrimination.

SECTION B: STRUCTURED QUESTIONS 50 marks

Instructions: Answer all questions. Write your answers clearly in the spaces provided by your teacher.

1. Introduction to Art Appreciation (8 marks)

a) Define the term art appreciation. (2 marks)

b) State three reasons why learners should study indigenous Kenyan arts and crafts. (3 marks)

c) Give three examples of indigenous Kenyan craft products. (3 marks)

2. Indigenous Kenyan Arts and Crafts (8 marks)

a) Identify four categories of indigenous Kenyan arts and crafts. (4 marks)

b) State two materials used in the production of traditional baskets. (2 marks)

c) Explain two importance of indigenous pottery in Kenyan communities. (2 marks)

3. Contemporary Kenyan Art (8 marks)

a) Define contemporary art. (2 marks)

b) Identify three forms of contemporary Kenyan art. (3 marks)

c) Explain three ways in which contemporary Kenyan artists are influenced by indigenous art. (3 marks)

4. Evaluation of Artworks (8 marks)

a) State four factors considered when evaluating an indigenous or contemporary artwork. (4 marks)

b) Explain two ways in which the utility of a craft item contributes to its value. (4 marks)

5. Art Studios, Galleries and Documentation (9 marks)

a) Differentiate between an art studio and an art gallery. (2 marks)

b) State three activities that learners may observe during a visit to a local art studio. (3 marks)

c) Explain two reasons why permission should be obtained before photographing artworks during a studio or gallery visit. (4 marks)

6. Authenticity, Opportunities and Presentation (9 marks)

a) State three ways of maintaining the authenticity of artworks in digital formats. (3 marks)

b) Identify three employment or self-employment opportunities in the Kenyan art and craft industry. (3 marks)

c) Explain three qualities of an effective art appreciation presentation. (3 marks)

SECTION A: ANSWER KEY

Question	Answer	Question	Answer
1	B	16	B
2	C	17	A
3	B	18	A
4	A	19	B
5	B	20	A
6	B	21	A
7	A	22	A
8	A	23	C
9	B	24	B
10	C	25	B
11	A	26	A
12	B	27	A
13	A	28	A
14	C	29	A
15	A	30	B

SECTION B: STRUCTURED QUESTIONS (50 MARKS)

1. Introduction to Art Appreciation (8 marks)

a) Define the term art appreciation. (2 marks)

- Art appreciation is the process of observing, analysing, interpreting and evaluating works of art to understand and enjoy their meaning, beauty and value. (2 marks)

b) State three reasons why learners should study indigenous Kenyan arts and crafts. (3 marks)

Award 1 mark for each correct response:

- To preserve and promote Kenyan cultural heritage.
- To understand the traditions, beliefs and practices of different Kenyan communities.
- To develop creativity and artistic skills.
- To promote national identity and cultural pride.
- To appreciate the skills and knowledge of traditional artists.
- To encourage innovation using indigenous artistic techniques.

c) Give three examples of indigenous Kenyan craft products. (3 marks)

Award 1 mark for each correct response:

- Traditional baskets.
- Clay pots.
- Beaded necklaces.
- Wooden carvings.
- Leather sandals.
- Traditional stools.
- Woven mats.
- Traditional gourds.

2. Indigenous Kenyan Arts and Crafts (8 marks)

a) Identify four categories of indigenous Kenyan arts and crafts. (4 marks)

Award 1 mark for each:

- Pottery.
- Basketry.
- Weaving.
- Beadwork.
- Wood carving.
- Leatherwork.
- Metalwork.
- Sculpture.

b) State two materials used in the production of traditional baskets. (2 marks)

Award 1 mark for each:

- Sisal fibres.
- Papyrus reeds.
- Palm leaves.
- Grass.
- Raffia.
- Banana fibres.
- Strips of tree bark.

c) Explain two importance of indigenous pottery in Kenyan communities. (2 marks)

Award 1 mark for each well-explained response:

- Used for storing water and other household items.
- Used for cooking and serving food.
- Used in traditional ceremonies and rituals.
- Used for storing grains and other foodstuffs.
- Provides income to potters through selling pottery products.

- Preserves cultural traditions and skills.

3. Contemporary Kenyan Art (8 marks)

a) Define contemporary art. (2 marks)

- Contemporary art refers to art produced by artists in the present period, reflecting current ideas, experiences, cultures, technologies and social issues. (2 marks)

b) Identify three forms of contemporary Kenyan art. (3 marks)

Award 1 mark for each:

- Painting.
- Sculpture.
- Photography.
- Digital art.
- Graphic design.
- Installation art.
- Street art.
- Mixed-media art.
- Printmaking.

c) Explain three ways in which contemporary Kenyan artists are influenced by indigenous art. (3 marks)

Award 1 mark for each well-explained response:

- They use traditional patterns and symbols in modern artworks.
- They incorporate indigenous materials such as wood, clay, beads and fibres.
- They borrow traditional techniques such as weaving, carving and pottery.
- They use themes based on Kenyan culture, beliefs and traditions.
- They adapt traditional designs to create modern products and artworks.

4. Evaluation of Artworks (8 marks)

a) State four factors considered when evaluating an indigenous or contemporary artwork. (4 marks)

Award 1 mark for each:

- Creativity and originality.
- Use of materials and techniques.
- Colour and design.
- Composition and arrangement.
- Cultural significance.
- Functionality or usefulness.
- Quality of workmanship.
- Beauty and visual appeal.
- Message or meaning communicated.

b) Explain two ways in which the utility of a craft item contributes to its value. (4 marks)

Award 2 marks for each well-explained point:

- Practical usefulness: A craft item that serves a useful purpose, such as a basket for carrying goods or a pot for storing water, becomes valuable because it meets people's needs.
- Demand and marketability: Craft items that perform useful functions are likely to attract more buyers, increasing their demand and market value.
- Durability: Items that can be used repeatedly for a long time are considered more valuable because they offer lasting service.
- Multiple uses: A craft item that serves several purposes may have greater value because it provides more benefits to the user.

5. Art Studios, Galleries and Documentation (9 marks)

a) Differentiate between an art studio and an art gallery. (2 marks)

- Art studio: A place where artists create, practise and develop their artworks. (1 mark)
- Art gallery: A place where artworks are displayed, exhibited and sometimes sold to the public. (1 mark)

b) State three activities that learners may observe during a visit to a local art studio. (3 marks)

Award 1 mark for each:

- Painting and drawing.
- Sculpting and carving.
- Pottery and modelling.
- Weaving and basket making.
- Beadwork and jewellery making.
- Mixing colours and preparing materials.
- Designing and decorating artworks.
- Packaging and finishing art products.

c) Explain two reasons why permission should be obtained before photographing artworks during a studio or gallery visit. (4 marks)

Award 2 marks for each well-explained point:

- Respect for artists' rights: Permission protects the artist's copyright and prevents unauthorised copying or reproduction of their work.
- Privacy and respect: Some artworks may be private, sensitive or not intended for public viewing, so permission respects the artist's wishes.
- Protection of cultural knowledge: Some traditional artworks may contain sacred or culturally sensitive information that should not be shared without approval.
- Professional conduct: Asking for permission demonstrates respect for the artist, studio or gallery rules.

6. Authenticity, Opportunities and Presentation (9 marks)

a) State three ways of maintaining the authenticity of artworks in digital formats. (3 marks)

Award 1 mark for each:

- Keep the original digital file safely.
- Avoid altering the original artwork without the artist's permission.
- Include the artist's name and relevant details.
- Acknowledge the source of the artwork.
- Use watermarks or digital signatures to identify the original artist.
- Maintain accurate records of the artwork's creation and ownership.
- Use reliable storage and backup systems.

b) Identify three employment or self-employment opportunities in the Kenyan art and craft industry. (3 marks)

Award 1 mark for each:

- Professional artist or painter.
- Sculptor or wood carver.
- Potter or ceramic artist.
- Graphic designer.
- Photographer.
- Jewellery or beadwork designer.
- Basket maker or weaver.
- Art teacher or instructor.
- Art gallery manager or curator.
- Craft shop owner or entrepreneur.
- Interior decorator.

c) Explain three qualities of an effective art appreciation presentation. (3 marks)

Award 1 mark for each well-explained point:

- Clarity: Ideas should be communicated clearly and understandably.
- Organisation: Information should follow a logical order, with an introduction, main points and conclusion.
- Accuracy: Information about the artwork, artist, materials and techniques should be correct.
- Confidence: The presenter should speak confidently and maintain good eye contact.
- Visual support: Relevant pictures or actual artworks should be used to support explanations.
- Good communication: The presenter should use appropriate language and an audible voice.

