

Fine Art and Crafts

for Rwanda Secondary Schools

Learner's Book
Senior 2

Timothy Tebenkana

FOUNTAIN PUBLISHERS
www.fountainpublishers.co.ug

Fountain Publishers Rwanda Ltd
P.O. Box 6567 Kigali, Rwanda
E-mail: fountainpublishers.rwanda@gmail.com
publishing@fountainpublishers.co.ug
Website: www.fountainpublishers.co.ug

© Fountain Publishers 2017
First published 2017

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission from the publishers.

ISBN 978-9970-19-406-3

CONTENTS

<i>Introduction</i>	<i>v</i>
<i>Learner's Health Tip.....</i>	<i>viii</i>
UNIT 1 Still Life and Nature	1
Observation of the drawings.....	2
Elements for drawing and painting.....	3
The Principles of Art.....	12
Study of a landscape.....	17
Human figure drawing.....	20
Assessment.....	25
<i>Glossary</i>	<i>25</i>
UNIT 2 Motifs, Patterns and Design Process	27
How to make a motif.....	30
Printing by impression.....	32
Printing by stamping.....	34
Printing by stenciling.....	37
Assessment.....	41
<i>Glossary</i>	<i>42</i>
UNIT 3 Letter Styles, Illustration and Design Technology	43
The major aspects of a design.....	45
Different letter styles in design.....	45
How to design a magazine cover	48
Assessment.....	50
<i>Glossary</i>	<i>51</i>
UNIT 4 Methods of Modelling Clay Figures and Forms	53
Clay preparation	55
Moulding different clay figures.....	57
How to make a mask from a mold	57
Decorating clay surfaces.....	62
Assessment.....	63
<i>Glossary</i>	<i>64</i>

UNIT 5 Weaving using Basic Local Materials	65
Weaving techniques	68
Design Patterns for weaving	70
Assessment.....	73
<i>Glossary</i>	<i>74</i>
UNIT 6 Motifs, pattern in embroidery, batik, tie and dye and design technology	75
Making motifs and patterns for batik	77
Making patterns for Tie and dye	80
Assessment.....	85
<i>Glossary</i>	<i>86</i>
UNIT 7 The Development of Art Through different eras in the World	87
What is Modern Art?	90
What are the characteristics of modern art?	92
What is Abstract art?	97
World renowned artists.....	99
Major art works in the world	101
Major art sites	104
Assessment.....	106
<i>Glossary</i>	<i>106</i>
<i>References.....</i>	<i>107</i>

Introduction

Changes in schools

This text book is part of the school curriculum reform in Rwanda: Regarding the changes in what is taught in schools and how it is taught. It is hoped that this will make what you learn at school useful in whatever you do when you leave school.

In the past, the main thing in schooling has been to learn knowledge – that is facts and ideas about each subject. Now the main idea is for you to be able to use the knowledge you learn by developing skills or competencies. These skills or competencies include the ability to think for yourself, to be able to communicate with others and explain what you have learnt, and to be creative. This includes developing your own ideas instead of just following those of the teacher and the text book. You should also be able to find out information and ideas for yourself, rather than just relying on what the teacher or text book tells you.

Activity-based learning

This means that, this book has a variety of activities for you to do, as well as information for you to read. These activities present you with materials or things to use which will help you learn more about different methods and techniques by yourself. You already have a lot of knowledge and ideas based on your life experiences within your community. Some of the activities, therefore, ask you to think about such knowledge and ideas you already have.

In using this book, therefore, it is essential that you do all the activities. They are the most important part of the book.

In some ways this makes learning more of a challenge. It is more challenging to think for yourself than to copy what the teacher tells you. But if you take up this challenge you will become a better person and more successful in your life.

Group work

You can also learn a lot from other people in your class. If you have a challenge, it can often be solved by discussing it with others. Many of the activities in the book, therefore, involve discussion or other activities in groups or pairs. Your teacher will help to organise these groups and may

arrange the classroom so that you always sit while facing each other. You cannot discuss properly without facing each other.

Research

One of the objectives of the new curriculum is to help you find out things for yourself. Some activities, therefore, ask you to do research using books in the library, the internet, if it is available at school, or other sources such as newspapers and magazines. This means you will develop the skills of learning for yourself when you leave school. Your teacher will help you if your school does not have a good library or internet.

Icons

To guide you, each activity in the book is marked by a symbol or icon to show you what kind of activity it is. The icons are as follows:



Thinking

Thinking icon

This indicates thinking for yourself or in groups. You are expected to use your own knowledge or experience, or think about what you read in the book, and answer questions for yourself .



Practical Activity

Practical Activity icon

The hand indicates a practical activity, such as a role play on resolving a conflict, taking part in a debate or following instructions on a map. These activities will help you to learn practical skills which you can use when you leave school.



Writing/Research Activity

Writing Activity icon

Some activities require you to write draw or paint in your exercise book or elsewhere.



Group

Group Work icon

Group work means that you are expected to discuss something in groups and report back on what your group discussed. In this way you learn from each other and how to work together as a group to address or solve a problem.



Fieldwork Activity

Fieldwork icon

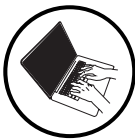
Field work is an enjoyable and practical part of Fine Art. For these activities, you will need to go out of the classroom to study parts of your environment, such as natural objects builders or different human activities.



Discussion/ Vocabulary Reading

Discussion icon

Some activities require you to discuss an issue with a partner or as part of a group. It is similar to group work, but usually does not require any writing, although some short notes can be written for remembrance.



Computer/Internet Activity

Computer/Internet Activity icon

Some activities require you to use a computer in your computer laboratory or elsewhere.



Pair Activity

Pairing Activity icon

This means you are required to do the activities in pairs and exchange ideas



Listening Activity

Listening Activity icon

The listening activity requires you to carefully listen to the teacher or fellow learner reading a passage, poem or extraction on the subject and then answer the questions



Observation Activity

Observation Activity icon

As Learners, you are expected to observe and write down the results from activities including experiments or social settings overtime.

Good luck in using the book.

Learner's Health Tip

Every person would be glad to live in a healthy environment. Therefore it is our duty to protect ourselves and the environment. In order to learn skills in fine art and crafts, one needs to experiment with different tools and materials.

Besides, the materials used in art and design can be either natural or artificial depending on the art works to be made. While using these materials you have to be careful not to hurt yourself or your friends. At the same time you must learn to protect your environment as you collect and prepare materials for your art works.

Some materials involve the use of sharp tools such as cutters and needles. Care should be taken when handling such tools to avoid cutting yourself and your friends. Some materials such as wax are used when hot. Care should be taken to avoid burning yourself and others while working in groups.

Also, some materials such as clay and powder colours may be messy if used carelessly. You are always advised to keep your clothes clean and wash hands after working.

An illustration of two black birds perched on a branch, facing each other. Behind them is a large, pale yellow full moon. The background is a deep blue with some faint, light blue leaves or petals scattered around. The entire scene is framed by a dark blue border.

UNIT 1

Still Life and Nature

My goals

By the end of this Unit, I will be able to:

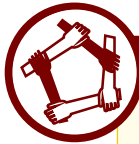
- ◉ Explain the elements of art.
- ◉ State the difference between dry and wet media.
- ◉ Draw and paint objects in composition.
- ◉ Paint a landscape.
- ◉ Draw from a human figure.
- ◉ Respect the opinions given by others about my own work.

Introduction

In Senior One, you were introduced to different materials used in drawing and painting. You also practiced with the elements of art such as shape, line, tone, colour and texture. You also observed and drew objects in composition as still life, as well as single objects picked from nature.

Remember, **still life** is the study of objects in composition, in relation to their immediate background. Yet nature is the analytic study of objects from the natural environment.

Based on your past experience, do Activity 1.



Activity 1

1. Visit your surroundings and pick a twig with three leaves.
2. Using a pencil and paper draw the twig.
3. Exchange your drawing with your neighbour.
4. Discuss each other's drawing by pointing out the strengths and weaknesses that you are able to observe. (Assessment is done in terms of use of space, shapes, tones and texture).
5. How can such weaknesses be improved for a better drawing?.

Observation of the drawings

I hope you were able to observe that in some drawings from Activity 1, the object was too small for the paper. In some drawings still, the object could not fit on the paper. The two cases usually happen if you have not taken time to compare the size of the object with that of the paper. Space should be used comparatively, to make sure that the object drawn fits well on the paper.

Observe the two pictures in Figure 1.1 and answer the questions in Activity 2.



Figure 1.1: Studies of plants

Activity 2

1. Identify the different types of lines used in the two pictures.
2. Mention the colours that were used in the two pictures.
3. Describe the types of shapes in the pictures.
4. Describe the kind of texture in the work.

Elements for drawing and painting

Remember, in order to draw and paint well, you need the building blocks to follow. These are the elements of art. They include space, line, shape, tone, form, structure, colour and texture.

(a) Space

When you look around you, you can see different objects, and people including your neighbour. But at the same time there are areas you can see which are occupied by nothing. All these are part of space. Therefore space is simply emptiness. However, in drawing and painting, we have both **negative** and **positive** space. For example, look at how space was used in Figure 1.2



Figure 1.2 : A still life composition of fruits

The area occupied by objects in the composition is called the **positive space**. The area around the objects is what we call **negative space**.

We always begin drawing and painting by identifying the space in which to create our compositions. After identifying space, we use other elements to form our drawings and paintings.

Observe the compositions in Figures 1.3 and 1.4 and work out activity 3.



Figure 1.3: A still life composition in colour



Figure 1.4: A composition of artificial objects

Activity 3



Space in a still life composition

1. Identify the positive and negative spaces in the two pictures above.(ie Figure 1.3 and Figure 1.4)
2. Comment on how space was created in the two compositions.
3. Mention the objects and the colours used in the two different pictures.

Take note:

- The paper you are given for drawing or painting provides you with the space in which to fit your drawing or painting.
- In drawing and painting, a good composition balances space. The picture you draw has to fit within the space provided. Never cut off parts of the object drawn or painted in a given space.
- Leave same space on the left and right side of the paper. The upper space should be bigger than the lower space left on the paper, that's how negative space is balanced in drawing and painting.
- Space is controlled in order to create a feeling of depth in the composition.

(b) Line and shape

In Senior One, you identified the different materials used in drawing. After identifying what to draw in a given space and the suitable materials to use, we use lines to draw or paint. Lines play a vital role in drawing different shapes of objects.

Remember, shapes can be either **geometric** or **natural** (organic).

Geometric shapes are more regular, they include circles, squares, rectangles and triangles. Natural shapes are irregular such as a shape of a stone, tree or leaf.

(c) Tone and form

After drawing the required shapes of objects in the composition, then you can apply tones according to the light direction. It is the tones that bring out the forms of objects in the composition. As light fall on an object, it casts a shadow on the opposite side.

Therefore **tone** refers to the variation from light to dark on the surface of an object as light falls on it. On the other hand **form** is the roundness of an object.

For example, look at the effect of light on the drawing of a tomato in Figure 1.5.

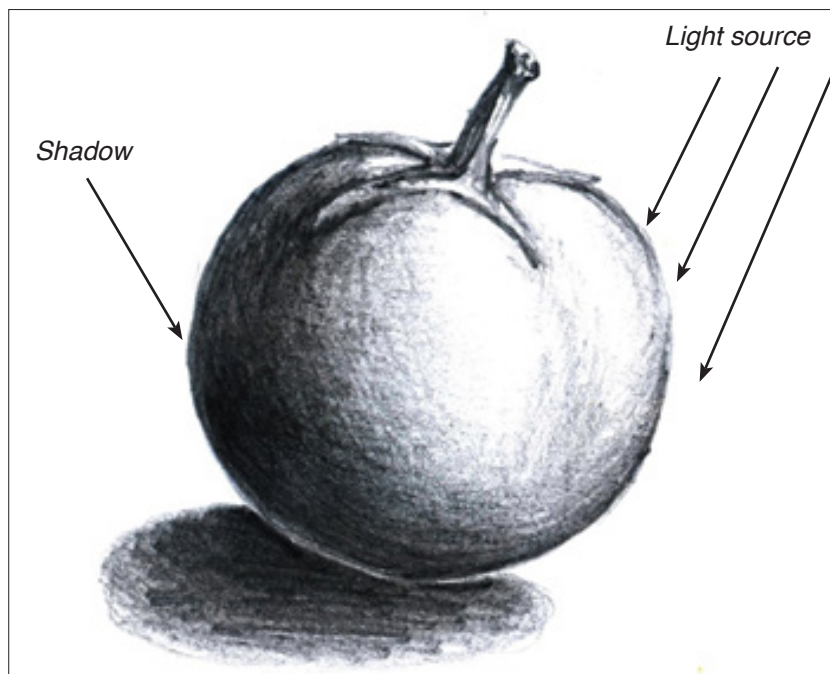


Figure 1.5: The effect of light on an object

Activity 4

**Responding to light and shade**

1. Arrange three objects from your surroundings to form a composition.
2. Using a pencil and paper, draw the composition; first in lines and then shade the composition to create forms and shadows.
3. Display your work and discuss it with your friends regarding the use of tones to create the forms in the composition.

(d) Textural patterns

During the process of trying to draw the forms of objects in a given composition, there is need to show their surface quality (texture). Are the objects smooth, rough or coarse? This question is answered by using textural patterns that fit the objects being studied. Textural patterns depend on the shading technique used. For example, look at the textural patterns on the objects in Figure 1.6.

Hence, textural patterns refer to the appearance of the surface of an object according to the shading technique used.

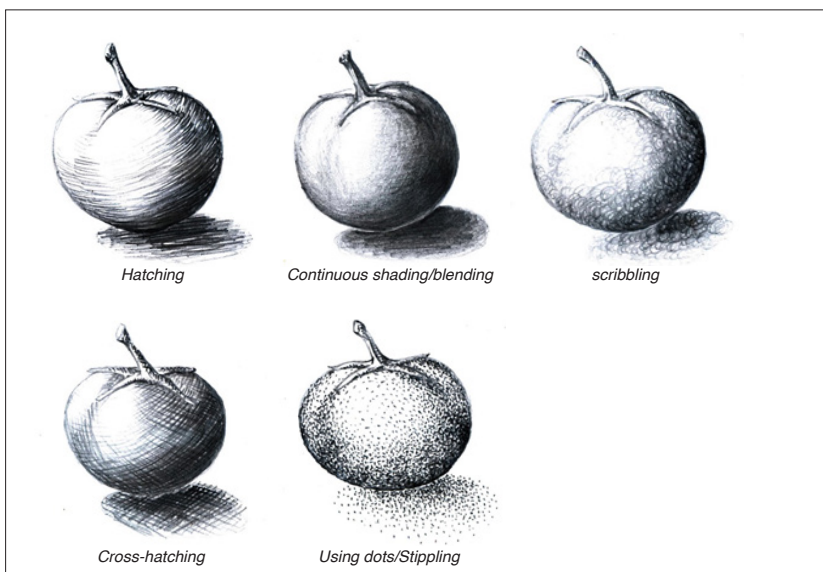


Figure 1.6: Textural patterns



Activity 5

Dealing with textural patterns

1. Pick three objects with different texture, from your surroundings and arrange them to form a composition.
2. Draw the objects on a piece of paper and use different shading techniques to capture the different surface qualities of the objects.

Take note:

- Texture varies with the form of a given object.
- Where the tone is light, the texture is light and vice versa

Types of colour application

In Senior One, you studied about colour and you looked at primary and secondary colours. Primary colours are basic and are only three ie. Red, Yellow and Blue. Besides, secondary colours are got after combining two primary colours. Secondary colours include orange, green and violet. When you combine a secondary colour with a primary colour, you get a **tertiary colour**. For example, study the colour combinations in Figure 1.7 and Figure 1.8.








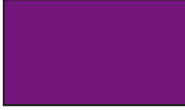

Primary	+	Secondary	=	Tertiary
	+		=	
YELLOW		ORANGE		YELLOW-
ORANGE				
	+		=	
RED		ORANGE		RED-
ORANGE				
	+		=	
RED		VIOLET		RED-VIOLET

Figure 1.7: Colour Combinations










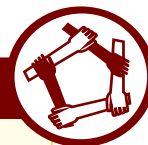
Primary	+	Secondary	=	Tertiary
	+		=	
BLUE		VIOLET		BLUE-VIOLET
	+		=	
BLUE		GREEN		BLUE-GREEN
	+		=	
YELLOW		GREEN		YELLOW-GREEN

Figure 1.8: Colour combinations

Activity 6



Colour mixing

Mix the different colour combinations. Remember to always use equal amounts of the different colours in order to come up with the right mixture.

Colours can be used to capture objects in a still life composition.

Colour can be classified under different properties such as hue or purity, value and intensity. A **hue** refers to a colour in its purest state. The common hues include yellow, red, blue, green and purple as they appear on a colour wheel. Look at Figure 1.9.



Figure 1.9: Colour Hues

Value refers to the darkness or lightness of a colour; if a colour is dark, its value is low and if a colour is light, its value is light for example, look at Figure 1.10.

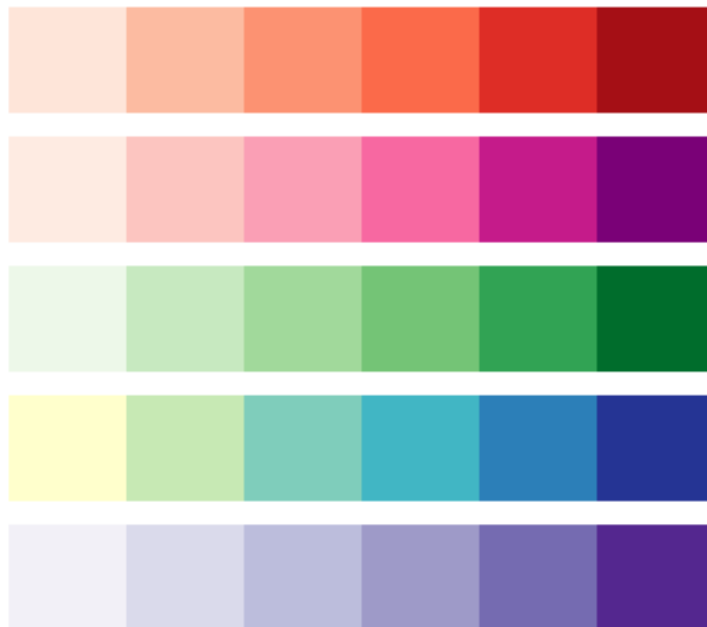


Figure 1.10: Colour Value

On the other hand **intensity** refers to the brightness or dullness of a colour, for example look at Figure 1.11 Intensity also refers to saturation.

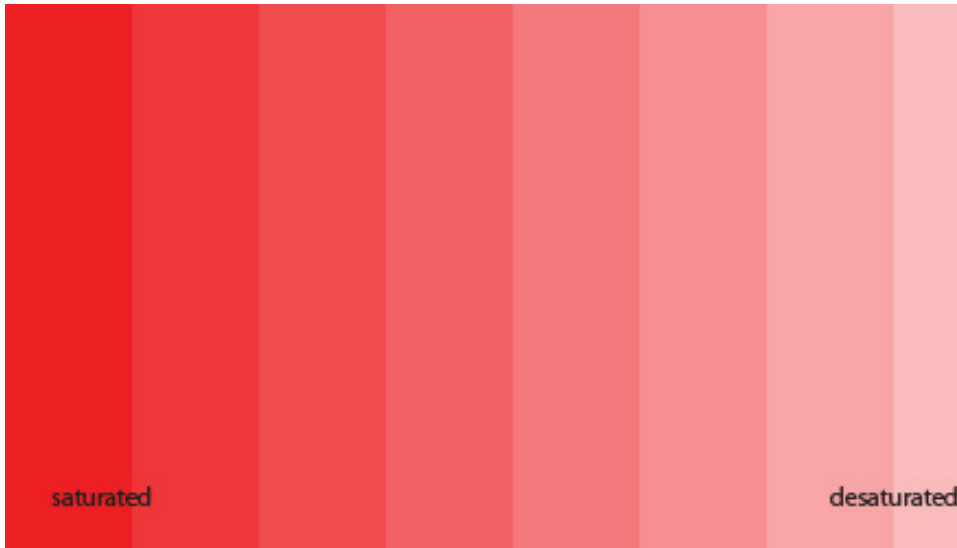


Figure 1.11: Colour Hues

Colour can also be classified as being (colour temperature) **hot, cool, complementary** and **supplementary/analogous**. Hot colours strike the eye; these include red, yellow and orange. Cool colours do not strike the viewer's eyes; they include brown, green and blue. Supplementary colours appear next to each other on the 12 part colour wheel eg; yellow and orange or blue and purple. Complementary colours appear opposite each other on the colour wheel such as; green and red or yellow and purple.

In painting, black is considered to be a shade, a colour darkens when it is added with black. On the other hand white is considered to be a tint. A colour becomes lighter when added with white.

In order to paint a good picture, select colours according to the natural appearance of the objects being studied. For example look at Figure 1.12 and observe how colours were used to reflect the natural appearance of the objects.



Figure 1.12: A painting of flowers



Activity 7

Observation exercise

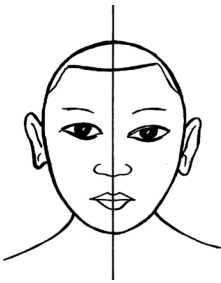
Observe the picture in Figure 1.12 and do the following:

1. Identify the objects in the composition by their colours.
2. Mention the primary colours, secondary colours and tertiary colours that you can see in the composition.

The Principles of Art

As you follow elements of art while drawing and painting, you need to follow guidelines. These guidelines or rules are referred to as the **principles of art**. They include balance, rhythm, pattern, perspective, unity/harmony and proportionality.

1. **Balance:** This refers to a state of equilibrium when all elements in an artwork are well arranged. Balance can be symmetrical, asymmetrical or radial.



- (i) Symmetrical balance is also called **formal balance**. This is achieved when the opposite parts in an artwork are exactly or nearly the same in respect to a vertical / horizontal axis. For example, look at the symmetrical balance on the human face in Figure 1.13.

Figure 1.13: The human face

- (ii) **Asymmetrical balance** is also called **informal balance**. It refers to balance by visual weight. It can be achieved when a work of art is looked at in totality when all parts of the work seem to agree with each other even if they are not equal with each other. For example look at Figure 1.14



Figure 1.14: A painting showing asymmetrical balance



- (iii) **Radial balance** is a type where elements are equally distributed from the center. For example Figure 1.15

Figure 1.15: A painting showing radial balance.

Activity 8



Look at the works of art from your surroundings and identify those where symmetrical, asymmetrical and radial balance has been achieved.

2. **Rhythm** is a principle of art which focuses on visual movement in a work of art. It is achieved when there is a feeling of movement from one part of the work to the other. For example, look at the design in Figure 1.16

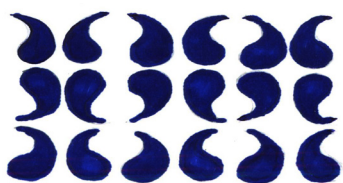


Figure 1.16: A design showing rhythm and pattern



Activity 9

- (i) Choose one geometric shape (eg circle, triangle and square) draw and repeat it several times on a piece of paper to form a pattern with rhythm. You are free to use any colours of your choice.
- (ii) Display your work and discuss it with your fellow students to judge which pattern is more rhythmic.

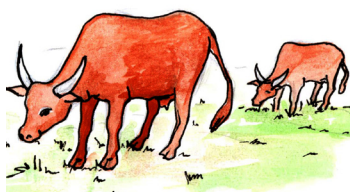


Figure 1.17: Animals seen at different points.



Figure 1.18: A painting showing unity/harmony

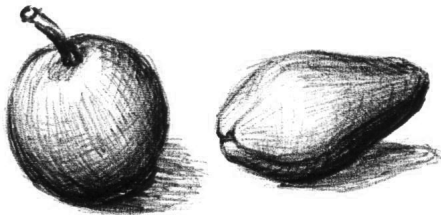
3. **Pattern** refers to repetition of elements such as line, colour texture over and over to create an impression work of art. For example, the design in Figure 1.16 consists of curved patterns.

4. **Perspective:** In Senior One, you were introduced to linear perspective, where you focused on the use of lines to show perspective in landscapes. As a principle of art, perspective refers to the variation in size, tone and colour of objects with distance. Near objects look bigger/brighter compared to those seen at a distance. For example look at Figure 1.17.

5. **Unity/harmony:** This principle is achieved when all, elements in given work of art (such as lines, colour and texture) agree with each other. For example, look at Figure 1.18.

6. **Proportionality:** This refers to the relationship of different parts of an object in terms of size. Naturally, there are sizes which are considered normal and when such sizes change compared to others, they are considered abnormal. For example the size of human hands is small compared to that of legs. Or a passion fruit is considered smaller than a pumpkin. Therefore when drawing or painting, always consider the right sizes of the objects or parts of the objects in order to achieve the right proportions.

Take note:



In drawing and painting some objects which are known to be small may appear bigger than those which are known to be big, due to perspective. For example look at the drawings in Figure 1.19.

Figure 1.19: Passion fruit appearing bigger than a pawpaw

Working with dry and wet media in drawing and painting

What we use to draw and paint pictures (such as pencils, crayons, pastels and water colours) is often referred to as a **medium**. When there are many different materials, they are referred to as **media**. Media can either be **dry** or **wet**.

Drawing with dry media

Pencils are commonly used in drawing. These are part of the dry media. Dry media refer to materials which do not flow. Other dry media include crayons and coloured pencils. For example, look at the two drawings in Figure 1.20. One was drawn using crayons and the other one by use of coloured pencils.



Figure 1.20: Compositions drawn in different media



Activity 10

Drawing with dry media

1. Look at Figure 1.20 and identify the picture drawn with crayons and the one drawn with coloured pencils. What is the difference?
2. Using either coloured pencils or crayons draw a composition of three objects picked from your surroundings.

Take note:

Coloured pencils usually give a clear picture compared to crayons. Crayons differ from pencils as shown in Figure 1.21



Figure 1.21: coloured pencils and crayons

Drawing or painting with wet media

Wet media refer to materials which can flow. Using such materials requires you to add a liquid in order to make it flow well. You may need a brush in order to paint a given composition.

These materials include inks, water colours and powder colours. Observe Figures 1.22 and 1.23, and work out the questions that follow.



Figure 1.22 : A drawing made by use of a pen, ink and a brush



Figure 1.23: A drawing made using ink, a brush and water colours

Activity 11



1. What is the difference between the two drawings in Figure 1.22 and 1.23?
2. Using a pen and ink draw a twig of a plant from your school compound.
3. Display your work and discuss it with your friends, regarding how the materials have been used to create tones and form.

Take note:

When you are going to draw or paint with wet media, always begin with a sketch in pencil. This helps you to draw the right shapes and the proper arrangement of the objects in a given composition. Pencil work can easily be adjusted by rubbing out. Ink and water colours cannot easily be changed.

Study of a landscape

Our environment is a rich resource for the study of **landscape**. A landscape is the natural scenery. Such sceneries include plants, houses, etc. You will enjoy your studies by moving out of your classroom and observe the surroundings. Look at the landscapes in Figure 1.24 and try out Activity 12.



Figure 1.24: *Landscapes in different styles*



Activity 12

Study the landscapes in figure 1.24 and do the following:

1. List the different objects in the four landscapes.
2. Identify the materials that were used to draw or paint these landscapes.
3. Discuss how space was used, how the shapes of different objects were painted/drawn and the sizes of objects were varied to achieve depth.

Much as your environment is rich for your studies of a landscape, you do not have to include everything that you see. You need to select the best view. This can be done by using a **view finder**. A view finder is made by cutting a rectangular shape on a cardboard, as shown in Figure 1.25.

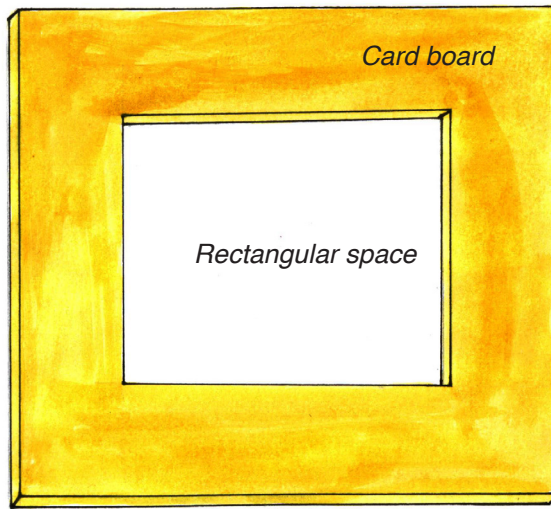


Figure 1.25: A view finder

How to use a view finder to study a landscape

You hold your view finder in one hand and through its space, observe the landscape ahead of you. You then sketch only those objects which appear within the view finder's space. Look at the Figure 1.26.

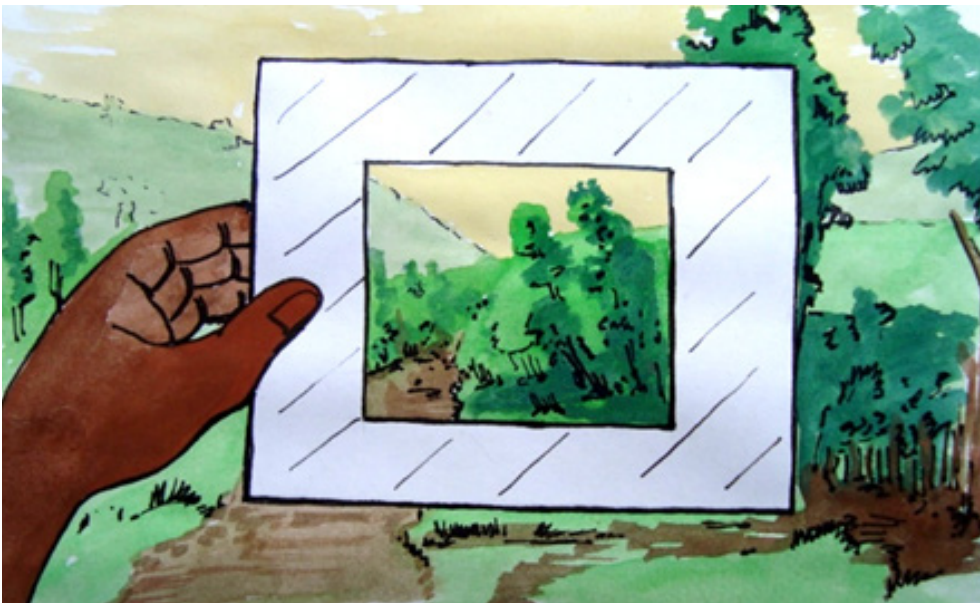


Figure 1.26: How to use a view finder to observe a landscape

Take note:

- The closer the view finder is to your eyes the bigger the area of study and vice versa.
- Keep the distance between the view finder and your eyes uniform throughout your study of the landscape.



Activity 13

Study of a landscape

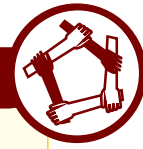
1. Using a cardboard and cutter, prepare your view finder.
2. Go outside your classroom and use your view finder to select a suitable view from your surroundings.
3. Draw or paint the landscape.
4. Display your work and discuss it with your friends.

Human figure drawing

In Senior One, you were introduced to human figure drawing and you learnt that human figures can be drawn either from observation or imagination. You also learnt that getting the right **posture** (the way the human figure is sitting or standing) of the human figure is important. This demands for continuous practice with different studies of the human figure with different materials. Now study the images in Figure 1.27 and work out activity 14.



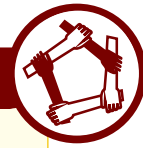
Figure 1.27: Studies of the human figure

Activity 14

1. Study the seated figures in Figure 1.27 and discuss how lines, shape, colour, tones texture and space were used to bring out the posture.
2. Draw one of these pictures on a piece of paper.
3. Share your work with your neighbour and discuss it regarding the posture and use of space. How do the different parts of the body relate to each other in your drawing? (Proportions).

How to get the right proportions

In the examples above, you note that the artists tried to get the right proportions of the human figures. You can always check the **proportions** of your human figure drawing by comparing the size of the head to the rest of the body parts.

Activity 15

Stand up, look at each other and discuss the following:

1. Compare the size of the arms to the rest of the body.
2. Compare the size of the legs to the rest of the body.
3. Lastly compare the size of the head to the rest of the body parts (i.e. the hands, legs and the torso).

A fully grown human being is believed to have about eight head-lengths in height. Figures 1.28 and 1.29 show the relationship between the head-length and the rest of the body parts of the female and male human figures.

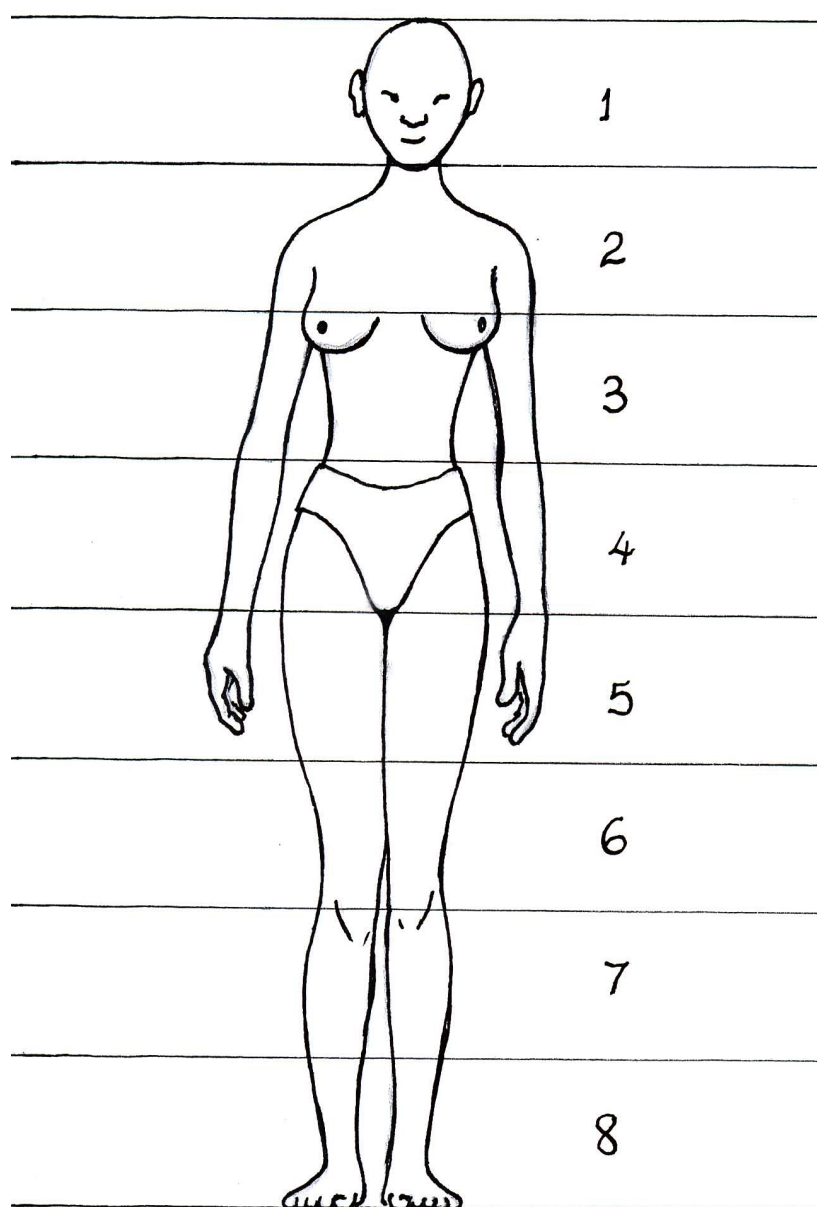


Figure 1.28: A female figure

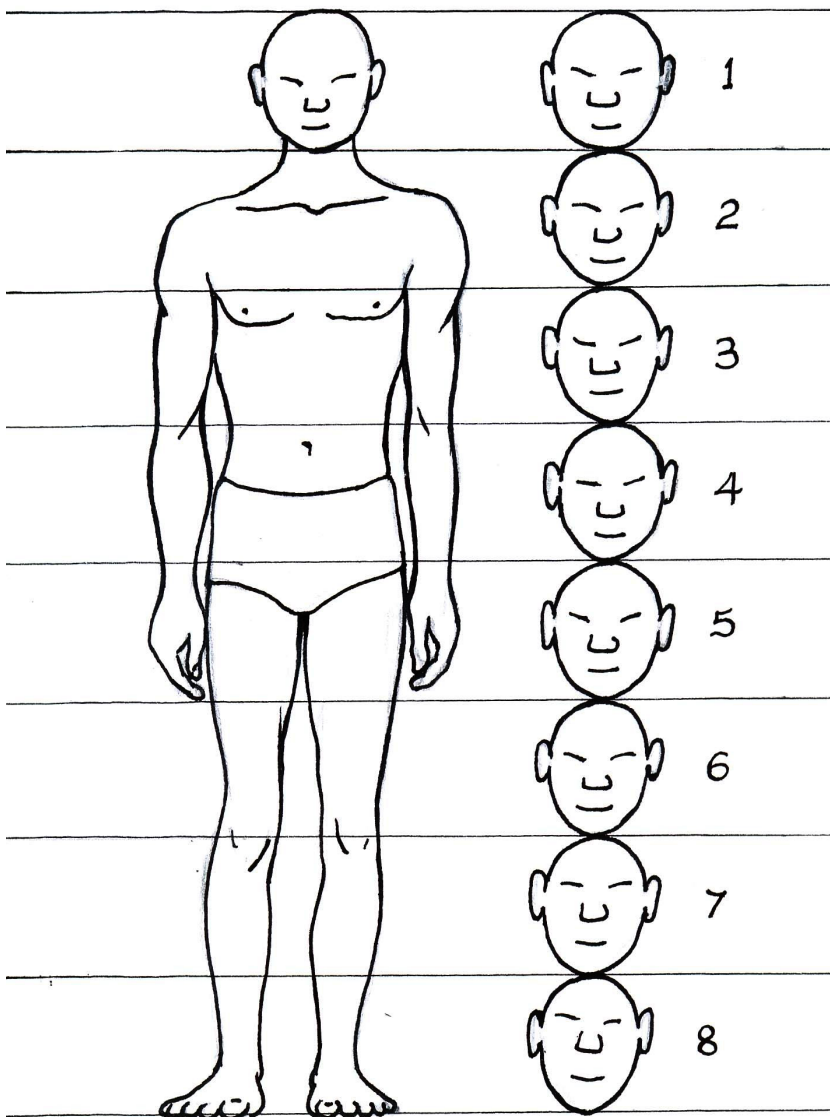


Figure 1.29: A male figure

You can observe that the elbow is at the same line with the navel for a standing posture. The lower leg matches with the upper leg and the torso in height. There are two head-lengths for the lower leg and the same applies to the upper leg and torso each. The height of the head matches with the length of the foot of the human figure. For example, observe the relationship of the body parts in Figure 1.30.



Figure 1.30: A bending female figure



Activity 16

1. The following drawings were made by Senior Two students. Observe the human figures in Figure 1.31 and discuss the challenges with their proportions.



Figure 1.31 Drawings by Senior Two students

2. Following the right proportions draw a human figure in a standing posture.
3. Display your work and discuss it with friends, regarding proportions and posture.

Assessment

1. What is the difference between dry and wet media?
2. Using materials of your choice, draw an insect or animal from your surroundings.
3. Draw or paint a standing boy, dressed in a short sleeved shirt and a pair of shorts.

Glossary

Head-length: the size of the head from the chin to the end of the forehead.

Imagination: using one's mind to create ideas.

Negative space: area around the objects in a drawing or painting.

Observation: using eyes to look at something in details.

Posture: the way a human figure appears to the viewer, either standing, sitting or sleeping.

Positive space: the area occupied by objects in a drawing or painting.

Proportions: relationship of different body parts of a given object.

Resource: a set of things from which an idea is developed.

Torso: the middle part of the human figure excluding the hands, legs and head.

Landscape: a natural scenery which may include, plants houses, animals etc.

Element of art: building blocks followed while making and talking about a work of art.

View finder: a card with a square or rectangular space used to select a particular area in a landscape for study.

Dry media: materials which do not flow such as pencils and crayons.

- Wet media:*** materials which flow as they are used in drawing such as painting.
- Still life:*** a study of objects in composition in reflection to their immediate background.
- Nature:*** a study of objects picked from the natural environment.
- Principles of Art:*** guide lines or rules followed while making or talking about a work of art.



UNIT 2

Motifs, Patterns and Design Process

My goals

By the end of this Unit, I will be able to:

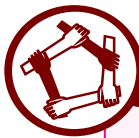
- ◉ Identify patterns from the surroundings.
- ◉ Develop a motif for printing.
- ◉ Print patterns on surfaces using stamping and stenciling.
- ◉ Share ideas with others about own work.

Introduction

In Unit one, we explored objects from the environment for drawing and painting. But the same objects can be used in a different way. Look at the different objects from your surroundings (such as shirts, dresses, skirts, carpets and curtains). What patterns can you see? Now look at the examples in Figure 2.1 and do activity 1.



Figure 2.1: Objects with different patterns



Activity I

Identifying patterns

1. Look at the designs on the works in Figure 2.1. Identify the shapes that were used to develop the patterns.
2. Find some other patterns including some which look really Rwandan, either traditional or modern.
3. Identify the shapes that were used to develop the patterns.
4. Which shapes are natural and which ones are geometric?
5. Mention some natural objects from which these patterns might have been gotten from.

Indeed such interesting patterns can be got from objects from our environment. These include both natural and artificial objects. You may pick interest in their shapes, texture and colour in order to create your own pattern. Now look at some

of the possible sources of patterns from the environment in figure 2.2.



Figure 2.2: Objects with patterns

How to make a motif

The process of making a motif (pattern) is what we call a **design process**. In order to make your pattern, you go through several steps and changes. For example, study the following steps of creating a motif from a frog.



Step 1

Identify an interesting object from your surroundings. This is often called a **source of inspiration**. Draw it on a piece of paper as shown in Figure 2.3.

Figure 2.3 A toad

Step 2

Simplify the shapes into outlines. You could join two of these shapes facing and touching each other, to create a pattern as shown in Figure 2. 4. This can be done with the help of a tracing paper.

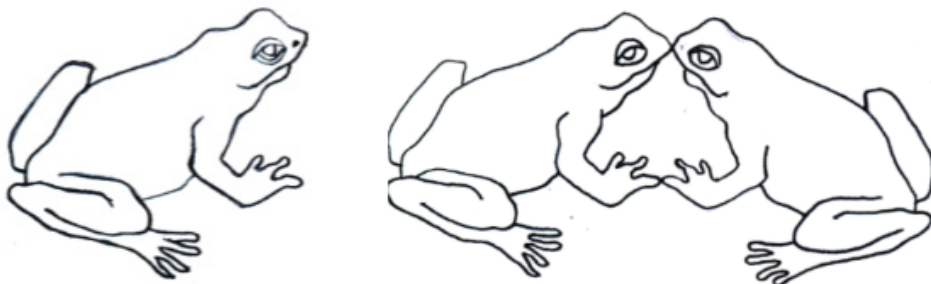


Figure 2.4: Pattern adopted from a toad



Figure 2.5: Positives and negatives

Step 3

Shade these shapes into black patches to create positives as shown in Figure 2.5. The remaining white space is called **negative**.



Figure 2.6: Repeating the patterns to enrich the design

Step 4

This could be repeated and joined as a reflection on the same paper, as shown in Figure 2.6. Look at the pattern being formed.

Step 5

The design can be repeated to create an interesting pattern for your motif. Look at Figure 2.7. The black patches form the positives and the white space forms the negatives.



Figure 2.7: A motif ready for printing



Activity 2

1. Choose a different natural object, animal, flower or plant (not a toad).
2. Follow the steps above and develop your own pattern for printing.
3. Display your work and discuss it with your friends regarding its attractiveness and movements.

Take note:

- When you are creating a pattern for printing, try to balance the positives with negatives.
- There is no particular way of organising the shapes for your pattern. The arrangement largely depends on your creativity.
- While creating a motif, it is very important to follow rhythm (Movement and balance).

After developing a pattern on a piece of paper, it is your duty as a designer to transfer it on to another material where it can be used for other purposes. This can be done by **printing**. Printing is a process of reproducing a pattern or design on a given surface. Printing is done in several ways, but at this moment we are going to look at **impression**, **stamping** and **stenciling**.

Printing by impression

Sometimes you can transfer a pattern from one source to another by impression. In order to use this method, you need a pattern from a hard surface, such as a stone, tree bark, a coin, shoe sole, etc. Then you use this pattern to create an interesting design in colours of your choice. For example, you can develop a pattern by following the steps below.

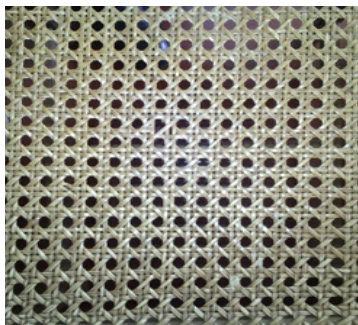


Figure 2.8:
chair seat

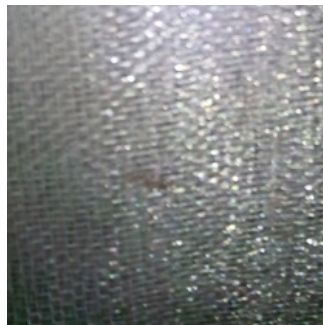


Figure 2.9:
wire mesh

Step 1

Get a surface from your surroundings, with an interesting pattern. For example, look at the surfaces in Figures 2.8 and 2.9.

Step 2

Put the piece of paper on top of the object with the pattern and rub the surface with a pencil so that the pattern is seen on the paper. For example, the pattern in Figure 2.10 was taken from a wire mesh.

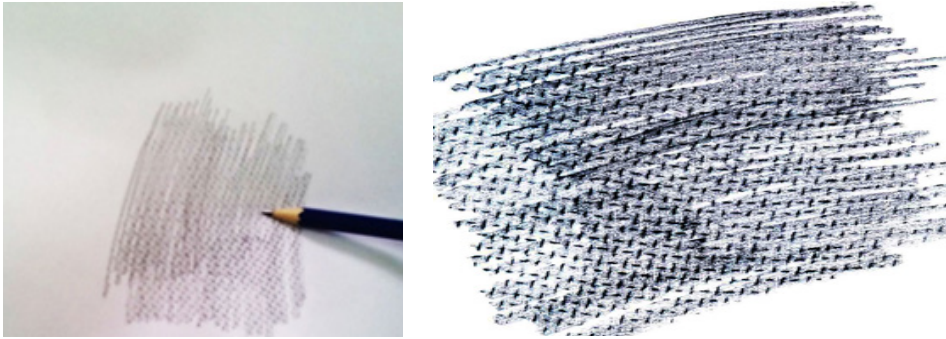


Figure 2.10: A pattern adopted from a wire mesh

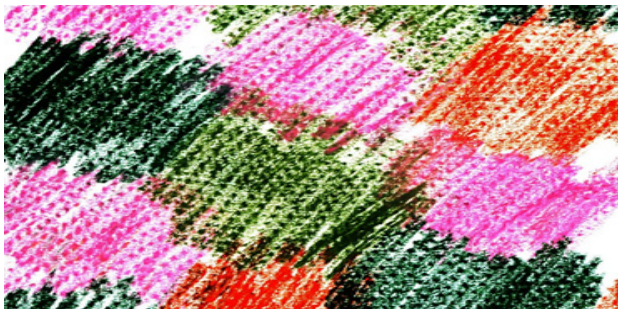


Figure 2.11: A pattern in different colours

Step 3

Repeat this several times until you cover the whole space with the pattern. You could use different coloured pencils to enrich your pattern as shown in Figure 2.11.

Activity 3



Creating a pattern by impression

1. Pick an object with a pattern from your environment and create a pattern using the impression printing technique. Use different colours of your choice.
2. Display and discuss your work with your classmates. Focus on the choice of colours, neatness and attractiveness of the pattern.

Take note:

- Printing by impression is used to create designs on a small scale and it is better used on paper.
- Using different colours makes the pattern look more attractive.

Printing by stamping

Probably you have seen stamps with letters and images, used in different places such as schools, post offices and hospitals. These are sometimes circular, square or rectangular. Such stamps are used to pass on the same message to many sources.

Observe the pictures in Figure 2.12, as well as Figure 2.13 and answer the questions in activity 4.



Figure 2.12: Stamps



Figure 2.13: Patterns made by use of Stamps

Activity 4



Creating a pattern by stamping

1. What is unique or special about the letters and images on these stamps?
2. How do these stamps operate?

You may have observed that these stamps have images which stick out but they are inverted, that is the reverse of the stamp you want. When a stamp is pressed on to an ink pad, it picks up ink and when it is pressed on a piece of paper, it releases the ink following the protruding or sticking out images.

The same idea can be used to create patterns through a process called **stamping**. This was briefly introduced to you in Senior One. You can use soft materials such as irish potatoes, or sweet potatoes and a cutter. You need the following materials; materials for printing, photo cutter, printing ink as shown in Figure 2.14.




		
Printing ink	Cutter	Sweet Potato

Figure 2.14: Materials for printing

Consider the following steps.

Step 1

Draw a simple pattern on paper as shown in Figure 2.15. This can be developed from objects from your surroundings.

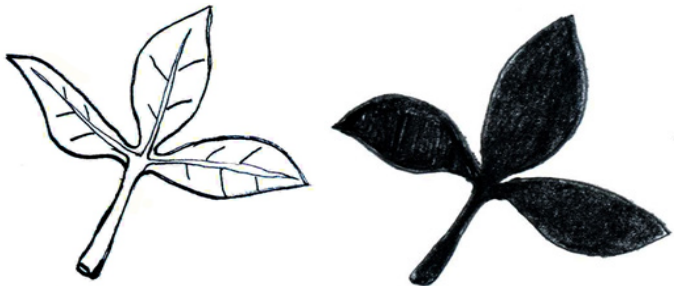


Figure 2.15: A simple shape of an object from the surroundings

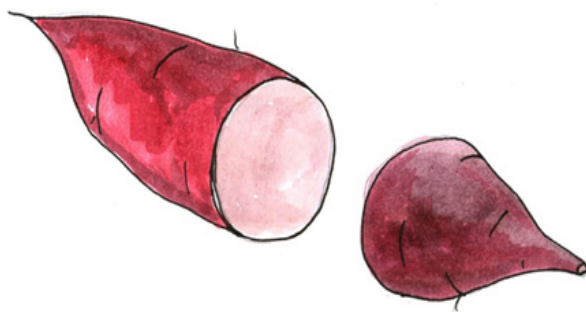


Figure 2.16: A sliced potato

Step 2

Slice the sweet potato into two parts as shown in Figure 2.16. (Make sure the sliced part is flat)

Step 3

Sketch the pattern on the flat surface of the potato with a pencil. Look at figure 2.17.

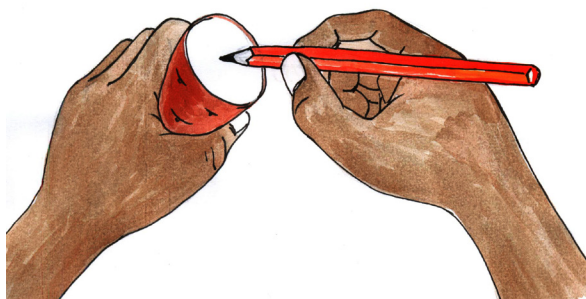


Figure 2.17: Sketching on the potato

Step 4

Then use a cutter to cut away the negative space to retain the pattern on the surface. Your pattern should be left protruding as shown in Figure 2.18.

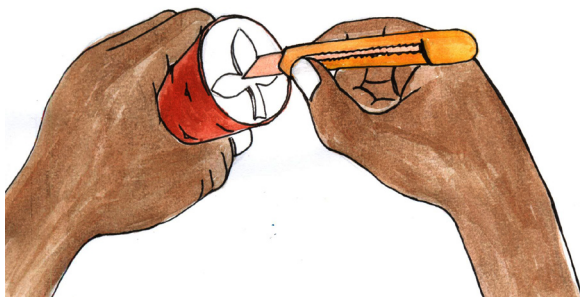


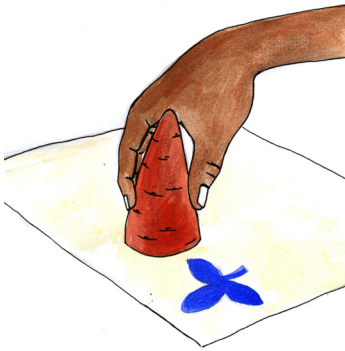
Figure 2.18: Cutting the pattern on a potato

Step 5

Dip the pattern in colour or ink as shown in Figure 2.19. Make sure that it is only the **pattern** which touches the colour and the rest of the potato remains clean.



Figure 2.19: Inking the stamp



Step 5

Print your **pattern** on another surface (such as cloth or paper). The printing is repeated to form a complete design on the surface as shown in Figure 2.20.

Figure 2.20: The printed pattern

The final work appears as shown in figure below

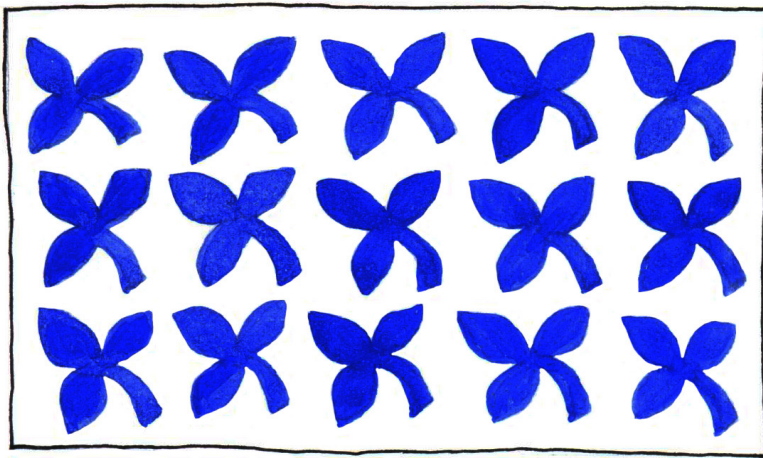


Figure 2.21: The printed pattern

Activity 5



1. Follow the steps above and create your own design.
2. Display your work and discuss it with your classmate.

Printing by stenciling

Stenciling as a printing technique, comes from the use of a stencil to transfer a given design on a given surface. A stencil can be made from a hard material (Figure 2.18) such as manilla paper or transparencies. You need the following materials in place, then follow the steps given to make your print.



Manilla paper



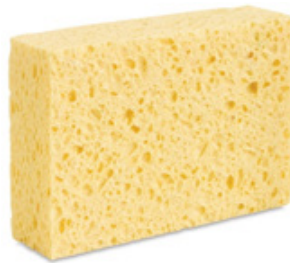
Tracing paper



cutter



Masking tape



sponge



tacks

Figure 2.22 Materials used to create designs using stenciling

Step 1: The design process

Making a print usually begins with the design process. At this stage you make sketches of an object which inspires you from your surroundings as studied in Unit 1. The process continues until you prepare your motif or design on a piece of paper such as the one in Figure 2.23. Remember always to develop a well-balanced motif.



Figure 2.23 Forming a motif or design

Step 2: Fixing the stencil on to the motif

If your stencil is transparent, use a masking tape to fix it on top of your motif on paper, along a flat surface. This can be on top of a table or desk as shown in Figure 2.24. This is done so that you can observe the design from underneath. If you are using an opaque stencil such as a manilla paper, use a tracing paper to transfer your design on to the stencil.

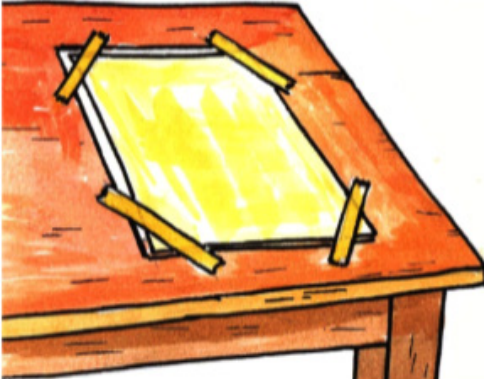
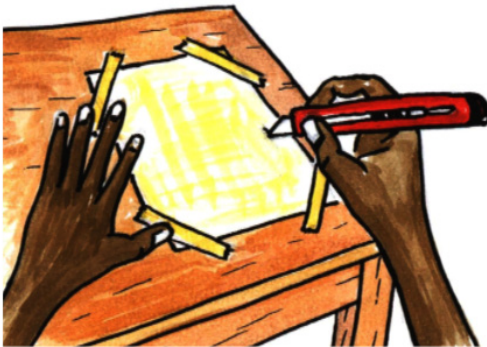


Figure 2.24 Fixing a stencil on the motif

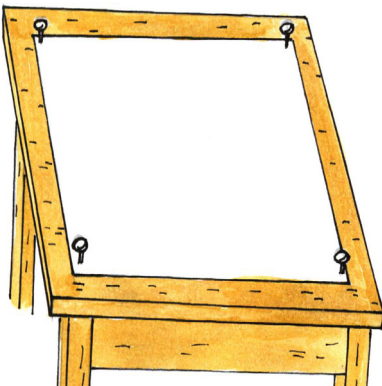
Step 3: Cutting out the positives



Use a cutter to cut out the pattern on the stencil as shown in Figure 2.25. When cutting the stencil, you should only cut out the positives and leave out the negatives. Take care to avoid hurting yourself.

Figure 2.25 Cutting the pattern on a stencil

Step 4: Stretching out the cloth



Stretch the cloth on top of the table. You can use tacks to fix it in the same position. Look at Figure 2.26. Remember before printing the cloth has to be washed, dried and ironed in order for your printing paste to register well.

Figure 2.26 A cloth stretched on a table ready for printing

Step 5: Fixing the stencil on the cloth

Place your stencil on the surface of the material you are going to print on as shown in Figure 2.27. You could use pins to fix the motif in position.

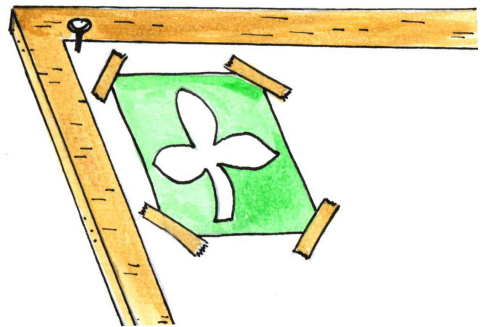


Figure 2.27: Fitting the motif on the cloth for printing

Step 6: Printing with a sponge

Use a sponge to print your design as shown in Figure 2.28. Repeat the process until the whole cloth is covered with the design. Take care as you print; when you apply a lot of force, the printing ink can easily spread beyond the intended lines. On the other hand, if you print with too gently, the design becomes faint.

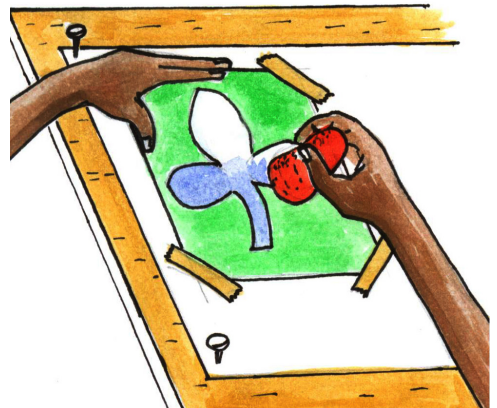


Figure 2.28: Printing the pattern on a cloth with a sponge

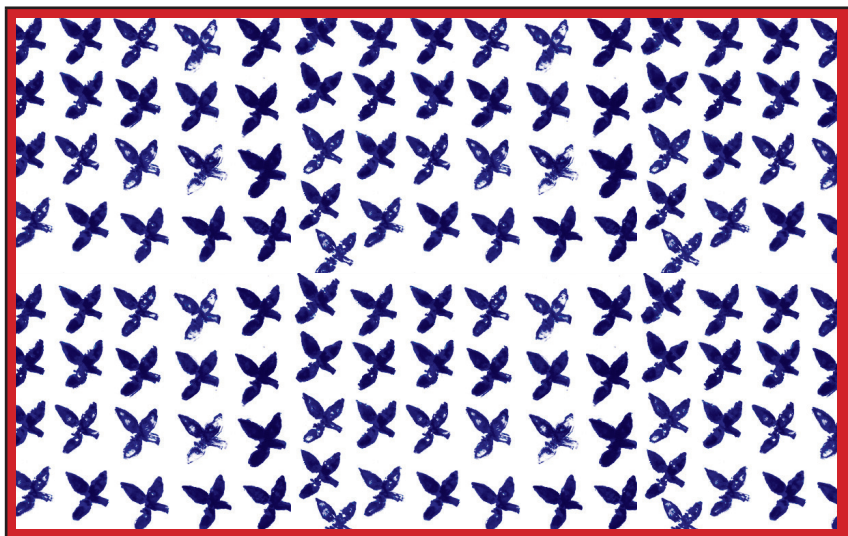


Figure 2.29 Printed pattern on a cloth

Activity 6



1. Design your pattern on cloth by following the steps given.
2. Display your work and discuss it with friends regarding balance, rhythm and neatness.

Assessment

1. Get a source of inspiration from your surrounding and develop a motif.
2. Choose a method of your choice (either stamping or stencilling) and print your motif on a cloth of half a square meter.
3. What is the use of a stencil in the process of printing?
4. What is the difference between stamping and stenciling in printing?

Take note: Your design should be balanced and flowing.

Glossary

Balance:	a state of equilibrium where elements of art are seen to agree with each other in a work of art.
Design process:	steps taken to develop a design or motif. This usually involves sketching of the ideas as they are developed.
Flow:	movement of patterns in a design.
Motif:	a set of patterns in a design.
Pattern:	a repeated form or design mainly used to decorate something.
Rhythm:	repeated art elements to form an interesting movement.
Source of inspiration:	something from which an idea is got.
Stencil:	a thin material with a design cut into it for printing purposes.
Design:	the art of making arrangements or patterns to produce a decorative work of art.
Stamping:	a technique of creating patterns by pressing a motif with ink on a given surface.
Stenciling:	creating a design by use of a stencil.



Letter Styles, Illustration and Design Technology

My goals

By the end of this Unit, I will be able to:

- Explain the basic elements of design.
- Write using calligraphy.
- Design a magazine cover.
- Communicate through designing.
- Share ideas about own work and that of others.

Introduction

In Senior One you studied about letter construction and made designs with letters. You also learnt that neatness is important for producing attractive designs. In this unit, we are going to look at other designs that can be made with letters. Look at the designs in Figure 3.1 and answer the questions that follow.



Figure 3.1: Different designs of cards



Activity 1

1. What messages do you read ifrom the four different cards?
2. Describe the colours that were used in the four different designs.
3. What type of letters were used in the designs?

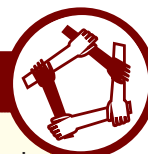
The major aspects of a design

I hope you were able to note that letters play a very important role in bringing out the message for each card. Letters must be carefully designed to look neat and legible.

Therefore, the key aspects which must be considered while designing cards, posters and book covers include the following:

- The **layout**: this refers to a particular plan or outline acceptable for a given design. Each design has a particular layout. This has to be spread out for clarity.
- **Message**: the design has to communicate to the observer.
- **Lettering**: the choice and construction of letters in a design. Letters have to be legible so as to bring out a clear message to the observer.
- **Balance**: space has to be wisely distributed throughout the design.
- **Neatness**: a design has to be clean and attractive to the observer.
- **Colour choice**: the colours used must relate to the message being communicated. Dull colours tend to kill the attractiveness of the design. Contrast is often followed when applying colours in a design.

Activity 2



Discuss how the aspects discussed above were achieved in the works presented in Figure 3.1

Different letter styles in design

We have already seen that letters play an important role in conveying a message in many designs. In Senior One you practiced letter construction and you were introduced to different letter styles. By now you know the difference between upper case and lower case. The choice of letters depends on the nature of the design you want. There are two major types of letter fonts; i.e. **formal letters** and **fancy letters**.

Formal letters are not so decorated. They are easy to read and are often used to pass on important messages to the viewer. Look at the fonts in Figure 3.2.

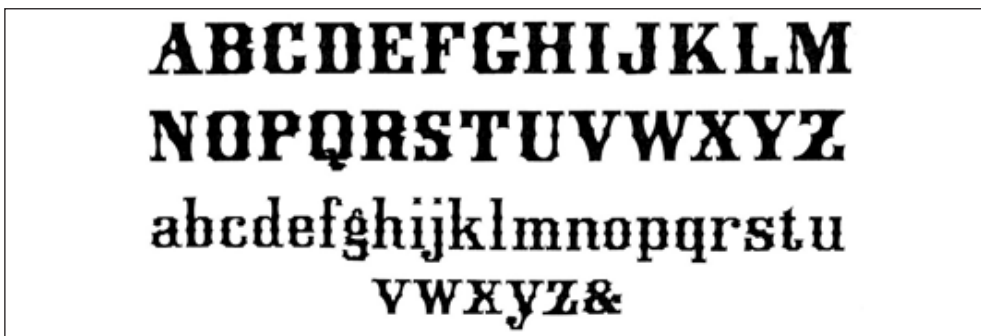


Figure 3.2: Formal letters

Formal letters are good for designing posters and book covers which carry formal information. Look at the following examples in Figure 3.3

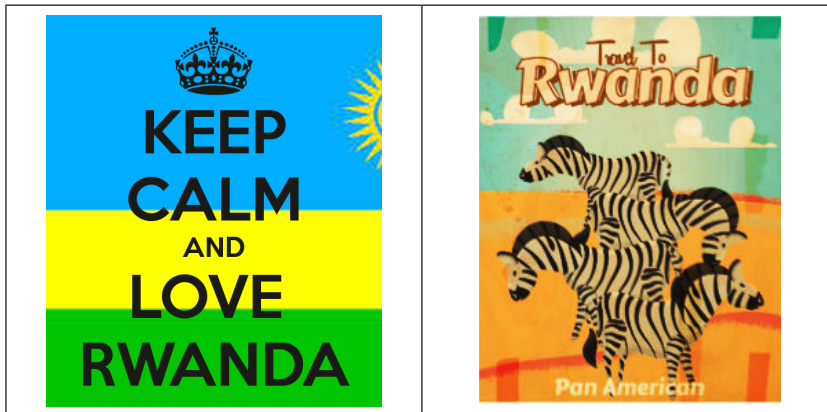


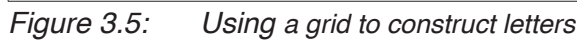
Figure 3.3: Posters and book covers

On the other hand, there are fancy letters. These look complicated and more difficult to construct and read. They are often used to design works which are more decorative such as cards and fancy magazines. For example look at the letter fonts in Figure 3.4.



Figure 3.4: Fancy letters

You can use a grid while constructing different letters, for example look at Figure 3.5.



- ## How to design a magazine cover

Activity 4

-
- RWANDA GOSPEL**
Magazine
- GABY K Agarukanye**
Imyamba ALBUM Audio na Video
Nyuma y'ibikorwa
- Kubera umuho w'ubwami**
- Ikorera ryu ADEPR**
- Imyamba ALBUM Audio na Video**
- Nyuma y'ibikorwa**
- Kubera umuho w'ubwami**
- Ikorera ryu ADEPR**

Figure 3.6: Magazine A



Figure 3.7: Magazine B

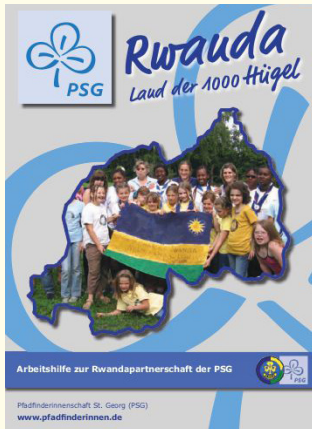


Figure 3.8: Magazine C



Figure 3.9: Magazine D

You may have observed that the examples presented have many words and images. However, in designing you have to make your work simple and attractive. A magazine has the following important components;

- A front cover; with a name of the magazine, the different titles of the articles found inside, and an **illustration** or **illustrations**. Titles can be arranged in any way that is interesting to the observer as long as balance is achieved.
- A back cover which usually has an image of the author and publisher.

Look at the layout in Figure 3.10.

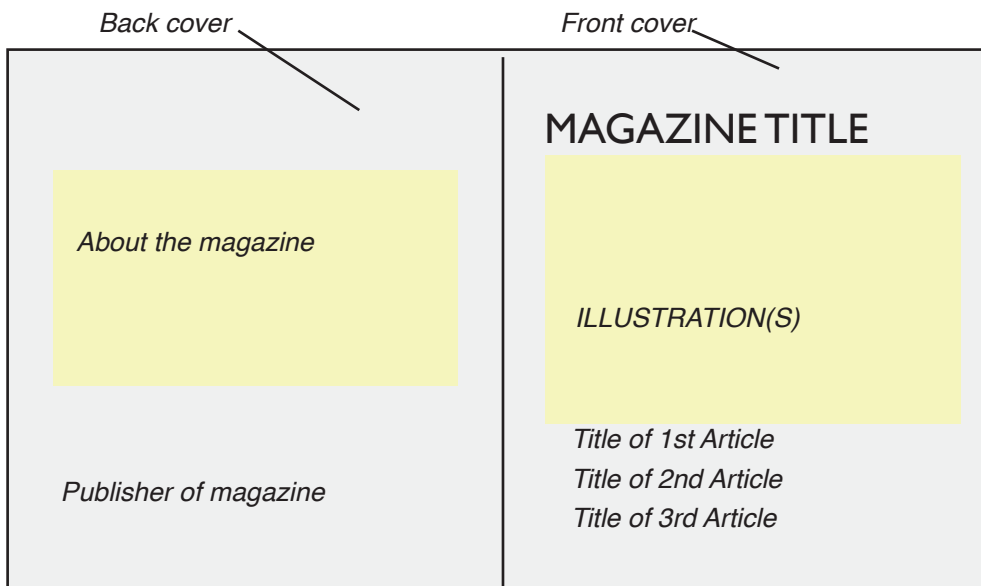


Figure 3.10: Lay out of a magazine

Take note:

- Any design you make must fit within the particular measurements (dimensions).
- The front and back cover of a magazine share the same dimensions ($A \times B$) where "A" is the length and "B" the height .
- The choice of colours should match with the message on the magazine.
- The illustration should add to the meaning of the title of the magazine. This has to be simplified to avoid confusing the reader.



Activity 5

1. Design a magazine cover with a title "The Beauty of wild Id Life" written by Peter Kayibanda. The magazine should have dimensions 15cm by 20cm. Use only three colours.
2. Display your work and discuss it with your classmate.

Assessment

Using letters of your preference, design an invitation card for Senior Two students. The card should invite students for a nature talk to be held at your school on a date of your choice.

Glossary

Author:	an individual who writes a book.
Balance:	a state of equal distribution of elements in a given design.
Design process:	the stages of making sketches for a given design
Fancy letters:	the type of letters with decorations.
Feature:	character of a given work of art.
Formal letters:	the type of letters with no decorations. These are often easy to read and construct.
Illustration:	an image or a set of images which accompanies a design to add to its meaning.
Layout:	the spread out or general outline of a design presented on a flat surface.
Lettering:	the art of letter construction regarding type, size and neatness.
Message:	the ability of a design to communicate.
Neatness:	the appearance of a design with minimum mistakes.
Publisher:	the organisation which organises, proofreads and prints out a particular book or magazine.



UNIT 4

Methods of Modelling Clay Figures and Forms

My goals

By the end of this Unit, I will be able to:

- ◉ Describe the process of preparing clay.
- ◉ Make a sculpture in clay.
- ◉ Decorate the surface of a clay piece.
- ◉ Make a mask and decorate it.
- ◉ Share ideas with others about modelling.

Introduction

Modelling is a very old activity which has been done by different cultures. It includes both pottery and sculpture. There are many figures which have been formed using clay. For example look at the ceramic wares from Gatagara Pottery in Figure 4.1.



Figure 4.1: Ceramic wares from Gatagara Pottery



Activity 1

1. Look at Figure 4.1 and mention the different objects in the picture.
2. Identify the patterns used to decorate these objects.
3. Which materials were used to make these products?

In Senior One you studied about modelling where you learnt about clay and its uses. You also studied about the different methods of making ceramics (such as pots, cups and bowls); these include pinch, coil and slabs. You studied about the different methods of decorating ceramic articles. You learnt that clay was used as the basic material for ceramics. Clay can further be used in other ways.

In this unit, we are going to learn more about modelling in clay by exploring additive and subtractive methods. For example, look at the two sculptures in Figure 4.2.



Figure 4.2: A male and female sculpture made out of clay

Activity 2



1. Observe the sculpture in Figure 4.2 and identify the activities represented.
2. Discuss the sculptures in terms of form and use of clay.
3. Look at the surface of these sculptures and discuss how their texture was made.

Clay preparation

In Senior One you learnt about clay preparation. You studied about four different methods of clay preparation namely;

The plastic method: The method is often used in brick making. The available moisture in clay is used to prepare it.

The wet method: Where clay is dissolved in water to form slurry. Then it is wedged to lose moisture and prepare it for use. It is good for making pottery.

The dry method: Clay is dried, pounded and crushed into powder form. It is often used in factories for making tiles.

The semi dry method: Combines both dry and plastic methods.

Each method has got advantages depending on where it is being used. However, it is always important to get rid of unwanted materials such as stones, plant roots from clay during its preparation. **Grog** is always added in clay for sculpture in order to make it stronger and to ease the firing process.

Remember, clay has to be **kneaded** and **pressed** during its preparation in order to get rid of air pockets. This is also done in order for the clay to become more plastic.



Activity 3

1. Discuss the four different methods of clay preparation.
2. Which method is more suitable for preparing clay for pottery?
3. Which method is more suitable for the preparation of clay for sculpture?
4. Follow an appropriate method and prepare your clay. Keep it in a safe place.

Take note:

- The quality of clay determines the quality of the object formed. When clay is well prepared, it can be used to form fine objects.
- Objects can easily break if they are made from poorly prepared clay.
- Ready clay should not crack when pressed, it should be even such as the one in Figure 4.3.

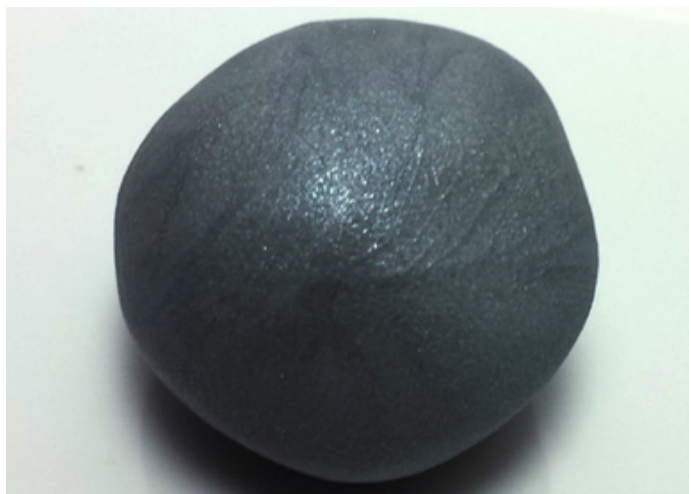


Figure 4.3: A lump of clay ready for use

Moulding different clay figures

Your hand is the basic tool while moulding clay. This applies to both additive and subtractive methods of forming art works. Clay figures can be made by use of the following methods:

- Using coils
- Using slabs
- Additive method
- Subtractive method

Activity 4



Discuss the four methods above and write how each one of them can be applied for making clay work.

In Senior One, you studied about the use of coils and slabs to make clay figures such as masks. As you may have observed, these methods are commonly used to make pottery and ceramic sculpture. You can make a sculpture using the additive method, by putting together small pieces of clay until you get the whole sculpture desired. For example, the sculptures in Figure 4.2 were made using the additive method.

Subtractive method is where you begin with a big piece of material which you keep reducing until the required sculpture is got. Subtractive method commonly applies to such materials as wood and stone. However, it could be used in clay. For such a method, you pile up a lump of clay, then you keep removing pieces until you get the required form.

How to make a mask from a mold

Remember, a mask is an object which is normally put on the face to disguise one's identity. Since it is to be worn on the face, a mask is usually made of light materials such as wood, plastic and paper. For example, look at the masks in Figure 4.4.



Figure 4.4: Local masks

You can make a mask of your own using a mold. A mold is a form which is used to give shape to another softer material. In this unit we shall use clay to make a mold.

In order to make a mask using a mold, you begin by thinking about the purpose of your mask. From the purpose you can develop a title for your mask. For example, your mask could be used to entertain people on a festive occasion. You need the following materials in place.

- Clay
- Colours
- Waste papers
- Brushes
- Glue
- Small stones or seeds
- Polythene material
- Raffia and threads
- Vaseline

Then you follow the steps below:

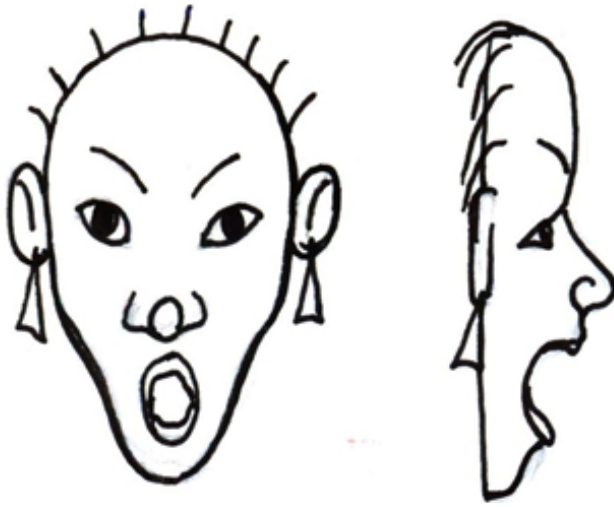


Figure 4.5: Sketches for a mask showing the front and side view

Step 1

Develop sketches for your mask as shown in Figure 4.5. Making a sketch helps you to develop and put ideas together and it acts as a guide while forming your work.



Figure 4.6: Forming a mold for the mask out of clay

Step 2

Use clay to make your mask mold. Look at Figure 4.6. Avoid creating **pockets** on your mold. These are areas with depressions within the mold. Such pockets make it difficult to remove the mask off your mold.



Figure 4.7: Finishing the mold in clay

Step 4

Use a tool to create a smooth finishing on your mold as shown in Figure 4.7. This could be a table knife or a smooth stick. This would further help you to remove your mask so easily. **Never allow your mold to get dry.** Always cover it with a polythene material whenever you break off.



Step 4

When you are done with the mold, smear its surface with Vaseline. (Figure 4.8). This eases the removal of the mask after completion.

Figure 4.8: Smearing the clay mold with vaseline



Step 5

Tear small pieces of paper and carefully use glue to fit them on your mold as shown in Figure 4.9. When you are done with the first layer, apply glue and add another layer. Whenever you add three to four layers expose your work to get dry.

Figure 4.9: Applying papers on the clay mold



Step 6

When you are done and satisfied with the thickness of the mask, carefully get it off the mold. This can be done by scooping clay out and you remain with the image in papers. Then turn it around and work on its inner parts. Look at Figure 4.10. The inner part of your mask should be as smooth as the outer part.

Figure 4.10: Finishing the inner part of the mask after

scooping out clay



Step 7

Then cut out the provision for the eyes as shown in Figure 4.11. Prepare colours and paint your mask according to your plan or sketch. Add a string for holding your mask in place.

Figure 4.11: Cutting out the provision for the eyes



Step 8

Your mask could be decorated further by adding more colours, raffia and a rough texture with small stones or seeds. For example look at Figure 4.12.

Figure 4.12: A decorated mask

Activity 4



1. Follow the steps above and make your mask to be used on an occasion. Decorate it using the available materials.
2. Display your work and discuss it with classmates

Decorating clay surfaces

Clay naturally has its texture. But this can be changed by use of different tools to improve the appearance of the art work.

Consider the following techniques of decorating clay surfaces:

- **Smoothering:** the article is made smooth with a tool, then it is fired.
- **Glazing:** glaze is applied to the surface of the article at bisque level, the article is then fired for the second time. Glazing can be done in one uniform colour or with patterns.
- **Painting:** a technique where colours are applied to an article after firing. Such colours are applied following particular patterns.
- **Incision:** this is done by using a tool to cut patterns into the surface of an article.
- **Building:** the surface of an article is decorated by adding small pieces on the surface while following a particular pattern.



Activity 5

Observe the clay pieces in Figure 4.13 and 4.14, and mention the technique which was used to decorate its surface. (Choose from these; building, incision, painting, glazing and smoothering).



Figure 4.13: Clay articles with different surface decorations



Figure 4.14: Clay articles decorated in different ways

Assessment

1. Use clay to prepare a mold of your choice. Don't let your mold dry up.
2. Using waste papers and glue, prepare a mask and decorate it.
3. Display and discuss your skills regarding creativity and use of materials.
4. Describe four techniques of decorating a pottery article.

Glossary

Grog:	crashed fired clay which is usually added in clay to make it stronger and to ease its firing process.
Additive method:	a method of making clay works by putting together small pieces of clay.
Subtractive method:	a method of making artworks by removing small bits off the original shape until the required form is got.
Glaze:	a coating of coloured, opaque, or transparent material applied to ceramics before firing.
Mold:	a hollow form or matrix for giving a particular shape to something in a molten or plastic state.
Kneading:	a processing of folding, pressing and stretching a soft substance such as clay, and making it a smooth uniform mass.
Pressing:	exerting force on a substance such as clay to flatten it.
Pocket:	depressions within a given surface.



UNIT 5

Weaving using Basic Local Materials

My goals

By the end of this Unit, I will be able to:

- ◉ Identify materials and tools used for weaving.
- ◉ Describe the techniques of weaving with raffia.
- ◉ Identify the decoration techniques for weaving.
- ◉ Share ideas with others about own work.

Introduction

Weaving is practiced by many different cultures in the world. It refers to the process of interlacing strands of a given material. The practice usually involves the use of natural materials such as palm leaves, sisal, raffia, different plant stems and plant fibers. For example look at raffia in Figure 5.1. Raffia is a type of a natural yarn. Have you ever seen and touched it before?



Figure 5.1: Raffia

In Rwanda, there are many local products woven from Raffia. Raffia can be dipped in dyes to change its colour according to the products to be made, for example look at Figure 5.2.



Figure 5.2: Coloured raffia

Activity 1



1. List objects from your local area which are made from raffia.
2. Which other materials are used together with raffia to make these objects?
3. Visit your local area and get raffia (coloured and uncoloured).

There are many products made by weaving raffia. For example look at the different products in Figure 5.3.



Figure 5.3: Products made from raffia



Activity 2

1. Observe the objects in Figure 5.3 and discuss their purpose.
2. Discuss how these products were made. What style was used?

Weaving techniques

The appearance and texture of a woven work depends on the weaving techniques used. There are many types of weaving techniques that can be used to make raffia products. These include; plain weave, twill weave, satin weave and Ghiord's knot.

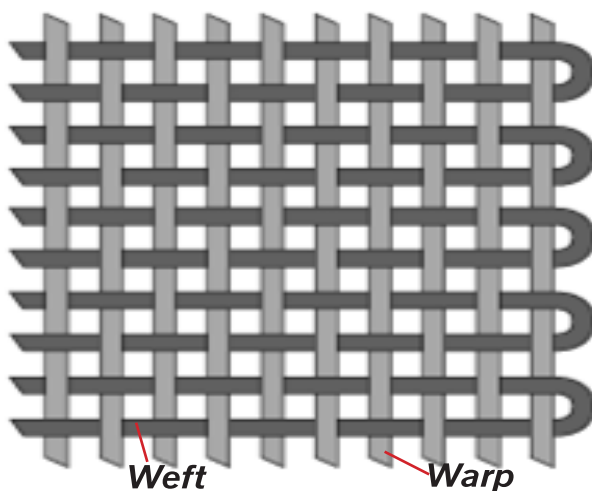


Figure 5.4: Plain weave

(a) The plain weave:

This is the simplest weaving technique. The weft **weave** goes under one **warp** at a time. The process is repeated as one weaves. For example, look at Figure 5.4. This type of weave is also known as a 1/1 weaving style.

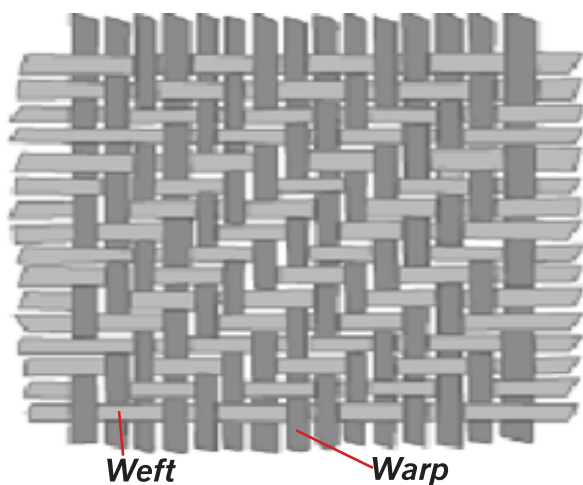


Figure 5.5: Twill weave (2/2 pattern)

(b) Twill weave:

For this style, a weft goes over several warps before going down and then under two warps. The most common twill weave is shown in Figure 5.5. This is a 2/2 twill weave. Twill weaves often look heavier and stronger and therefore are used to make long lasting works.

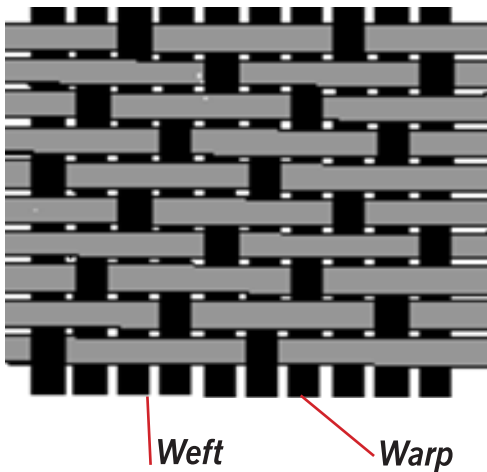


Figure 5.6: A 4/1 satin weave

(c) Satin weave:

This is a more delicate and fancy weaving technique. For this style the weft goes over four or more warp before going down. Then it goes under only one warp as shown in Figure 5.6.

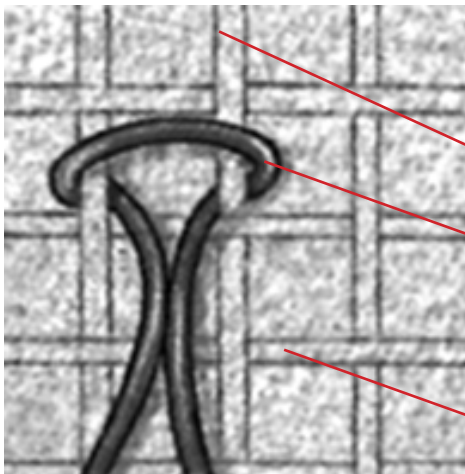


Figure 5.7: The Ghiordes knot

(d) Ghiordes Knot:

This is a type of knot where a yarn is passed over two warp yarns and is then pulled through between these two warps. Then the knot is cut to form a pile as shown in Figure 5.7. This type of knot is often used to finish edges of certain woven work such as carpets.

Twinning weave

This is the type of weave where two left strands are twisted or interlaced as they are made to pass over the left as shown in Figure 5.8. Twinning is often used in making baskets and mats.

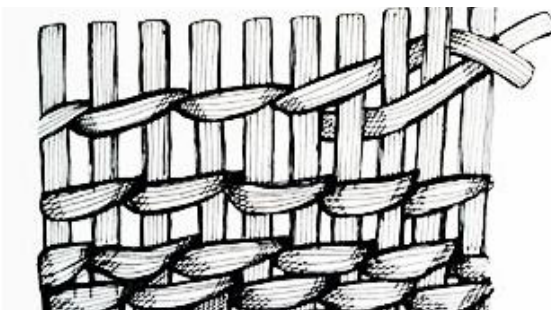


Figure 5.8: Twinning weave.



Activity 3

1. Study the weaving techniques above and try them on your own using raffia.
2. Display weaves to your friends and discuss it with them.

Design Patterns for weaving

The weaving techniques discussed can be used to make such products as carpets, table and door mats. The patterns of the woven work largely depends on your creativity. In some patterns you may include words yet in others you simply deal with different colours of raffia. Observe Figures 5.8 and 5.9, and work out activity 3.



Activity 4

Observe Figures 5.8 and 5.9 and do the following;

1. What weaving technique was used in the two works?
2. Identify similar work from your surroundings.



Figure 5.9: A door mat designed with raffia



Figure 5.10: A door mat designed with multiple colours

Coming up with such quality work may be difficult for you this time. However, simpler activities would make you improve on your skill with continuous practice. In the next activity, you need raffia in different colours (where possible) and a pair of scissors or a cutter.

You can weave a square or rectangular table mat by following the steps below. You could join two or three pieces of raffia for one strand depending on the strength required.

Step 1

Get pieces of raffia and trim them to about 30cm. Look at Figure 5.11.



Figure 5.11: Trimmed pieces of raffia.



Figure 5.12: Trimmed pieces of raffia

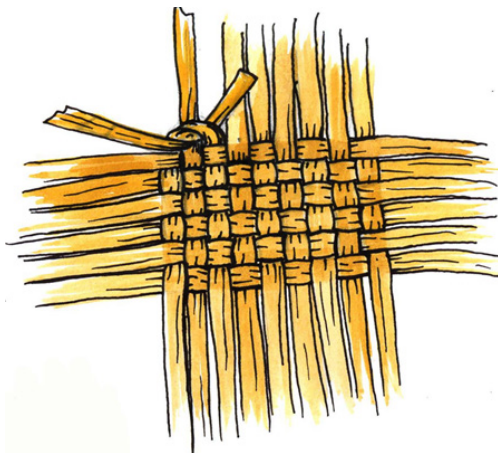


Figure 5.13: Sealing the edges



Figure 5.14: A finished table mat.

Step 2

Using either a plain weave or a twill weave, make your table mat. Begin with two strands at right angles and then keep adding on the two adjacent sides. Leave raffia of about 5cm on either side of your table mat as shown in Figure 5.12. Follow an even number for both the warp and weft in order to ease the finishing.

Step 3

After weaving the required size of the table mat, seal off the edges by tying the first strand with the third in the row. Look at Figure 5.13. Remember, your table mat must be kept tight.

Step 4

Using either a cutter or a pair of scissors, cut off the excess raffia on all sides. This is what we call “finishing” the article.

Look at the finished table mat in Figure 5.14.

Activity 5



1. Use raffia to weave a table mat by following the steps above.
2. Finish the table mat by cutting off excess raffia.
3. Display your work and discuss it in terms of the weaving pattern used and the neatness of the woven work.

Assessment

1. Collect raffia and dye it in two different colours.
2. Weave a small piece (15cm by 15cm) using a satin weave. the warp should be in a different colour from the weft?
3. Finish your art piece by cutting off all unnecessary pieces of raffia.
4. What is the difference between twill weave and plain weave.

Glossary

Finishing:	trimming off unnecessary yarn from a woven piece.
Ghiorde's knot:	a Turkish knot where a piece of yarn is tied and twisted along two warps to form a pile. It is usually used in making carpets.
Pile:	upright loops of strands in a weave.
Plain weave:	a type of weave where the weft goes over and under one warp during the weaving process.
Satin weave:	a weaving technique where a weft goes over four wefts and one weft under.
Strand:	fibers or yarn combined to form one piece for weaving.
Twill weave:	a weaving technique where the weft goes over and under two warps during the weaving process.
Warp:	vertical strands in the weaving process.
Weave:	interlacing threads/yarn to form an article.
Weaver:	a person who weaves.
Weft:	horizontal strands which go over and under warp in the weaving process.
Strand:	a single thin length of something such as fibre especially twisted together with others.



UNIT 6

Motifs, pattern in embroidery, batik, tie and dye and design technology

My goals

By the end of this Unit, I will be able to:

- ◉ Describe the materials and tools used for designing textiles.
- ◉ Create motifs using different tools for textile decoration.
- ◉ Make patterns using batik technique.
- ◉ Create a pattern using tie and dye.

Introduction

In Unit two you made patterns using different printing techniques. The techniques you used are referred to as **surface resist**. There are other methods of resisting a liquid (colour or dyes) from entering a cloth or another surface. In this unit we are going to study about batik and tie and dye methods of textile decoration. These are called **bound resist techniques**. For example look at the patterns in Figures 6.1, 6.2, 6.3 and 6.4.



Figure 6.1: Pattern A



Figure 6.2: Pattern B



Figure 6.3: Pattern C

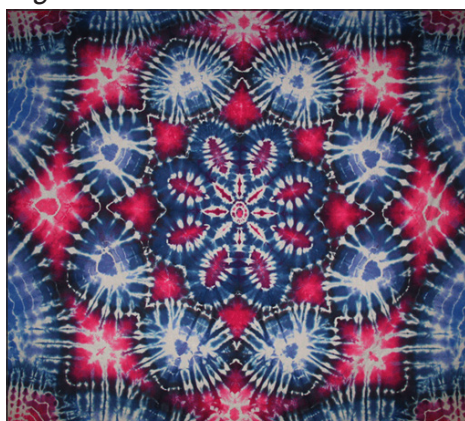


Figure 6.4: Pattern D



Activity 1

Identifying patterns

1. Look at Figures 6.1 to 6.4 and differentiate batik designs from tie and dye designs.
2. What makes the two patterns different?
3. Identify the colours used.
4. Look for similar patterns from your local area and discuss them with your classmates.

You may observe that patterns made using batik technique are bolder than those made using tie and dye. However, one has to plan the patterns in advance before using either batik or tie and dye

Making motifs and patterns for batik

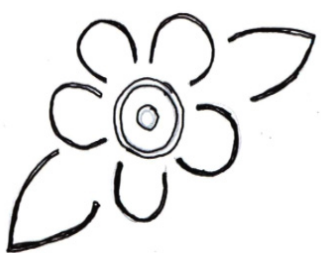
In batik, we use wax to resist dyes from occupying certain areas in your pattern. Whenever you are applying dyes, begin with light colours, then add dark colours as you complete the work. These colours mix with each other to create interesting tones.

In order to make a batik article, you need the following materials:

- Pencil and paper
- Cloth (A cotton cloth works better). Remember, you should wash and iron the cloth before using it in any design work.
- Wax (this can be either bee wax or paraffin wax)
- Brushes of different sizes
- Dyes of different colours
- Containers for mixing dyes
- A heating source
- A source pan
- Rough papers, such as news papers
- Iron box or flat iron

Then follow these steps to make your batik article.

Step 1



Using a pencil, sketch your pattern on paper. Your pattern should be simple as the one shown shown in Figure 6.5. A complicated pattern will give you a hard time to work on. Mix the dyes in water, following the instructions for mixing which appear on these dyes.

Figure 6.5: Sketches for a batik work



Step 2

Spread your cloth on a table. Then transfer the sketch on to the cloth as you follow the proportions of your sketch. Look at Figure 6.6.

This can be done by re-drawing it with a pencil or you may use a stencil if the sketch does not need enlargement.

Figure 6.6: Transferring the sketch on to the cloth



Figure 6.7: melting wax

Step 3

Put wax in a source pan and heat it until it melts into liquid as shown in Figure 6.7. Use little heat when the wax melts, to keep it in liquid form.

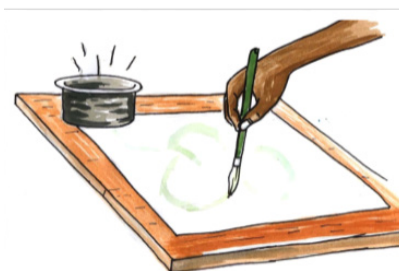


Figure 6.8: Applying wax on the cloth

Step 4

Dip the brush bristles in the molten wax and block the sketched lines on the cloth as in figure 6.8. Never leave the brush in hot wax for long, it could easily get burnt.

You should put a paper or papers below the cloth in order to stop it from getting stuck on the table.



Figure 6.9: Painting the cloth with dyes

Step 5

Using a relatively big brush, paint your cloth with a light colour. Then let the cloth dry. Never dry the cloth under hot sun because it melts the wax put on earlier. See figure 6.9.



Figure 6.10: Painting the cloth with wax

Step 6

Apply wax to places where you want to maintain the first colour. Then paint the cloth with another colour (darker than the first).

Look at figure 6.10

Step 7

When you are done with the colours you wanted, apply wax on the entire cloth. Let it dry up and then crackle it (create cracks through the wax).



Figure 6.11: Painting the cloth with the darkest colour

Step 8

Paint the cloth with the darkest colour as shown in Figure 6.11. Let it dry up.



Step 9

Crease the cloth to remove the wax as shown in Figure 6.12.

When you are done, remove the excess wax by putting the cloth between papers and ironing it as shown in Figure 6.13.

Figure 6.12: Creasing the cloth to remove wax



Figure 6.13: Removing excess wax by ironing



Figure 6.14: Final work



Activity 2

1. Follow the steps given to make your own batik article.
2. Display and discuss your work with your classmate.

Take note

Melting wax and making batik work requires a well ventilated place.

Be careful as you work with hot molten wax. It can easily burn you.

Making patterns for Tie and dye

The process of making patterns for tie and dye begin with tightly tying the cloth, and dipping it in boiling dyes before

bringing it out to dry. Therefore the name comes from the process of making the patterns, “first tie the cloth and then dye it in dyes”.

To make tie and dye patterns, you need the following materials:

- Cloth
- Raffia or nylon threads
- Dyes
- Water
- Heat source
- Cutters
- Wax
- Salt (this is usually added in the dyes as they are boiled)

Patterns for tie and dye largely depend on how the cloth is treated before dyeing it. The cloth is tied in order to resist dyes from going to unwanted areas. After tying the cloth, it is dipped in dyes and boiled for about 30 minutes (or according to the instructions on the tin for a given dye).

It is then removed from the dye and made to dry under shade. The tying should be tight in order to limit dye from going to places they are not supposed to.

You can use different colours to dye your cloth. But before dyeing the cloth in another colour, the first colour should be dry. Then more tying is done to preserve the first colour. The threads are not removed until the cloth is totally dry.

Activity 3



1. Look for tie and dye patterns from your local area.
2. What shapes can you see in these patterns?

There are several ways of treating the cloth, these include:

1. Folding and gathering
2. Stitchery

1. Folding and gathering

There are several ways of folding and gathering the cloth these include pleats, strips, circles and spirals. These are demonstrated in Figure 6.14. In all the styles shown, the cloth is twisted first, then it is tied to form a given pattern.

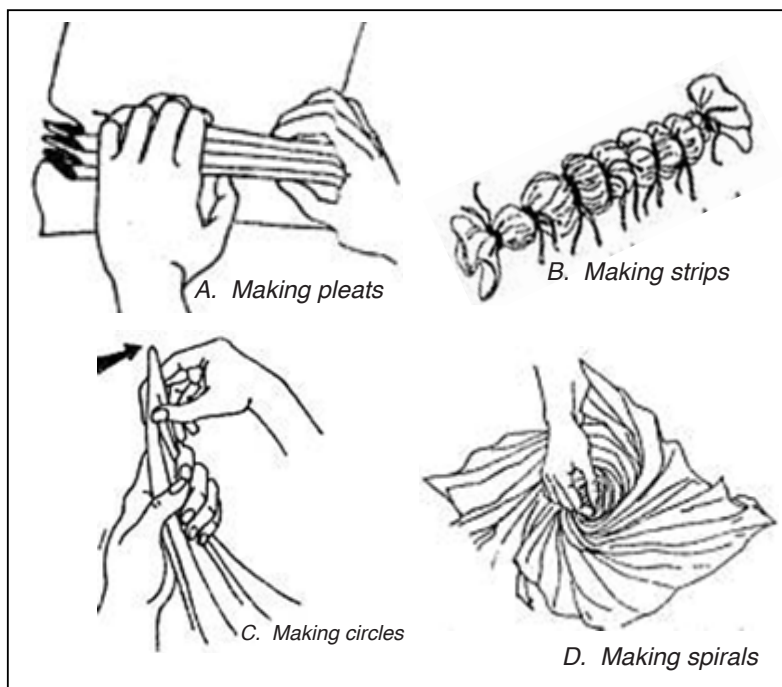


Figure 6.15: Ways of making patterns for tie and dye

After folding and gathering the cloth, it is then tied and immersed in dyes as shown in figure 6.16. The cloth is boiled for some time as indicated on the dyes, look at Figure 6.17. After dyeing the cloth it is left to dry under a shade if you are to use several colours, the process is repeated. You add more ties after drying the cloth and dip it into the second colour. Then when you are done with all colours, the cloth is unfolded and ironed and the patterns of final work appear as shown in figure 6.18.

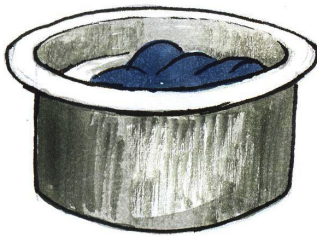


Figure 6.16: Dipping the cloth in the dye

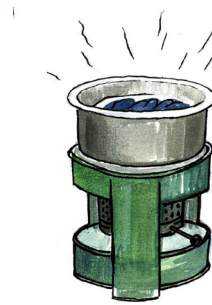


Figure 6.17: Boiling the cloth in the dye

Activity 4

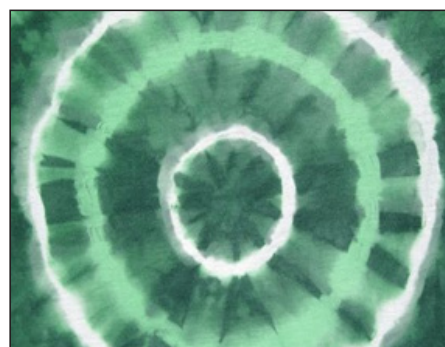


1. Observe the patterns in Figure 6.14 and try them out on a piece of cloth.
2. Dye the cloth to see the outcome.

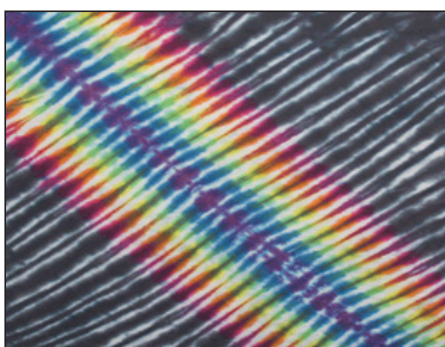
Now take a look at how the patterns look like on the final work in Figure 6.18, after dyeing the cloth.



Patterns from pleats



Patterns of circles



Patterns of stripes



Patterns of spirals

Figure 6.18: Tie and dye patterns

2. Stitchery

For this technique, you need a needle and threads (preferably nylon threads or raffia). For example the pattern in Figure 6.15 was a result of stitchery. You begin by sketching the patterns on the cloth, then you sew them with a running stitch. But you leave threads of a reasonable length hanging. These are the threads used to tie the cloth when it comes to dyeing it. Figure 6.19 A pattern made using stitchery techniques. You can now look at the pattern made by use of threads on a cloth in figure 6.20.



Figure 6.19: A pattern made using stitchery techniques

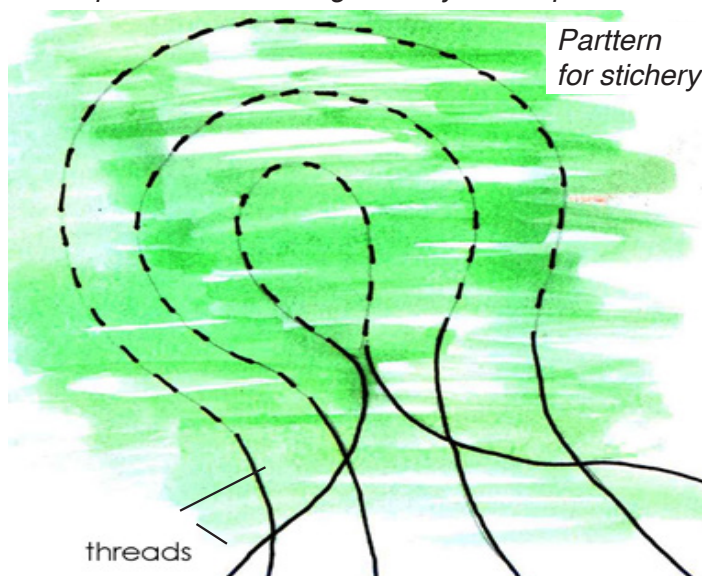


Figure 6.20: A pattern made in a cloth using a running stitch

While using the stitchery technique, threads are pulled and tied at intervals depending on the planned design and colours. Then the cloth is dipped in dyes following the same process as the one you used in folding together on page 83. Your pattern may come out as shown in the figure 6.21.

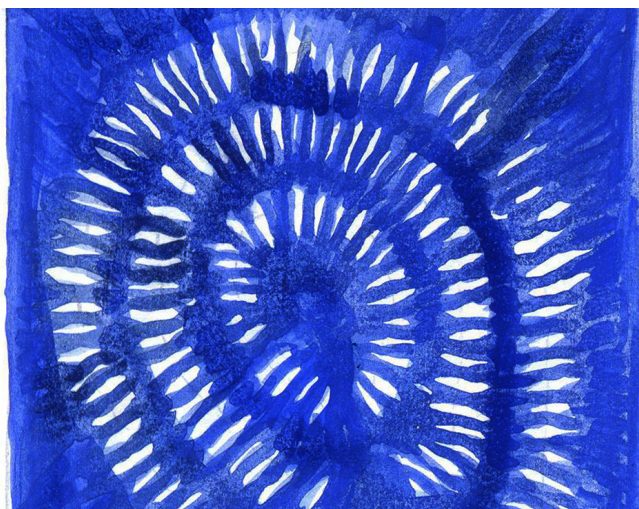


Figure 6.21: Final work

Take note:

- Just like the case of batik works, the process of dyeing the cloth should always begin with light colours.
- You need to know the colour combinations before doing tie and dye. These were studied in Unit one.

Activity 5



1. Draw a pattern for stitchery on a piece of paper.
2. Sew the stitch on a piece of cloth.
3. Dye the pattern and observe the outcome

Assessment

Create a pattern on a cloth (1/2 square meter) using one of the techniques discussed in this unit.

1. Get a piece of cloth (1/2 square meter) and create patterns by folding it into either circles or pleats
2. Tie the cloth into different values and dip it into a light dye

3. Repeat the processes in '2' at with different parts in the second dye.
4. Unfold the cloth and let it dry. Then iron your cloth and display it.

Glossary

<i>Bound resist:</i>	a technique of decorating cloth in which dyes are stopped from going to certain areas on a cloth by either tying, or using wax.
<i>Surface resist:</i>	a technique of decorating a cloth in which printing ink is limited to particular areas by using a stencil, or graphic film or photo emulsion.
<i>Crackling:</i>	a technique used to create rugged lines on a batik work when it is completed.
<i>Stitchery:</i>	a tie and dye method in which threads are used to create patterns on a cloth.
<i>Dye:</i>	a material which is used to change the colour of another materials either directly or by use of heat.
<i>Crease:</i>	a process of squeezing a cloth in order to remove excess wax.
<i>Pleats:</i>	folds created in a pieces of cloth as a process of creating patterns on it before dipping it in dyes.

A prehistoric cave painting featuring several animals, including a large bull (aurochs) and a horse, rendered in earthy tones of ochre, red, and black. The background is a textured, mottled brown.

UNIT 7

The Development of Art Through different eras in the World

My goals

By the end of this Unit, I will be able to:

- ◉ Identify the characteristics of art in some African and European regions.
- ◉ Describe the characteristics of works by renowned artists.
- ◉ Appreciate the value of culture in the society.
- ◉ Discuss the major art sites in the world.
- ◉ Appreciate modern and abstract art.

Introduction

Art reflects people's way of life. This is majorly because people create art according to their social, economic and political background. Therefore, by studying the history of art from different regions and periods, we can understand the nature of different societies in the world. This helps us learn about the works they produced, their methods and techniques, and

the materials they used, in order to boost our creative abilities as we produce our own art.

For example, look at the change in style of the art works in Figures 7.1, 7.2, 7.3, 7.4 and 7.5.



Figure 7.1: A rock painting at Lescoux



Figure 7.3: Monalisa by Leonardo da Vinci



Figure 7.4: An abstract painting – Portrait by Pablo Picasso



Figure 7.2 : A modern painting by Thomas F



Figure 7.5: A modern art garden sculpture from pinterest.com



Activity 1

Observe the art works in Figures 7.1, 7.2, 7.3, 7.4 and 7.5, and do the following:

1. Discuss their differences regarding the following aspects;
 - (a) use of space
 - (b) subject matter
 - (c) the light effect in the composition
2. Identify the colours used in these compositions.
3. Mention any paintings from your local area with some of these characteristics.

The paintings in Figures 7.1 to 7.4 and the sculpture in Figure 7.5 show the trend of art from the pre-historic, the renaissance, to the modern and abstract art. Indeed art has greatly changed and a number of materials discovered to date in painting, sculpture, pottery, the graphic arts, textile designs and architecture. But in this unit, we are going to look at **Modern and Abstract Art**.

What is Modern Art?

The word modern has been used to refer to the most recent things as opposed to the past. Sometimes the past is related to what is traditional. For example in your community, what do you consider to be the past and what is modern?

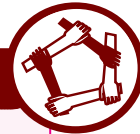
Modern art can be traced from the period of **industrial revolution** (18th and 19th century). This was a period with many changes in manufacturing, technology and transport. These changes greatly affected the cultural, social and economic conditions of the western world.

Before the 18th century, the church was the major consumer of art and therefore artists painted compositions from biblical stories. But as the industrial revolution progressed, people of the high class begun demanding for art works. Besides, as people's way of life changed, artists became more interested in painting about the people and places which interested them. Therefore the subject matter changed. For example look at the painting in Figure 7.6.



Figure 7.6: *The Oath of Horatii by Jacques Louis David*

Activity 2



Observe the painting in Figure 7.6 and discuss the following questions:

1. How many people are in the composition?
2. From which direction is light coming from in the painting?
3. What is the story presented in the composition?
4. From which setting is the action taking place?
5. Draw this composition on a paper and paint it while trying to copy the colours as they appear in this painting.
6. Display and discuss your paintings with other groups.

Well, some scholars believe that modern art is likely to have begun with the work of the French painter, Jacques Louis David, the founder of the style called **Neoclassicism**. He was born in 1748 and died in 1825. He painted various compositions

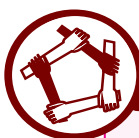
from stories around French politics and Figure 7.6 is one of them.

The painting presents a dramatic composition in which three brothers are saluting toward three swords held up by their father. At the extreme corner, there are women in grief behind the father, an indication that they were not in support of their sons' joining the army.

A number of art schools had been started and they trained artists following ideas that were developed in the Renaissance. Modern art was started by artists who kept working against the norms learnt from these art schools. Therefore, other scholars consider modern art as the style of art which existed between 1870 and 1970.

What are the characteristics of modern art?

1. New types of art were formed during this period, for example; collage art, animation, performance art and kinetic art.
2. New materials were discovered and used in painting, such as fixing objects on canvas paintings. Also, found objects were used in sculpture in form of assemblages.
3. Colour was extensively used for expressive purposes. In many compositions, colour was used to express the artist's ideas.
4. New movements of art were formed, especially in painting.



Activity 3

Discuss the following questions.

1. What is meant by the term Modern Art?
2. What are the common characteristics of Modern Art?
3. Mention four artists' paintings and four artists in Modern Art.

A number of art movements were formed as part of “Modern Art”. These include: impressionism, Fauvism, cubism, pop art, Dadaism, surrealism and abstract art. We shall discuss some of these styles as follows.

1. Impressionism

This is a style of painting which was developed in the 19th century by French artists, such as Edgar Degas, Claude Monet, Edouard Manet and Auguste Renoir. It is characterized by the use of short brush strokes, using bright colours with the effect of light. For example look at Figure 7.7.

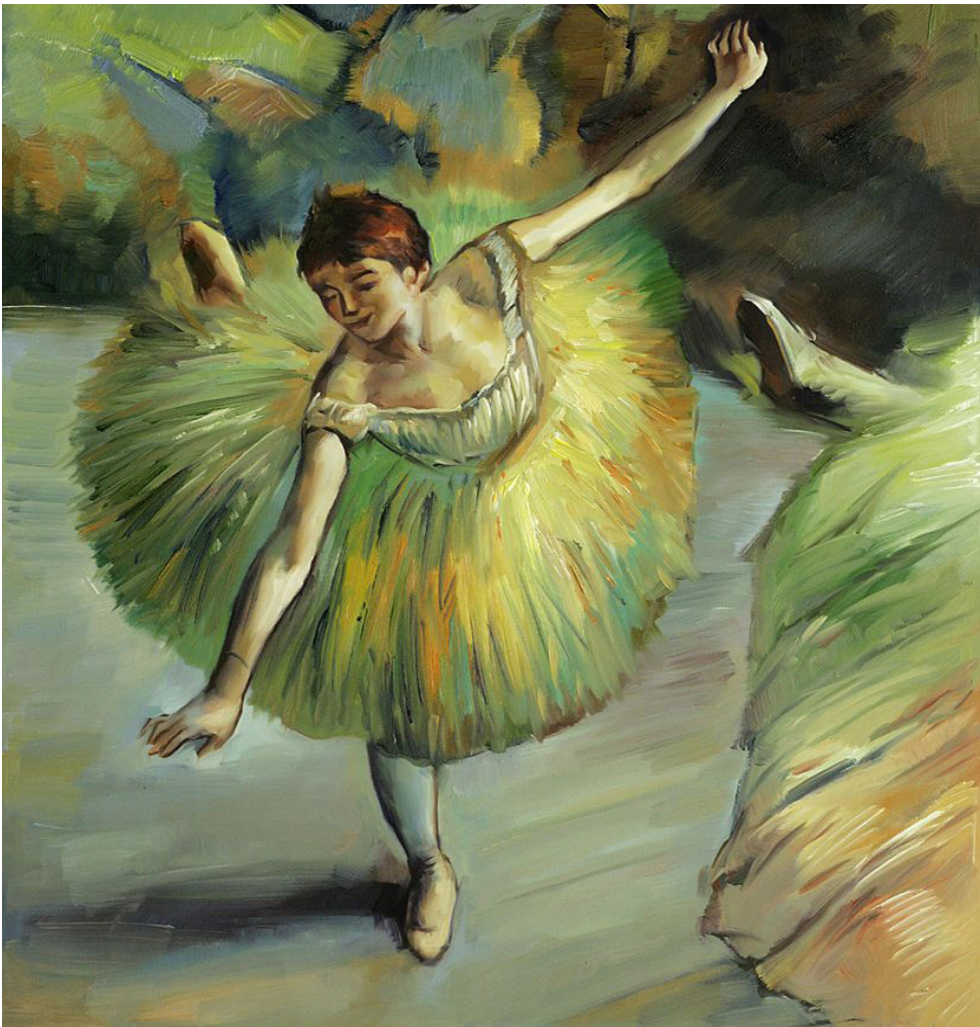


Figure 7.7: Dancer tilting by Edgar Degas

2. Fauvism

This is a style of painting which was developed in the 20th century by a group of French artists who referred to themselves as “the wild beasts”. The style was based on colour effects and light with big patches of colour. For example look at Figure 7.8.

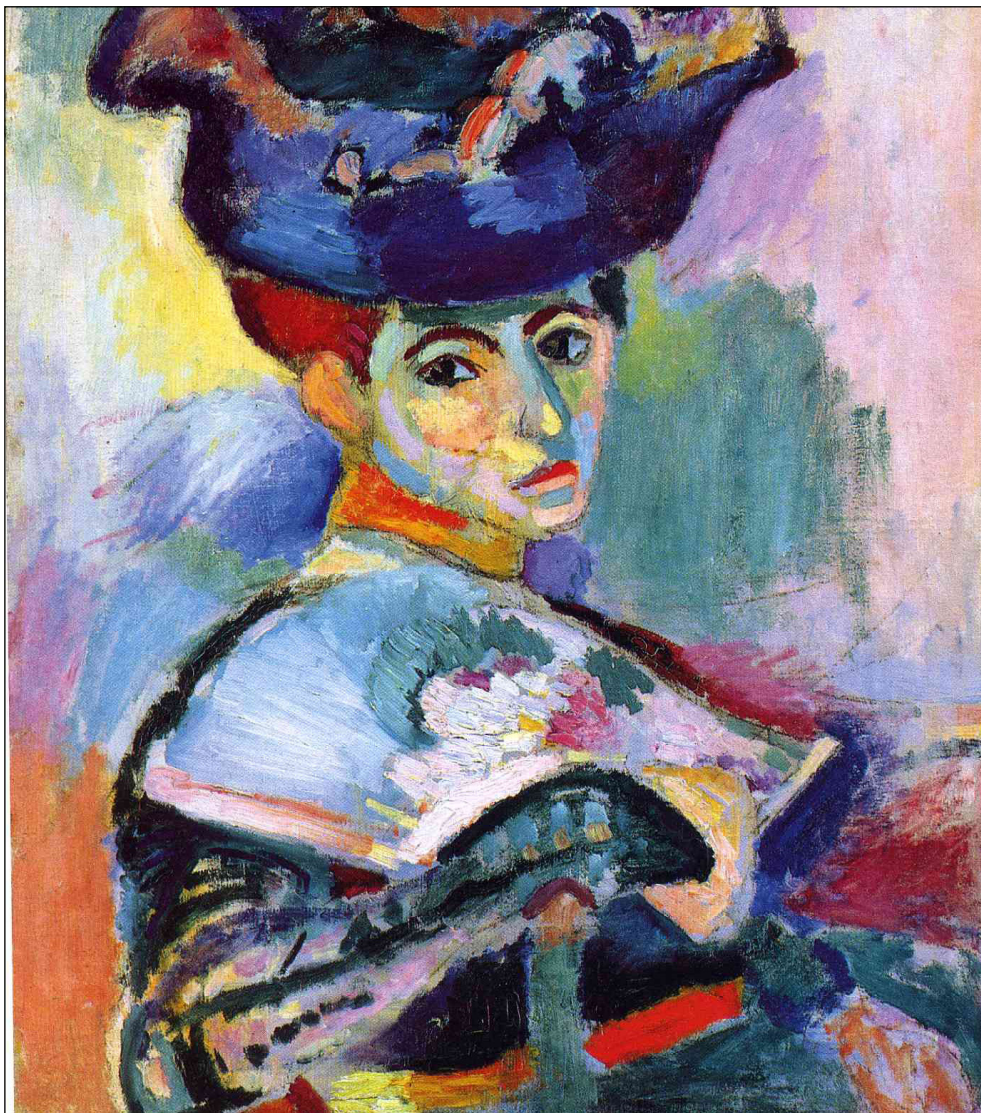


Figure 7.8: Woman with hat by Henri Matisse

3. Cubism

This is another modern art style which was developed in the 20th century. The style is focused on presenting figures whose natural forms are simplified into geometric shapes. A prominent artist who followed this style is Pablo Picasso, one of his paintings is presented in Figure 7.9.

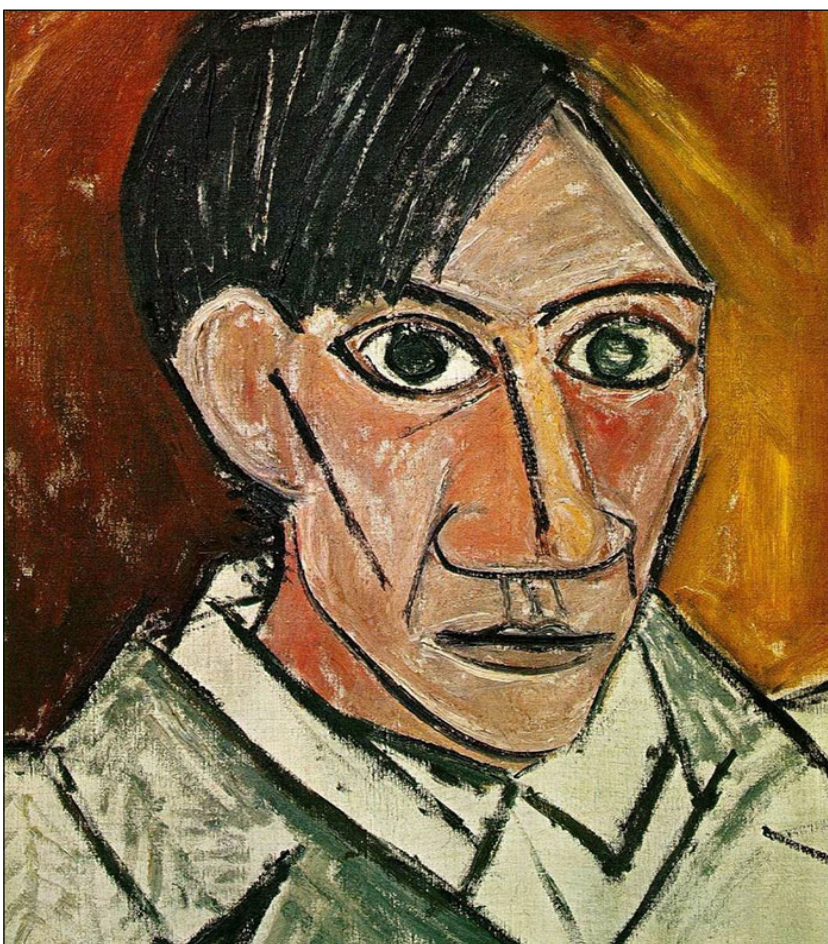


Figure 7.9: Self Portrait by Pablo Picasso

Activity 4



1. Sketch a composition of an activity of your choice on a piece of paper.
2. Paint this composition by following any of the styles discussed so far.
3. Display your paintings and discuss them with the rest of your classmates.

4. Surrealism

This is a modern art style in which the artist portrays what seems to be a dream into reality. It was developed during the 20th Century. There is a lot of rearrangement of ideas which from the natural point of view looks unreal. For example look at the painting in Figure 7.10.

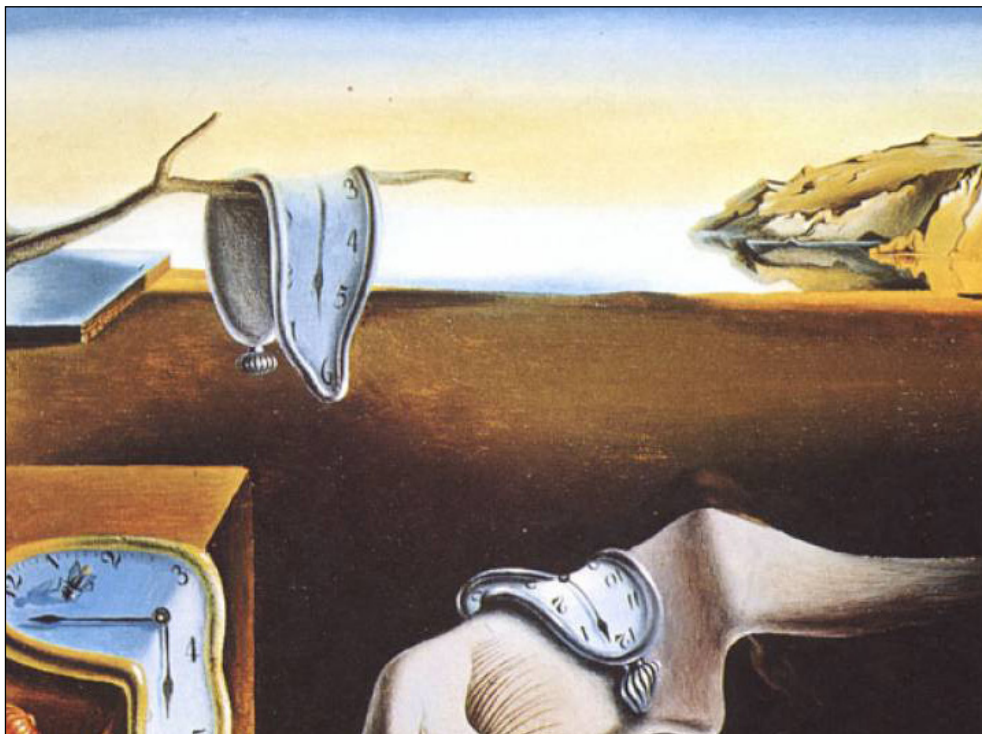


Figure 7.10: A painting in surrealism

5. Pop art

This is the type of modern art which is nonrepresentational. It was developed in the 1950s in Britain and the United States. It depicts objects and scenes from everyday life. For example, look at the painting in Figure 7.11.



Figure 7.11: Pop Art

Activity 5



1. Sketch a composition in either surrealism or pop art.
2. Using colours of your choice, paint this composition.
3. Display the paintings and discuss them with friends.

What is Abstract art?

This is a type of modern art which focuses on using forms, shapes, colours and texture. It does not represent objects as they appear in nature but according to the artist's expressive abilities. For example look at Figures 7.12 and 7.13.

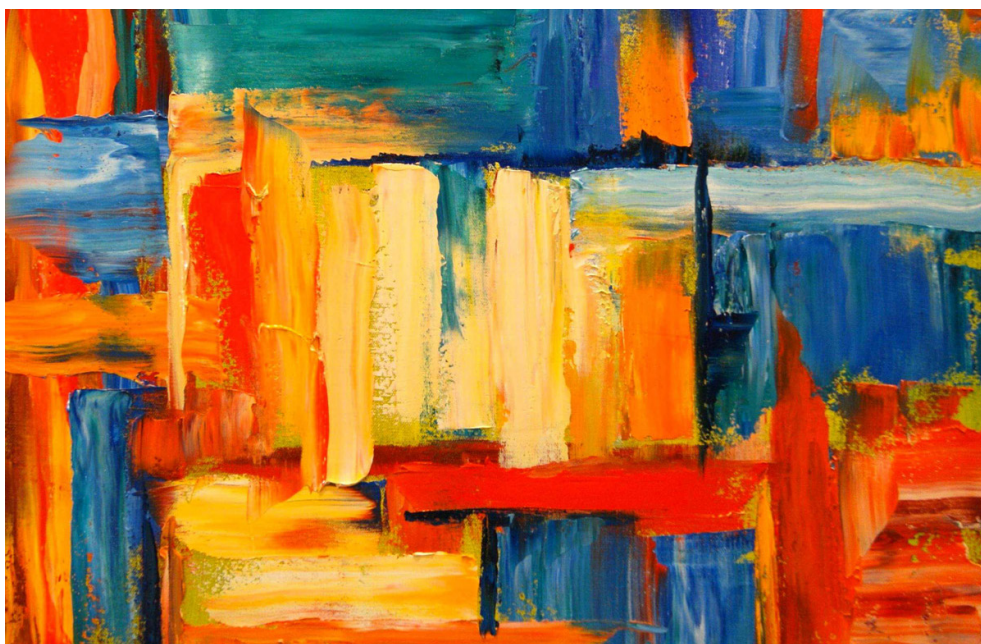


Figure 7.12: Abstract painting

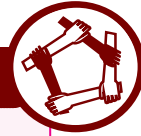


Figure 7.13: Abstract sculpture by B.J. Las v

In Figure 7.12, the artist focused on the use of colour to create rhythm in the painting. Then in Figure 7.13, the artist uses geometric shapes to create harmony and unity in the composition.

Therefore, in abstract art, objects are deformed, simplified and rearranged to come up with a work of art.

Activity 6



Look at Figures 7.12 and 7.13 and discuss the following:

1. Identify the colours that were used in the abstract painting.
2. What shapes were used in the sculpture? Relate these shapes to any natural object from your surroundings.
3. How does abstract art differ from cubism? (refer to Figures 7.9 and 7.12).

World renowned artists

There are a number of artists who have made significant impact in the field of art. These include; Michelangelo, Leonardo da vinci, Pablo Picasso and O'Keeffe. Some of these and their work, you studied about in Senior One. Let us summarise their contribution in the following section.



Figure 7.14: Michelangelo

Michelangelo (1475-1564)

An Italian Renaissance artist who was a painter, sculptor and architect. He is known for his mastery of the body structure. He painted great works in the Sistine chapel such as creation of Adam in Figure 7.16.



Figure 7.15: Leonardo da vinci

Leonardo da vinci (1452-1519)

An Italian Renaissance artist who was a painter and ceramicist. He is known for his style of making paintings with no strict outlines (chiaroscuro). One of his painting is the monalisa shown in figure 7.17.



Figure 7.16: The Creation of Adam

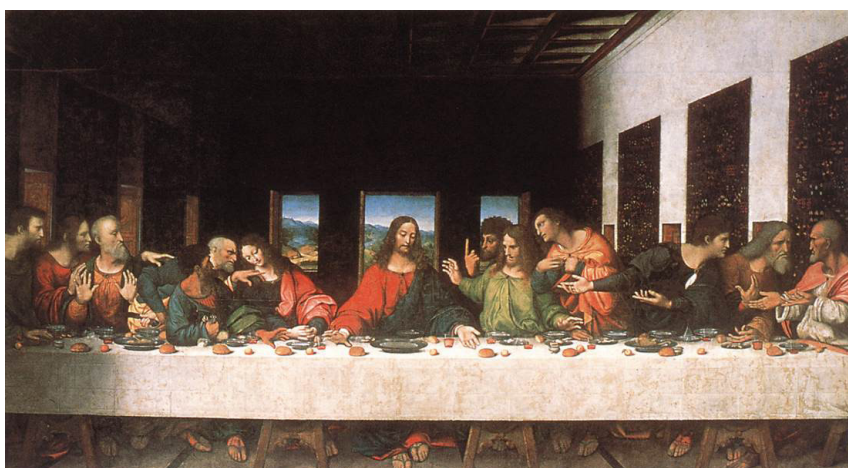


Figure 7.17: The Last supper by Leonardo da Vinci

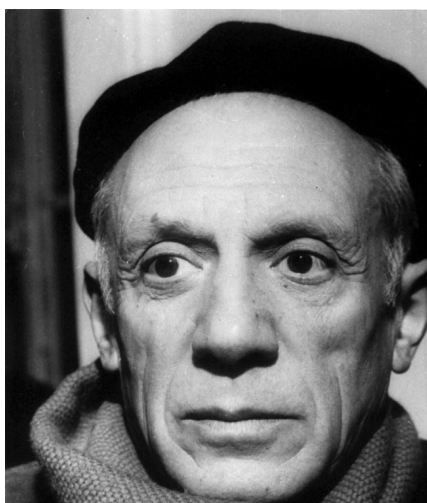


Figure 7.18: Pablo Picasso

Pablo Picasso

A Spanish painter, ceramicist, sculptor and poet. He is one of the renowned artists in the 20th century who is the founder of cubism. He made many compositions and portraits such as Figure 7.20.

Georgia o'Keeffe

An American modern artist who is known for her paintings depicting nature. She mainly painted plants with emphasis on flowers in brilliant colours for example, look at Figure 7.19.



Figure 7.19: Georgia o'Keeffe

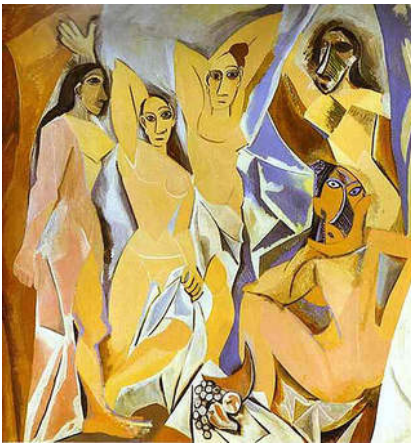


Figure 7.20: Les Demoiselles d'Avignon by Pablo Picasso



Figure 7.21: Squash-blossoms by Georgia O'Keeffe

Activity 7



1. Discuss the characteristics of art works of the renowned artists presented in the previous section.
2. Identify some art works from your local area with characteristics similar to those of the famous artist discussed.

Major art works in the world

Many art works have been produced by different artists from different regions of the world. Such works have characteristics which have

influenced the production of art in the world. Some of these art works include; the fertility goddess (Figure 7.22), The Monalisa (Figure 7.3), the Sistine charpel (Figure 7.24) and the kangaroo hunt (Figure 7.23).



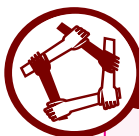
Figure 7.22: Fertility goddess



Figure 7.23: The Kangaroo hunt



Figure 7.24: The interior of Sistine Chapel



Activity 8

Observe the art works in Figure 7.21, 7.22, 7.23 and 7.24 and discuss the questions that follow:

1. Identify the objects and compositions presented in these works.
2. List the different colours used.
3. What materials were used in these works?

Major art sites

You studied about the major art sites in the world in Senior One and discussed some of the art works found in these places. These places include Altamira in Spain, Lascaux in France and Olduvai Gorge in Tanzania.



Activity 9

Observe the paintings in Figure 7.25, 7.26 and discuss the general characteristics of the two paintings.

1. What do you think are the materials used to make these paintings?
2. Mention the colours that were used in the paintings.



Figure 7.25: A painting of animals at Altamira



Figure 7.26: A painting of animals at Lescaux

In your discussion, you may have come up with these similarities in the paintings at Altamira and Lescaux:

1. Both paintings were made during the Pre-historic period.
2. The paintings were done on rocks.
3. The paintings were done in cave ceilings.
4. Animals are the main subject matter of both paintings.
5. Lines were used to draw the shapes of the animals and filled with colour.
6. The colours used are similar, basically browns and yellow ochre.

At Olduvai Gorge, it is believed that the oldest man on earth lived here and his major tools were made of stone. These tools were discussed in Senior One. Therefore, the similarity between Olduvai Gorge, Altamira and Lescaux is that the people who lived in these places used stone as the major tool.

Assessment

1. Discuss five styles that existed in the modern art period.
2. Mention three world renowned artists and state one art work made by each of them.
3. In which period does Leonardo da vinci belong.

Glossary

Rhythm:	a strong, regular repeated pattern of movement observed from an artwork.
Portrait:	a likeness of a person, especially of the face, as a painting or drawing.
Ceramicist:	a person who makes ceramic pieces.
Poet:	a person who writes or makes poems.
Architect:	a person who designs and supervises the construction of buildings or other large structures.
Chiaroscuro:	an Italian artistic term used to describe the dramatic effect of contrasting areas of light and dark in an art work, particularly paintings.
Neoclassism:	this refers to a period where there was a revival of a classical style or treatment in art, literature, architecture and music.
Renaissance:	this a period which started in Italy and spread to the rest of Europe. It's a period when artists revised the style of the classical period in ancient Rome and ancient Greece.

References

- Arnason H.H. (1986). *A History of Modern Art. (Third Edition)*. Thames and Hudson
- Brommer, G.F. & Kinne, N.K. (1995). *Exploring Painting*. Davis Publication inc. Worcester.
- Canaday, J. (1987). *Mainstreams of Modern Art. (2nd Edition)*. Harcourt Brace Jovanovich College Publishers.
- Getlein, M. (2008). *Living with Art. (Eighth Edition)*. McGraw-Hill Companies inc.
- Gombrich, G. W. (1995). *The Story of Art*. Phaidon Press.
- Proctor, R.M. & Lew, J.F. (1995). *Surface Design for Fabrics. (Revised Edition)*. University of Washington Press.
- Tansev, R., Kleiner, F. S., De La Croix, H., (2004). *Gardner's Art through the Ages. (14th Edition)*. Thames and Hudson
- Tebenkana, T. (2013). *Insights into the History of Art. (Volume 3)*. Astro Book Binding Center, Kampala
- Tebenkana, T. (2013). *Crafts and Studio Technology. (A revised Edition)*. Astro Book Binding Store. Kampala.