

# Vocational Skills

Standard Six

Pupil's Book



Tanzania Institute of Education

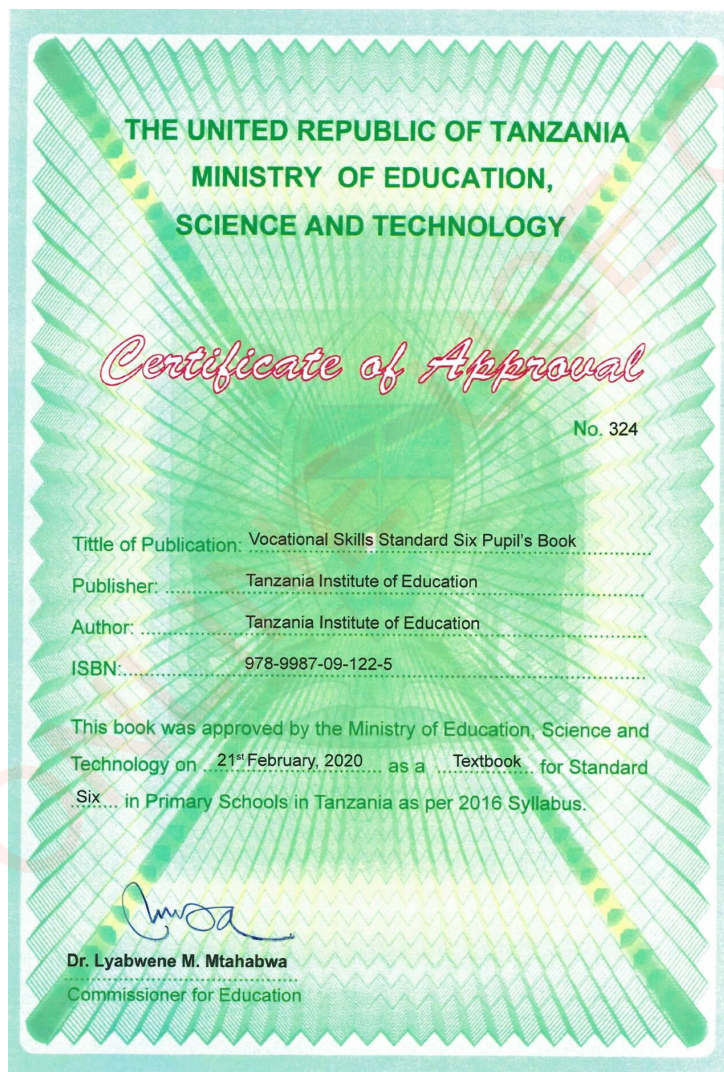


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# Vocational Skills

## Standard Six

### Pupil's Book



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Published 2020  
Reprinted 2021

ISBN: 978-9987-09-122-5

Tanzania Institute of Education  
P. O. Box 35094  
Dar es Salaam

Mobile numbers: +255 735 041 170 / 735 041 168  
Email: [director.general@tie.go.tz](mailto:director.general@tie.go.tz)  
Website: [www.tie.go.tz](http://www.tie.go.tz)

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## Acknowledgements

The Tanzania Institute of Education (TIE) would like to acknowledge the contributions of all the organizations and individuals who participated in the design and development of this textbook.

**Writers:** Dr Winnie Nguni (Entrepreneurial skills & Money management), Dr Martha W. Tesha (Environmental care, Entrepreneurial skills & Money management), Ms Victoria Goweke (Environmental care), Ms Fransisca P. Tarimo (Cookery), Mr Gaitani F. Romwald (Musical instruments & Mastering acting principles), Mr Revocatus Kundy (Pictures, play gears and printmaking & Modelling, weaving and models), Ms Brigita Nyaki (Good grooming) and Ms Zena H. Amiri (Good grooming & Cookery).

**Editors:** Dr Novetha A. Kigombe (Musical instruments & Mastering acting principles), Dr Dinnah E. Nicodemus (Pictures, play gears and printmaking & Modelling, weaving and models), Dr Manongi C. Ntimbwa (Entrepreneurial skills & Money management), Mrs Weneeli R. Mweta (Good grooming, Environmental care & Cookery) and Dr Gerald E. Kimambo, & Mr Yesaya Mweteni (Language)

**Designer:** Ms Rehema H. Maganga

**Illustrators:** Mr Fikiri Msimbe

**Coordinators:** Ms Zena H. Amiri and Mr Gaitani F. Romwald

TIE also extends its sincere gratitude to the Primary School teachers who participated in the trial phase of the manuscript.

Likewise, the Institute would like to thank the Ministry of Education, Science and Technology for facilitating the writing of this textbook.



Dr Aneth A. Komba  
Director General  
Tanzania Institute of Education

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## Introduction

This is the second book in a series of three textbooks on Vocational Skills for Primary Schools. The book has been prepared according to the 2016 Vocational Skills Syllabus for Primary Schools issued by the Ministry of Education, Science and Technology. The book consists of nine chapters which are Good grooming, Environmental care, Cookery, Musical instruments, Mastering acting principles, Pictures, play gears and printmaking, Modelling, weaving and models, Entrepreneurial skills and Money management. The book contains drama, poems, stories, cases, illustrations, conversations, recitations, activities and exercises that enhance learning. You are encouraged to do all the activities and exercises. This will enable you to develop the intended competencies.

## Chapter One

### Good grooming

#### Introduction

*In Standard Five, you learnt about cleanliness of the body, home and caring for your clothes. In this chapter, you will learn about washing clothes, ironing using different types of irons and cleaning shoes. Washing, and ironing clothes; and cleaning shoes help a person to look neat and smart. Smartness enables a person to be happy, confident and accepted by the society. Therefore, the content of this chapter will enable you to be neat and smart both at school and at home.*

#### Caring for clothes



Think

1. Why do clothes become dirty?
2. What will happen if you do not follow the rules for washing clothes?

Clothes become dirty when the wearer sweats and she or he is exposed to substances such as dust, mud, charcoal, grease or oil. Dirty clothes produce a bad smell which attracts insects, parasites and germs that may cause diseases. Clothes which are extremely dirty may wear out easily due to excessive scrubbing during washing. Therefore, it is important to ensure that you wash your clothes immediately after they become dirty. Make sure that your undergarment and socks are washed properly and changed frequently. Observing these rules will help you to avoid bad smells and skin diseases such as fungal attacks. Generally, clothes need proper care in order to look neat and last long.



## Removing stains from clothes

A stain is an unwanted mark on something that is difficult to remove. Stains may occur when a garment or household article is exposed to a substance such as animal blood and droppings, vegetables, fruits, grease and minerals. Some stains get absorbed into the fabric while others may just stick on its surface. When clothes are stained, they lose their attractiveness. Stains are easily removed from clothes while they are still fresh. If a stain remains for a long time, it penetrates into the inner part of the cloth fibres. Since stains spoil the appearance of articles, they should be removed as soon as they occur. If possible, the nature of the stain should be identified so that appropriate stain removers are used. Treat the stained area only and work around the stain to prevent it from spreading all over the garment. The garment should be washed immediately and dried as soon as the stains are removed. This is because some of the stain removers may weaken the fabric if left for a long time.

The stain remover to be used depends on the colour of the cloth and the type of fabric. There are natural and chemically made stain removers. In cotton clothes, stains can be removed by using various removers as follows:

- i. Table salt, hot water, lemon or lime juice, distilled white vinegar, caustic soda, plain white chalk and sun rays can be used to remove stains caused by foodstuffs including fruits and meat stew. Apply the selected stain remover on the stained area and leave it for 10-15 minutes.
- ii. Cold water mixed with table salt can be used to remove blood stains. It is advised not to use hot water because the stain may penetrate to the inner parts of the cloth.
- iii. Lemon or lime juice, tomato juice, or sour milk may be used to remove stains caused by chemicals such as ink. Apply the selected stain remover on the stained area and leave it for 10-15 minutes. Then, scrub the affected area until the stain is removed.

**Washing clothes:** Washing clothes is very important for the good health and smartness of the wearer. It is important to follow the required steps when washing clothes so that they become attractive and last longer. However, some clothes need special treatment to avoid damaging their appearances.

Such clothes are the knitted ones like vests and sweaters, which would stretch if they are not washed with care. While washing such clothes, it is very important to follow the right procedures in scrubbing, squeezing and drying. Make sure that you follow these steps during washing:

- i. Prepare all the necessary equipment and material for washing clothes. These were covered while in Standard Five.
- ii. Sort out the clothes according to their colours before soaking them to avoid ruining the colour, which will, in turn, affect the appearance of the clothes. Moreover, clothes should be sorted out depending on how dirty they are.
- iii. Check all pockets to ensure that, there are no items such as coins or hazardous things like pins and razor blades.
- iv. Repair worn-out clothes or seams before washing, because they may wear out further during scrubbing or rubbing.
- v. Avoid hard scrubbing when washing knitted clothes such as sweaters and vests. Scrubbing or rubbing will spoil the appearance of such clothes.
- vi. Knitted clothes such as sweaters and vests should be squeezed gently to remove the water before drying. Squeezing these types of clothes strongly may affect their appearances, especially by enlarging these parts of clothes: sleeves, the shoulders and the neck. In addition, it will weaken the stability of the threads that were used to knit the cloth.
- vii. After washing the clothes, rinse them with clean water to remove all traces of detergent and dirt. If such clothes are not rinsed thoroughly each time they are washed, they gradually become discoloured. If detergent is also left in the garments, it may also weaken the fibre band as well as make the garment smell badly.
- viii. Dry the clothes properly so that as much moisture as possible is removed.
- ix. When you dry clothes such as sweaters or vests, avoid stretching them because doing so may spoil their shapes.

- x. Avoid leaving the clothes in the sun for a long time, since it may damage the threads that were used to make the cloth and discolour them.
- xi. Dried clothes should be kept in a place with plenty of air to avoid mildew. If a cloth gets mildew, its appearance may be damaged and it may wear out easily. Clothes should be kept in a wardrobe, box, bag, trunk or a bamboo basket.

### Activity 1

1. In a group of five, put an ink stain on a piece of white cotton cloth and workout to remove it.
2. Wash a sweater or a vest by following all the required steps.

### Exercise 1

1. Explain three reasons for washing clothes immediately after becoming dirty.
2. Why is it advised to do the following activities before washing clothes?
  - (a) Sorting the clothes
  - (b) Repairing the clothes
3. What will happen if wet clothes remain in the bucket that is made of iron?
4. Explain three bad washing habits that may ruin sweaters or vests.

## Ironing clothes



Think  
Why are you supposed to iron clothes?

After washing clothes, they usually get wrinkles and shrinkage, which need to be removed. Ironing removes wrinkles and bad odours from clothes. There are three types of smoothing irons, namely a charcoal iron, an electric iron and a kerosene iron as shown in Figure 1.



**Figure 1 A:** Dry electric iron



**Figure 1 B:** Steam electric iron



**Figure 1 C:** Charcoal iron



**Figure 1 D:** Kerosene iron

**Figure 1:** Types of irons

Source: <http://victoriancollections.net.au>

Date accessed: 27<sup>th</sup> July, 2019



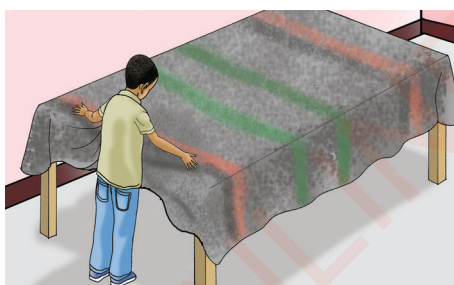
## Reasons for ironing clothes

Clothes should be ironed due to the following reasons:

- i. Removing dampness that may cause flu, coughing, rheumatism and fungus;
- ii. Removing wrinkles as well as making clothes look neat;
- iii. Killing germs or insects from the garment that may cause skin diseases such as rashes;
- iv. Making the wearer comfortable and confident; and
- v. Eliminate bad odour.

**Preparations for ironing:** Prepare all ironing equipment such as a table and a blanket, as shown in Figure 2a. Other equipment include smooth piece of cloth like bed sheet, a bottle of water, an iron, iron stand and a hanger.

Use an unpolished iron table to avoid damage to its appearance due to iron heat. If there is no table, you can lay a mat on a clean floor with heavy pressing clothes. You can also use a special ironing board as shown in Figure 2b.



**Figure 2a:** Preparation for ironing



**Figure 2b:** Ironing boards

Source: <http://www.ravvie.com>

Date accessed: 27<sup>th</sup> July, 2019.

**Points to consider when ironing:** The following points should be considered during ironing clothes:

- i. Coloured clothes should be ironed on the wrong side to avoid colour fading.

- ii. When ironing clothes, you are supposed to press them gently to straighten them better. Pressing down with an iron on the cloth depends on the type of fabric. For instance, clothes that are made up of thick materials such as khakis, need to be pressed heavily in order to be straightened. Cloth such as a school shirt, which is made up of light tetron materials, needs to be pressed lightly.
- iii. The amount of heat required during ironing depends on the type of fabric. Some fabrics need much heat while others need moderate heat. For example, cotton clothes need much heat compared to other clothes such as polyester or tetron that need moderate heat.
- iv. If the clothes to be ironed are over dried, sprinkle them with water to have enough dampness. The amount of dampness needed for the cloth depends on the type of fabric to be ironed. Over dried fabric such as cotton and linen must be sprinkled with enough water. This will help to remove wrinkles easily and make them appear neat.

**Note:** A soft brush or a bottle of water with small holes on the fixed lid is proper for sprinkling water. Fold your clothes after sprinkling them with water to get moisture. Then, iron them using the available type of iron such as an electric iron or charcoal iron. However, it is easier to use a steam iron to address this challenge.

### Using the charcoal iron

The following points should be considered when using the charcoal iron

- i. Wipe the charcoal iron to remove dust and other dirt.
- ii. Light up charcoal direct into the iron or use the already lit charcoal from a charcoal stove.
- iii. Lay down a heavy material such as a blanket together with a smooth piece of cloth like a bed sheet on the prepared ironing table.
- iv. Put an iron stand on the table and a damp piece of cloth for reducing heat.
- v. It is important to test the heat of the iron using a piece of cloth that is

similar to that of the garment to be ironed. If the piece of cloth is burnt or changes to brown, reduce the heat using a damp piece of cloth.

- vi. After finishing ironing, empty the used charcoal to the appropriate place. Keep the iron in a clean and dry area to avoid moisture. Moisture can cause rust to the iron surface, which will consequently stain clothes when ironing.

### Using the electric iron

This type of iron uses electricity. It can be a dry or steam iron. Since it has a heat regulator, it is easy to use because the user may reduce or increase heat depending on the type of fabric. The amount of heat required is shown in three levels: cool, warm and hot. Switch off the plug immediately after finishing ironing to prevent danger and to reduce electricity expenses. Remember to disconnect the iron from the socket after finishing ironing for safety reasons.

### Using the kerosene iron

This type of iron uses kerosene, which is reserved in the attached small tank. In most cases, it is used in areas without electricity, though not as often as the charcoal iron. This type of iron has a heat regulator for reducing or increasing heat depending on the type of fabric. Switch off the iron after finishing ironing and keep it in a clean, dry place to prevent it from getting rust.

### Cleaning an iron

The iron soleplate can become dirty due to scorch marks from cloth fibres. This situation is caused by a build-up of dirt on the soleplate, which may soil the ironed clothes. The following methods can be used to remove the deposited dirt from the iron soleplate:

#### (a) Cleaning the iron by using caustic soda

- i. When cleaning an electric iron, disconnect it from the socket. If it is a steam iron, pour the water. If it is a charcoal iron, empty the charcoal. Make sure that the iron soleplate is completely cool.

- ii. Mix two teaspoons of caustic soda with a quarter cup of water to make a paste.
- iii. Use a piece of cotton cloth to apply the paste to the dirty areas of the iron soleplate. Scrub it gently to remove the deposited dirt.
- iv. Wipe the iron soleplate with a clean piece of cotton cloth or soft brush until all dirt is removed.
- v. Leave it to dry before using it again.

#### **(b) Cleaning the iron using paper**

Warm the iron until it gets hot; then scrub the dirty area using a piece of paper such as newspaper until the dirt is removed. However, the method is not safe for children. Make sure that you wear special gloves to avoid being burnt.

#### **(c) Cleaning the iron with vinegar or lemon juice**

Immerse a piece of cotton cloth into vinegar, lemon or lime juice; remove it and wipe the dirty iron soleplate using the clean cotton cloth. If the dirt is not completely removed, immerse the cotton cloth again into the vinegar, lemon or lime juice for 15-30 minutes. Wipe the dirty area again. Make sure that the iron soleplate is completely dry before using it again.

#### **(d) Cleaning the iron with table salt**

Spread some salt on a piece of paper. Plug the electric iron to the socket or light the charcoal iron until it is moderately hot. Glide the iron over the piece of paper with salt until the dirt is removed. Unplug the socket if you are using an electric iron or empty the charcoal if using a charcoal iron and leave it to cool. Clean the iron soleplate with a soft dry cloth to remove the loose dirt.



### Points to be observed in ironing

- i. Start ironing light clothes such as handkerchiefs, which do not need high temperature, to minimize costs.
- ii. Shining clothes should be ironed on the wrong side. Non-shining ones should be ironed on the right side.
- iii. Start with the double parts such as handcuff, wristband, seams, garment yoke and the hem, except the collar.
- iv. Collars should be ironed after ironing all the other parts of the cloth;
- v. Embroidered or painted parts of clothes should be ironed on the wrong side. This will help to avoid discolouration of the embroidery threads or to harm the painting colours. Turn the garment to the right side and iron all of the outer parts.
- vi. Iron following the warp threads of the cloth.

**Note:** If the cloth has pleats, press them to lay flat.

### Hanging clothes after ironing



Think

Why is it advised to hang clothes soon after ironing?

It is very important to hang ironed clothes immediately in fresh air for effective drying. This is because sometimes cloth fibres may still have dampness. Moreover, the cooled iron heat may cause dampness in cloth fibres. However, such clothes may be laid on the table or on any clean surface to get air. Folding clothes immediately after ironing may make the remaining moisture in the clothes cause wrinkles. In addition, the clothes may have a stinking or a mildew stain.

## Folding clothes



### Discussion

In groups, discuss the importance of folding clothes after ironing.

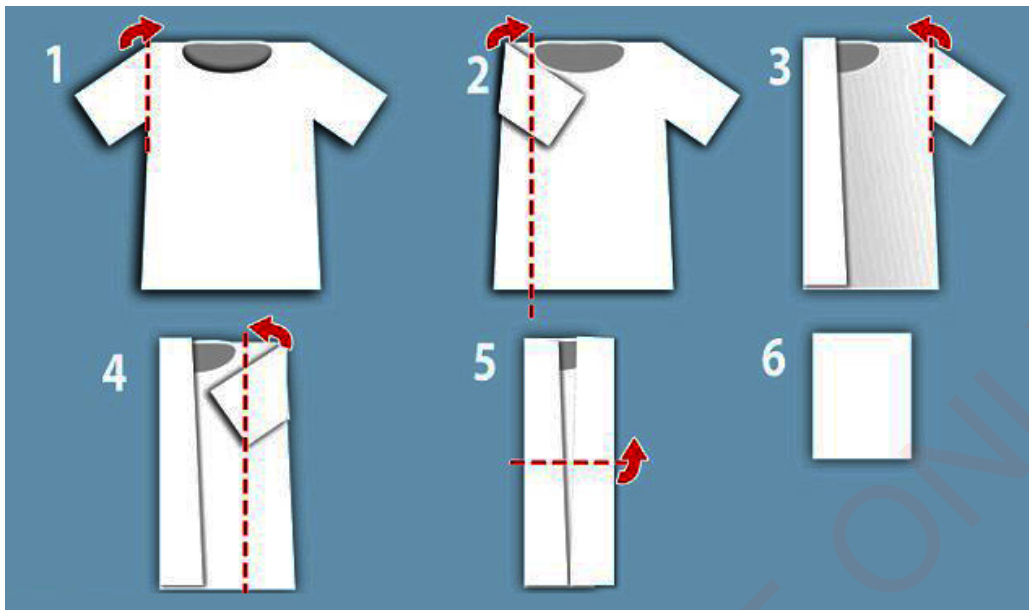
Folding clothes helps to avoid wrinkles while they are stored in a bag or a wardrobe. Properly stored ironed clothes are likely to be worn without re-ironing. After completing the ironing process, you should do the following:

- (a) Fold the clothes and keep them in the bag, trunk, suit case or wardrobe;
- (b) If there is a wardrobe for hanging clothes, fit the clothes into hangers and hang them well in the wardrobe; and
- (c) If you do not have a wardrobe, hang the clothes in a well arranged plan.

**Steps to be followed in folding clothes:** The following are steps to be followed in folding clothes:

- (a) Start to fold clothes from their length and then to their width as shown in Figure 3 A & 3 B. Fold the clothes according to the type of cloth, for example, shirts, trousers, dresses or skirts.
- (b) Gathered parts such as sleeves and waists should be arranged to lay flat like pleats.

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**Figure 3 A :** Steps to be followed in folding ironed tee-shirt

Source: <http://rcmodels-hmao.ru/uyut/315-kak-slozhit-rubashku-chtoby-ona-ne-pomyalas-poleznye-sovety.html>. Date accessed: 27<sup>th</sup> July, 2019



**Figure 3 B :** Steps to be followed in folding ironed shirts

<http://rcmodels-hmao.ru/uyut/315-kak-slozhit-rubashku-chtoby-ona-ne-pomyalas-poleznye-sovety.html>

## Activity 2

In groups, iron school uniforms following the steps that you have studied.

## Exercise 2

**Answer the following questions:**

1. What are the side effects of wearing clothes that are not dried properly?
2. Mention five parts of a garment with double layers of fabric.
3. Why is it important to sprinkle water over dried clothes before ironing?
4. Give two reasons for hanging damp clothes after ironing.
5. Explain three reasons for ironing clothes.

## Caring for shoes

Shoes are important items for human beings. Shoes play great roles in protecting our feet from getting mud, cold and damp. They also protect us from hazardous insects and injuries caused by sharp objects such as pins. Likewise, wearing shoes prevents feet from cracks as well as parasitic and diseases infection. Furthermore, if you wear clean shoes, you look smart and feel comfortable. Shoes are made of various materials such as rubber, plastic, leather and canvas. Accordingly, cleaning and caring shoes depend on the type of materials used for making such shoes. It is thus important to consider the procedures for cleaning, drying and storing shoes depending on the raw materials from which they have been manufactured.

## Choosing shoes

Buy shoes that comfortably fit your feet. Do not buy tight shoes because they may hinder the effective circulation of blood and make your feet feel uncomfortable. Loose shoes will also make your feet feel uncomfortable, especially when you are walking. Buy good quality of shoes that will last for a long time. Choose shoes according to the intended uses; for example, leather shoes are good for office use, school use and for games. High heel shoes are unsuitable for daily activities. Wearing high heel shoes may cause the stretching of muscles; hence, causing pain on legs, backbone



and tiredness. It is advisable to wear shoes with cotton socks to facilitate the absorption of sweat from the feet.

### Cleaning shoes

It is important to clean shoes regularly considering the type of materials used to make them. Clean shoes immediately after they become dirty to avoid spoiling their appearance which would result from hard scrubbing. It is also important to clean shoes in order to remove dirt and dampness which may lead to skin diseases such as fungus.

**(a) Cleaning canvas shoes:** The following steps should be followed in cleaning canvas shoes:

- i. Remove the shoe lining and shoelaces; then clean them separately to ensure that they are cleaned properly as shown in Figure 4;
- ii. Clean the shoes by using a washing brush and soapy water to remove dirt. If there is no brush, use a maize cob;
- iii. Rinse them thoroughly, especially white canvas shoes, with clean water;
- iv. If a pair of shoes is white, use white polish to brighten them;
- v. Dry the shoes in an open area with enough air. Then, lace the shoes and insert their linings; and
- vi. Keep the dried shoes in a dry place.



**Figure 4:** Shoelaces and linings separated from the shoes

**(b) Cleaning plastic shoes:** Cleaning plastic shoes is easier than cleaning canvas or leather shoes. Clean the shoes to remove dust, dirt or mud. Clean them using clean soapy water. Use a brush to remove deposited dirt and rinse the shoes using clean water. Make sure that all dirt is washed. Dry them in a place where there is no direct sunlight to avoid ruining their appearance.

**(c) Cleaning leather shoes:** Leather shoes should be cleaned regularly to make them look shiny. Leather shoes should be cleaned by wiping off dirt and polishing them. Avoid dipping leather shoes in water as it may ruin their appearance. Tools and materials for washing leather shoes include a brush for polishing, a brush for brightening, some water, a piece of cotton cloth, a piece of sponge and shoe polish.

**Steps to be followed in cleaning leather shoes:** Polished shoes look smart and last longer with their good appearance. Make sure that you consider the following steps in cleaning leather shoes:

- i. Remove the shoe-lining if possible;
- ii. Remove mud by using a dampened piece of cloth;
- iii. Wipe the shoes by using a piece of cloth to remove dust;
- iv. Use a soft brush to remove the remaining dust;
- v. Polish the shoes using a special soft brush. Make sure that you polish the outer part of the shoe and on the sides of the sole;
- vi. Allow the polish to dry in an open area;
- vii. Polish the shoes using a softer brightening brush;
- viii. Use a dry piece of soft sponge to brighten them; and
- ix. Stuff them with a rug or newspaper to maintain their shape and size; then, keep them in a dry place.

### Activity 3

Clean a pair of shoes following the required procedures depending on the material used to make them.

### Exercise 3

**A. Use your exercise book to answer the following questions by filling in the blanks.**

1. An iron is a tool used to .....
2. Shoes are made of various materials such as.....  
....., ..... and.....
3. White shoes are polished by using.....
4. Clothes become dirty due to..... and .....
5. A shoe lining is .....
6. An iron stand is .....

**B. Choose the correct answer and write the letter of your choice in your exercise book.**

1. A mixture of water with salt will remove stain from \_\_\_\_\_.  
(a) animal sources, for example, blood  
(b) mud  
(c) chemical sources, for example, ink  
(d) food sources
2. Bad appearance of the colour of clothes may be caused by \_\_\_\_\_.  
(a) separating them during soaking  
(b) not separating them during soaking  
(c) soaking them in separation  
(d) washing them day and night

3. Which type of clothes needs a very hot iron during ironing?
  - (a) Polyester and khakis
  - (b) Nylon and cotton
  - (c) Linen and nylon
  - (d) Cotton and linen
  
4. Which type of iron has three levels of heat: cool, warm, and hot?
  - (a) Charcoal iron
  - (b) Any iron
  - (c) Kerosene iron
  - (d) Electric iron
  
5. Why is it recommended to start ironing small articles like handkerchiefs before an iron becomes hot?
  - (a) They are ironed first to avoid easy burning of the cloth.
  - (b) Handkerchiefs are better than other clothes.
  - (c) Those clothes do not need too much heat.
  - (d) They are used as an iron coolant.
  
6. High heel shoes may cause \_\_\_\_\_.
  - (a) headache
  - (b) knee pain
  - (c) muscle pain
  - (d) stomach pain
  
7. Wearing cotton socks helps to \_\_\_\_\_.
  - (a) absorb sweat from feet
  - (b) reduce heat from feet
  - (c) walk better
  - (d) prevent feet from slipping over



8. Why is it advised to hang damp clothes after ironing?

- (a) To ensure effective drying of cloth fibres
- (b) To make the clothes look smart
- (c) To remove odour
- (d) To make them smoother

9. Why is it important to switch off an iron after using it?

- (a) To avoid burning the clothes
- (b) To prevent the iron from rusting
- (c) To make the iron last longer
- (d) To avoid danger and electricity expenses

10. Why it is not allowed to dip leather shoes into water?

- (a) They may get discolouration.
- (b) They may lose their appearance.
- (c) They may melt easily.
- (d) They will produce a bad smell.

**C. Answer the following questions in your exercise books.**

1. Identify three ways that you may use to sprinkle water on dry clothes during ironing.
2. Describe the steps to be followed in washing leather shoes.
3. Explain three reasons for wearing shoes.
4. What will happen if shoes are not cleaned?
5. What things should be considered for shoes to last longer?
6. Explain ways to be used to remove the following stains:
  - (a) food sources
  - (b) chemical sources

7. Mention five ways that can be used to clean a dirty iron's soleplate.
8. Give reasons for washing shoelaces and linings separately.

## Vocabulary

Garment yoke	part of a cloth appearing around the chest or shoulder made of double pieces of fabrics. These are mostly found in babies' clothes.
Handcuff	a piece of material attached to the bottom of a sleeve, especially a shirt sleeve that turns to the right side of the garment and mostly fastened with button and buttonholes
Iron stand	an instrument used to place a hot iron during ironing to avoid cloth burning
Linen	vegetable fibre obtained from the stalks of a flax plant. It resembles cotton fibres.
Seam	the joined double-shaped pieces of a fabric made by using a needle and thread to fasten together two or more layers of material securely
Shoe lining	a thin lining material that is placed inside shoes
Shoelace	a rope that is used to tie shoes

## Environmental care

### Introduction

*In Standard Five, you learnt how to clean home surroundings and different types of floors. You also learnt how to clean a bedroom and dispose of wastes. This chapter will introduce you to the care and maintenance of lawns, flowers, and vegetable gardens. You will also learn safe methods of disposing of organic wastes, alternative use and recycling of waste. Furthermore, you will learn how to control undecomposed hazardous waste. Therefore, the content of this chapter will enable you to protect your health and that of the community.*

### Importance of caring for lawns, flowers, and vegetable gardens in our environment



#### Think

What is the importance of having lawns, flowers and vegetable gardens in our environment?

The environment is everything that surrounds human beings. Mountains, valleys, rivers, oceans, homes and school buildings as well as the areas surrounding them form our environment. An environment looks attractive and more useful if it is well cared for. Our school and home environments should have well-maintained lawns if their surroundings do not have concrete or ceramic floors. Lawns beautify the environment, cool the surroundings, and prevent the formation of mud and water pools, especially during rainy seasons. They also reduce soil erosion caused by moving water and wind. It is therefore important to have flower gardens in schools and home surroundings.

Flowers make an environment look attractive. They attract honeybees and other insects that pollinate plants. Moreover, flowers can be used as a source of income. Flowers are also used as decorations in various ceremonies. Flower farming can be a source of employment, as it helps people to generate income.

Furthermore, vegetable gardens are important both for the school and home environment. This is because families obtain vegetables from the gardens. Vegetables provide us with vitamins and minerals that protect our bodies from diseases. If we have large vegetable gardens, excess vegetables can be sold to generate income.

### **Taking care of and maintaining lawns**

It is important to take care of lawns found in our environment. The following points should be considered in taking care of the lawns in our environment:

- i. Slash the grass to keep it short and attractive. Tall grass may harbour harmful creatures such as snakes, mice and insects. Moreover, tall grass may become breeding sites for harmful insects such as mosquitoes.
- ii. Water the lawn, especially during dry seasons to prevent it from drying up.
- iii. Remove weeds to allow proper grass to grow well and look attractive.
- iv. Old, worn-out grass should be replaced with new ones.
- v. Allocate pathways to avoid walking on the grass.
- vi. Protect the grass from pests and diseases. Manure or fertilisers can be applied to give them essential nutrients and good health. Pests can be controlled by using relevant pesticides. Uproot or destroy the affected grass to prevent the spread of diseases and replace it with new one. Refer to Figure 1 to see an example of well-maintained lawns in the school environment.



**Figure 1:** *Lawns at school*

### Activity 1

1. Look at the lawns at your school and home environment to see whether all aspects of environmental maintenance are taken into consideration.
2. Practise the good care and maintenance of lawns at your school and home by considering the learned knowledge and skills.
3. Prepare a report on the activities performed. Identify the challenges you faced and the strategies you used to address them. Give a presentation in class.



### **Taking care of and maintaining flower gardens**

The following are important practices to consider in taking care of and maintaining flower gardens:

- i. Plant enough flowers in a proper arrangement.
- ii. Avoid having crowded flower trees around the house, since they may block air and light.
- iii. In a sloping land, orient flower beds or plant flowers on contours perpendicular to the slope. Arrange the beds or contours in a way that water is prevented from running in lines straight down the slope. This helps to reduce soil erosion.
- iv. Weed regularly to remove unwanted grass and fill the plant base with soil to preserve water during watering.
- v. Cut off old or unwanted branches to allow the flowers to grow better. This process is known as pruning.
- vi. Uproot unwanted flowers to improve their appearance. Replace them with new ones.
- vii. Water the flower gardens if the moisture in the soil is not sufficient, especially during the dry season. This should be done early in the morning and in the evening to avoid water loss through evaporation.
- viii. Protect flowers against pests and diseases by using appropriate methods and techniques. For example, uproot and destroy the affected flowers, then replace them with new ones. This will prevent or reduce the spread of diseases. Appropriate pesticides can also be used to prevent pests and diseases.
- ix. Seek advice from horticulture experts on how to care and maintain flower gardens.

Refer to Figure 2 below as an example of well-maintained flower gardens in a home environment.



**Figure 2:** *Flower gardens at home*

### Activity 2

1. Study the flower gardens that exist at your school and at home to determine whether all aspects of care and maintenance are taken into consideration.
2. Practise taking care of and maintaining flower gardens at your school and at home considering all the important aspects that you have learnt.
3. Prepare a report on how you cared for the flower gardens. Identify the challenges you faced and the strategies you used to address them. Give a presentation of your report in class.

## Taking care of and maintaining vegetable gardens

There are two main ways of planting vegetables in a garden. These are direct sowing and transplanting. In direct sowing, seeds are planted straight into the field. Transplanting involves growing seedlings in a nursery bed and later transferring them into the field.

**Keeping a nursery:** The following points should be considered in caring for and maintaining a vegetable nursery:

- i. Choose an area with well-drained soil to establish a nursery. Avoid waterlogged soils.
- ii. Fence the nursery to protect it from destruction by wild or domestic animals.
- iii. Prepare nursery beds according to the seeds to be sown.
- iv. Protect the seedlings from direct sunlight during hot weather. This can be done by overhead shading or setting the length of the nursery extreme east and west to prevent the exposure of the seedlings to sun rays.
- v. Harden the seedlings before transferring them to withstand transplant shocks. This should be done gradually so that seedlings become accustomed to strong sunlight and less-frequent watering over a period of 7 to 10 days before transplanting.

**The vegetable garden:** The following points should be considered in caring for and maintaining a vegetable garden:

- i. Fence the garden to protect it from being destroyed by wild or domestic animals.
- ii. Clean the garden and prepare beds. During heavy rains, prepare raised beds. This will prevent the plant roots from being damaged by excess water in the soil. Excess water prevents air circulation in the soil. During dry seasons, prepare sunken beds. These beds help to preserve water. In areas with well-drained soils and a sufficient supply of water, you can use flatbeds. But in areas with a shortage of land such as urban areas, you can grow vegetables in polythene bags, cans or other containers as shown in Figure 3.

- iii. Transplant the vegetable seedlings to the beds in the right way and at the right time. If there is no enough water supply for irrigation, transplant the seedlings at the beginning of the rainy season. However, vegetables like tomatoes, pepper and eggplants grow well during the dry season. This is because most leaf diseases drop significantly during the dry season. The favourable time to transplant seedlings is during a slightly cold day, especially on a cloudy day. If such days are rare, transplant the seedlings in the evening when evaporation is minimal. This helps the seedlings to adapt well in the new environment.
- iv. The vegetable seedlings with fibrous roots such as onions and garlic should be transplanted within the age between 4 and 6 weeks. During this period, the seedlings will have reached a height of 13 to 25 cm. Vegetable seedlings with taproots such as egg plants and peppers should be transplanted before having six leaves and before their taproots become too large.
- v. Water the seedlings sufficiently, especially during the dry season. It is advisable to water early in the morning and in the evening to avoid water loss through evaporation. The plants should be watered at the base so that the water does not touch the leaves. This may reduce leaf diseases.
- vi. Thin the plants wherever necessary so that each plant has enough space to grow. Thinning is especially done for the vegetables that are sown directly into the garden.
- vii. Control weeds by weeding or using herbicides. While weeding, heap the soil around the plants to strengthen stems and improve growth of the vegetable plants.
- viii. Apply mulch where necessary, especially during the dry season. After transplanting your seedlings, add mulch around them about 10 cm from the seedling. Mulching keeps the soil cool, reduces evaporation and retains water. It adds nutrients to the soil when it decomposes. Mulching also reduces the growth of weeds, especially the broad-leaved.



- ix. Apply manure to nourish the vegetables. You can also use fertilisers where animal manure and compost are not available.
- x. Apply staking depending on the type of vegetables grown to support the stem while it grows. The stake enables fruit-bearing vegetables such as tomatoes to stand upright. Hence, their fruits do not touch the soil. It thus protects the fruits from soil-borne diseases. Staking also simplifies the application of manure or fertilisers; in addition, it makes spraying, watering, and harvesting easier.
- xi. Control pests and diseases.
- xii. Harvest the vegetables at the right time for consumption or sale.

Figure 4 shows a vegetable garden maintained in a school environment.



**Figure 3:** *Vegetables planted in various materials and containers*



**Figure 4:** *A vegetable garden*



**Note:** You may seek advice from agricultural extension workers on how to maintain your vegetable garden properly. The advice should be sought from the time of planting until harvesting. Remember that when you properly care and maintain your garden, you will eventually have a bumper harvest.

### Activity 3

1. Study the vegetable gardens that exist at your school and home, and determine whether all aspects of care and maintenance are taken into consideration.
2. Form groups and make two vegetable beds. Plant vegetables with fibrous roots in one bed and vegetables with taproots in the other bed. Care and maintain the beds by applying the knowledge and skills you have learnt.
3. Mention the challenges that you faced and explain how you addressed them.
4. Prepare a report on the activities and present it in your class.

### Exercise 1

Answer the following questions by writing their answers in your exercise book.

1. Mention three types of seedbeds.
2. Explain two main ways of planting vegetables.
3. Mention three advantages of flowers in our environment.
4. Explain two ways of controlling direct sunlight into a vegetable nursery.
5. Explain the reasons for hardening the seedlings before transplanting.
6. Explain three things to consider when watering flower or vegetable gardens.

## Waste management



Think

1. What types of wastes are found in your school and home environment?
2. How are they managed?
3. What are the effects of not managing such wastes properly?

In our daily activities, we produce different kinds of waste. The wastes may be categorised into various types. The types are not exclusive, as they may be considered overlapping, since one waste item may fall into more than one type. There are four types of wastes, namely organic, solid, recyclable, and hazardous. The management of these wastes differs.

Waste management procedures begin with sorting out the wastes according to their categories; then, the steps to manage them follows. Figure 5 shows how different kinds of wastes should be sorted out.



**Figure 5:** Wastes that have been sorted out and stored appropriately

If wastes are not managed properly, they may pollute the environment. Some of them may harbour harmful flies and parasites that can affect our health. Therefore, in order to take good care of the environment, we are advised to consider the following methods in waste management:

- i. Reduce or avoid producing waste.
- ii. Reuse the waste.
- iii. Recycle waste to make new, useful products.
- iv. Dispose of the wastes or store them safely.

### ***Waste management by reducing or avoiding production***

This method aims to reduce the use of items that turn out to be waste after use. This is because the wastes that exist in our homes, schools, villages and streets result from our daily activities. Therefore, avoiding or minimising waste production in our daily activities matters a lot. The following are some of the ways to reduce waste production:

- i. Avoid buying items that are packaged with several packaging materials.
- ii. Choose items that are made of glass and wood rather than plastic and iron.
- iii. Use a bag or basket to carry items when you go to buy goods in a shop or market place. This helps to avoid too much use of low quality and short-term packaging materials offered by traders.

This method of waste management is safe, since it protects us from the effects of wastes in our environment.

### ***Reuse the waste***

Some wastes can be reused. Such wastes should be sorted out and collected in a specific place before being used again. The following are examples of wastes that can be reused for various purposes:

- i. Tyres: They can be used as containers for growing plants and protecting land from soil erosion.
- ii. Cans: They can be used as containers for growing plants and for storing various items.
- iii. Polythene bags: These can be used for storing various items, growing plants, and carrying goods from a shop, market or farm.
- iv. Dried banana and coconut leaves: These can be used as packaging and roofing materials. Besides, they can be used for making various ornaments and for roofing and mulching.
- v. Used paper: It can be used for writing or typing on the other side and for lighting charcoal stoves.

### ***Recycling of waste to make new, useful products***

Recycling is the process of changing wastes into useful materials. In recycling, items that are no longer used are turned into raw materials to make new products. Recycling saves energy that is used in manufacturing new products. For example, in paper production, recycling reduces the fuel required to produce completely new paper by approximately two thirds. Recycling some wastes such as iron and rubber must be done in a factory. However, other wastes such as paper, glass and tins can be recycled in small or even backyard workshops.

***Advantages of recycling:*** The following are some of the advantages of waste recycling:

- i. It reduces the amount of solid waste that may pollute our environment.
- ii. It saves money and space or land that would have been used to store wastes.
- iii. It reduces the use of new resources by using the existing ones more than once.
- iv. It helps to stimulate societal and national economies. This can be done by reducing the amount of raw materials that would have to be imported.
- v. It creates employment opportunities.

***Some of the wastes that can be recycled:*** The wastes that can be recycled depend on the recycling industries existing in the area. The following are examples of wastes that can be recycled:

- i. Polythene bags: These are used for making storage bags and baskets for carrying goods from a shop or a market.
- ii. Coconut shells: They are used for making cups, forks, spoons, covers, scoops or ladles, and ornaments such as bracelets and earrings.
- iii. Dried leaves such as banana leaves: These are used for rope making, packaging, artefacts, mats and big straw mats.

- iv. Wood dust from wood workshops: It is used to make compost. It also produces fuel for cooking in special stoves or pressed into a brick and used as a source of cooking fuel.
- v. Scrap metal: It is used for making cooking stoves, lights and artefacts.
- vi. Glass: It is melted to form various shapes of new vessels.
- vii. Aluminium: It is melted to form new products such as cans.
- viii. Iron and tin cans: They are recycled by separating iron from tin and refined. These can be sold as raw materials for manufacturing cans and other items. Iron and tin cans are also used for making lanterns or kerosene lamps, oil lamps, and candle stands.
- ix. Rubber: It is recycled by being melted or cut to form various shapes of other products. In small factories, for instance, discarded tyres are used for making products such as sandals and spare parts for machines.
- x. Paper: It can be recycled and restored to its original state. Paper for commercial use is usually recycled in a factory. It can also be recycled manually to produce paper products for home and business uses, such as paper charcoal, bags, boxes, and other packaging materials.
- xi. Wastes containing toxic chemicals: These waste products may include computers, batteries, electronic devices, paints, pesticides, and their storage containers. They require great care in handling so that those who recycle them are not harmed. However, some of these products cannot be completely recycled.

### Challenges in waste recycling



Think

What are the challenges of waste recycling?

The quality of some wastes, especially plastic, is reduced when recycled. For example, a plastic bottle is not used to make another plastic bottle but to produce another low-quality product. For this reason, plastic items can only be recycled few times. Thereafter, it will no longer be useful.



Moreover, recycling some plastic wastes may produce toxic gases to industrial workers. Such gases also pollute our environment. In most cases, plastic wastes that need to be recycled end up in rubbish pits. Therefore, it is important to reduce the use of plastic materials as much as possible.

### ***Dispose of wastes or store them safely***

Every home produces various types of wastes. These wastes need to be disposed of properly to avoid negative effects over human health and environment. In addition, some of the wastes, especially organic ones, can be beneficial to us and our environment if they are properly managed.

Organic wastes come from living things such as plants and animals. Such wastes decay within a short time. Accordingly, they need to be buried to protect the environment and our health. If these wastes are not managed properly, they can pollute the environment and make it unattractive. Organic wastes produce bad odours or attract insects such as flies which spread diseases. The following steps should be considered in burying these wastes:

- i. Make sure the wastes are sorted out to separate them from other types of wastes.
- ii. Make a pit which is large enough to contain all the waste that you want to bury.
- iii. Put all the waste into the pit.
- iv. Cover the pit with soil in a way that animals such as dogs will not be able to expose the waste.

Organic wastes can also be converted into compost. Compost can be used in flower and vegetable gardens. Compost enriches the soil and helps flowers, vegetables, and other crops to grow well. Use of compost can lead to a high crop yield. Excess compost can be sold to generate income.

### Management of hazardous wastes



Discuss in a group with your fellow pupils the regulations set by the government or local authorities regarding the management of various wastes including the hazardous ones in your area.

Some wastes are not suitable for reusing, recycling or making compost. These wastes must be disposed of or stored safely. You should not burn them; or, throw them into a pit. You should not also cut them into pieces and use them as a source of cooking fuel. For example, burning plastic or rubber produces toxic chemicals that can cause various health effects. It is advisable to put these wastes to a special waste storage pit if it is located in your village or street. A special waste storage pit has a protective layer on the floor and on its walls. The protective layer prevents leakage of toxins that can enter into water sources. In the absence of a special pit, these wastes can be disposed of by digging a small pit away from the water source, putting the wastes into the pit, and covering them well into the soil.

**Note:** When toxic chemicals are buried in the ground, they can leak and contaminate the water. This situation can thus affect the health of those using the water.

#### Activity 4

1. In groups, do the following tasks:
  - (a) Identify all the methods used in the management of wastes at your school and at home.
  - (b) Explain the advantages of each method.
  - (c) Explain the disadvantages of each method. What measures will you take to avoid them?
2. Sort out and manage various types of wastes at your school and home environments.
3. Prepare a report on the performed tasks. Identify the challenges that you faced and explain how you dealt with them. Make a presentation in class.

## Exercise 2

**A. Choose the correct answer to each question and write it in your exercise book.**

1. The following wastes are suitable for making compost except \_\_\_\_\_.
  - (a) Animal dung
  - (b) Fruit peelings
  - (c) Tree leaves
  - (d) Coconut shells
  
2. Why do we manage wastes?
  - (a) To increase the area of the village and improve the environment
  - (b) To have a clean environment and to avoid diseases
  - (c) To recycle wastes and get better products
  - (d) To get modern fertilisers for home use
  
3. The following are examples of reusable wastes except \_\_\_\_\_.
  - (a) tyres and coconut shells
  - (b) polythene bags and scrap metals
  - (c) cosmetic bottles and pesticide tins
  - (d) dried leaves and used paper
  
4. Mulching in the garden helps to \_\_\_\_\_.
  - (a) prevent strong winds from damaging the seedlings
  - (b) preserve moisture during the dry season
  - (c) prevent direct sunlight from drying out plant leaves
  - (d) prevent light so that the seedlings do not overgrow
  
5. The following are advantages of vegetable gardening except \_\_\_\_\_.
  - (a) to access vegetables easily
  - (b) to improve the health of the consumer
  - (c) to increase the income of the farmer
  - (d) to provide the consumer with proteins

**B. Match the items in Group A with those in Group B by writing the letter of the correct answer in the brackets.**

No.	Group A		Group B
1.	Sum of all the things that surround a human being ( )	(a)	Stake
2.	Helps climbing vegetables not to fall onto the ground ( )	(b)	Compost
3.	Removing unwanted leaves and branches ( )	(c)	Environment
4.	A place of sowing seeds before transplanting ( )	(d)	Pruning
5.	A mixture of decaying living things that is used as manure ( )	(e)	Nursery
		(f)	Animal manure
		(g)	Fuel

**C. Answer the following questions in your exercise book.**

1. Mention four priorities to consider in waste management.
2. Identify four factors to consider when disposing of organic waste.

## Vocabulary

Lawn	an area of grass, especially near to a house or in a park that is cut regularly to keep it short and attractive
Mulch	material such as dried or decaying leaves placed around the base of a plant to preserve moisture, prevent the growth of weeds and improve soil quality
Mulching	the act of covering the soil between plants with a layer of dry grass or plant leaves: Sometimes polythene sheets are used instead of dry leaves
Recycling	collecting and treating rubbish or wastes to produce useful materials, which can be used again
Seedling	a young plant that has grown from a seed
Staking	the act of inserting a stake beside a plant in order to provide it with support while it grows
Thinning	removal of some seedlings of plants to make room for the growth of others
Yield	the total amount of crops harvested



## Chapter Three

### Cookery

#### Introduction

*In Standard Five, you learnt about the importance of cooking food, hygienic ways in food preparation, food groups, cooking methods and beverage preparation. In this chapter, you will learn more about the procedures for cooking by deep-frying. You will also learn about packed meals when travelling as well as preparation of juices by pounding and soaking ingredients. In addition, you will learn how to serve food on a table and on a mat. You will also learn how to garnish foodstuffs as well as adhering to good manners when eating. The content of this chapter will help you to prepare various types of foods and juices.*

#### Deep frying



Think

What types of foodstuffs are suitable for deep-frying?

Food is one of the basic needs of human life. It gives the body the necessary nutrients for better health. Some foods such as fruits are eaten raw, while others are cooked using various methods. Deep-frying is one of the cooking methods in which foodstuffs are cooked by being totally immersed in hot oil. Fried foods can be kept for a long time without deteriorating because a lot of water has been taken off. Various foods can be cooked by deep-frying. Buns, bananas, crisps and kebabs are common examples. The following are recipes for frying some of the foodstuffs:

## 1. Buns

### Ingredients

½ kilogram of wheat flour

4 tablespoons of sugar

125 grams of butter

300 millilitres of milk or coconut milk

1 teaspoon of yeast

100 grams or ¼ teaspoon of cardamom

2 to 3 eggs

1 liter of cooking oil

**Note:** The cooking oil should be two-thirds of the frying pan to be used.

### Steps

- i. Prepare ingredients and utensils.
- ii. Prepare milk or coconut milk.
- iii. Peel the cardamom and grind them.
- iv. Sieve the flour in a bowl.
- v. Add sugar, cardamom, yeast and butter in the flour.
- vi. Mix the ingredients by rubbing-in-method to allow air getting into the mixture.
- vii. Whip eggs and add in the mixture.
- viii. Add coconut milk or milk little by little. If milk or coconut milk is not available, use some water.
- ix. Knead the dough until it becomes soft. Cover it with a clean piece of cloth or any utensil and put the dough in a warm place to allow rising.

- x. Cut the rolled dough into small sizes and roll out to about one centimetre thick.
- xi. Cut the dough into preferred shapes by using different utensils such as a knife, a glass or a cup. Put them close to a warm place for rising to take place.
- xii. Heat the oil in a dry frying pan. Make sure the oil is heated to the required temperature.
- xiii. Test the temperature of the oil by putting a bun in the oil. If the bun rises shortly, the oil has reached the required temperature. If the bun sinks, then the oil has not reached the required temperature for frying the buns. Make sure that the oil is not much heated.
- xiv. Put the buns according to the size of the frying pan.
- xv. When the buns are cooked on one side, turn them over. The buns should turn brown.
- xvi. Remove the buns from the hot oil and put them on draining wire gauze or a special kitchen absorbent paper.
- xvii. Keep the buns in clean covered containers after cooling.
- xviii. Serve the buns with tea or as desired.
- xix. Wash the used equipments, utensils and clean the surroundings

**Note:** Buns can also be sold to generate income.

## 2. Fried bananas

### Ingredients

Bananas according to needs and purpose

Cooking oil will depend on the amount of bananas

Eggs according to the amount of bananas

Salt to taste

**Note:** Bananas can be green or half-ripe. Coating with eggs or wheat flour depends on personal preference. They can also be fried without coating.

### Steps

- i. Prepare ingredients and utensils.
- ii. Peel the bananas and slice them into long pieces.
- iii. Whip an egg and add some salt.
- iv. Coat the bananas with egg.
- v. Heat the oil to the appropriate temperature.
- vi. Put the coated pieces of banana into heated oil.
- vii. Fry them until they turn brown.
- viii. Remove the coated pieces of banana from the oil and put them into the colander or in an oil draining wire gauze.
- ix. Keep the bananas in a clean container ready for eating.
- x. Wash the used utensils, equipments and clean the surroundings

**Note:** Fried bananas can be taken with tea or any soft drink.

### 3. Crisps

#### Ingredients

Bananas or Irish potatoes or sweet potatoes or cassava according to the needs and purpose

Cooking oil (depending on the amount of the ingredients to be fried)

Salt (depending on the amount of the crisps to be prepared)

#### Steps

- i. Peel bananas or potatoes, wash and slice them into small pieces.
- ii. Heat the oil to the appropriate temperature.
- iii. Fry them in the heated oil until they turn brown.
- iv. Remove the crisps from the oil and put them in the colander or draining wire gauge.

- v. Keep the crisps in a clean container or pack in appropriate packages after cooling.
- vi. Wash the used equipments, utensils and clean the surroundings

**Note:** You can take crisps with any drink. You can also pack them for selling or eating while travelling.

#### 4. Kebabs

##### Ingredients

¼ kg of minced meat: You can use beef, chicken, goat, lamb or fish fillet.

½ litre cooking oil

2 peppers

1 onion

2 eggs

Bread crumbs 1 cup

¼ teaspoon of salt

##### Steps

- i. Mince the meat by using a machine or pound in a mortar or chop with a knife to get very small pieces. Put them in a bowl.
- ii. Grind or chop onions into small pieces. You can add some pepper if preferred.
- iii. Put the minced meat and ground or chopped onions in a bowl; then add salt and mix them together.
- iv. Make meat balls using the prepared mixture.
- v. Roll the meat balls in the bread crumbs and dip into an egg mixture. This process will bind the ingredients together.
- vi. Deep-fry the meat balls in the heated oil until they turn brown.
- vii. Wash the used equipments, utensils and clean the surroundings

**Note:** Kebabs can be eaten with tea or juice. You can also sell them to generate income.



### Activity 1

1. In groups, select two types of deep-fried foods you have learnt which are found in your environment.
2. Prepare ingredients and utensils; then cook the chosen foodstuff using the deep-frying method following the procedures you have learnt.

### Exercise 1

1. Describe ways of testing the required oil temperature for deep-frying.
2. Write reasons for using heated oil with appropriate temperature during deep-frying.
3. Identify other methods of mincing meat other than using a special machine.
4. Mention other types of deep-fried foodstuffs apart from what you have learnt.

### Juice making

Fruits provide our body with minerals and vitamins including vitamin C, which protects us from diseases. Fruits like oranges, lemons, tangerines, lime, grapes, baobab nuts and tamarind are rich in vitamin C. You can use one or a combination of the mentioned fruits to make juice. Juice is made by squeezing, pounding or soaking ingredients. In Standard Five, you learnt how to make juice by squeezing. In this chapter, you will learn how to make juice by pounding and soaking ingredients.

### ***Procedures for making juice***

The following are general procedures for making juice:

- i. Use quality, clean and safe ingredients. If you want to make a mixed fruit juice, it is recommended that one of the fruits should have a sour taste.
- ii. Prepare syrup by mixing sugar and boiled water. Then leave it to cool. The sweetness of the juice will increase as you add more sugar. The amount of sugar in the juice depends on an individual's preference. You can also use honey instead of sugar.
- iii. Squeeze or pound fruits when you need to prepare juice to avoid loss of nutrients.
- iv. Add cool syrup into juice.
- v. Keep the juice in a cool place or add ice cubes if it has to be taken cold.
- vi. Put the juice in a glass and decorate it with a piece of fruit that was used to make that particular juice to attract the user. You can also serve the prepared juice in a plastic or aluminium tumbler.

**Note:** Avoid using metal utensils, as they may destroy the taste of the juice, especially those made by sour fruits such as oranges. The juice can also destroy the appearance of the utensils.

Observe personal hygiene, cleanliness of the equipment, and kitchen environment to avoid effects that may be caused by a dirty environment.

### ***Making juice by pounding***

This is a simple and quick method of making juice. Fruits that are appropriate for making juice using this method include pineapples, pawpaws, mangoes, avocados, passion fruits and watermelons. The following are recipes for preparing pineapple and pawpaw juices.

### a) Pineapple juice

#### Ingredients

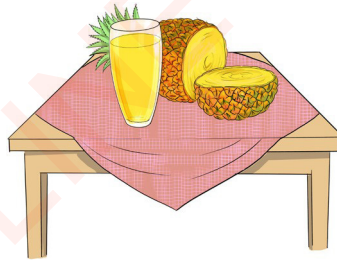
1 Pineapple

Sugar according to the needs

Clean and safe water

#### Steps

- i. Prepare syrup; then leave it to cool.
- ii. Peel the pineapple and cut it into small pieces.
- iii. Pound the pieces using a wooden spoon to get a thick mixture.
- iv. Add clear and safe water; then filter the mixture to get juice.
- v. Add the syrup to the juice and mix it well.
- vi. Keep the juice in a cool place ready for use.
- vii. Serve the juice in a clean attractive glass as shown in Figure1.
- viii. Wash the used equipments, utensils and clean the surroundings



**Figure 1:** *Pineapple juice*

### b) Pawpaw juice

#### Ingredients

1 Ripe pawpaw

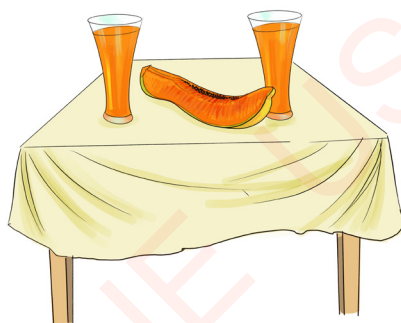
Sugar according to the needs

Clean and safe water

## Steps

- i. Prepare syrup; then leave it to cool.
- ii. Peel the pawpaw and cut it into small pieces; then pound the pieces using a wooden spoon or blender.
- iii. Add clear and safe water; then filter the mixture to get juice; add the syrup to the juice.
- iv. Stir the juice, making sure that the ingredients are well mixed.
- v. Serve the juice using a clean attractive glass as shown in Figure 2.
- vi. Wash the used equipments, utensils and clean the surroundings

The juice can be kept in a cool place such as in a refrigerator.



**Figure 2:** Pawpaw juice

**Note:** Various types of ingredients can be used to prepare juice by pounding.

## ***Making juice by soaking***

This is a simple method of making juice. Fruits such as baobab nuts, tamarind, and rosella need to be soaked for some time to get juice. The selected fruits should be soaked in clean and safe water. The recipe for preparing tamarind juice is as follows:

## Tamarind juice

### Ingredients

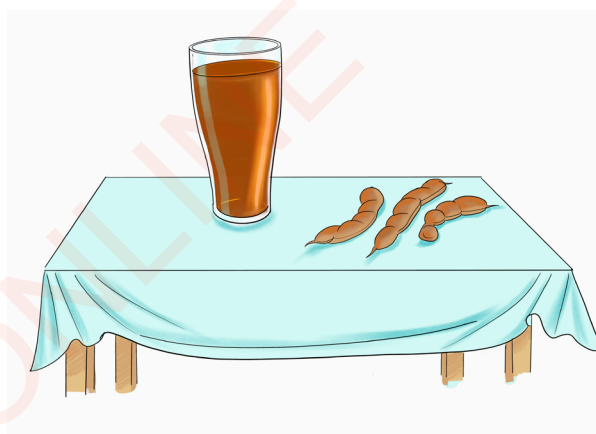
½ kg of tamarind

3 tablespoons of sugar or 2 tablespoons of honey

Clean and safe water

### Steps

- i. Wash and peel the tamarind.
- ii. Soak the tamarind in a bowl using clean and safe water. Make sure you cover the juice to prevent loss of nutrients.
- iii. Leave it for one hour.
- iv. Stir it to get a good mixture.
- v. Strain the mixture to get juice then add sugar or honey.
- vi. Keep the juice in a cool place.
- vii. Serve the juice as shown in Figure 3.
- viii. Wash the used equipments, utensils and clean the surroundings



**Figure 3:** Tamarind juice

**Note:** You can use baobab nuts or rosella to make juice using this method. Some spices can be used to add taste and flavour. For example, a small amount of cardamom or ginger can be added.



### Activity 2

Prepare juice by pounding or soaking using the ingredients found in your environment. Observe cleanliness and safety when preparing the juice.

### Exercise 2

1. Explain why you should observe personal hygiene, cleanliness of equipment, and kitchen environment when preparing juice.
2. List types of juice that can be made in your environment other than those learnt in class.
3. Identify three methods of making juice.

### Serving meals

You have now developed competence in preparing various types of foodstuffs using different cooking methods. You have also learnt how to prepare different types of juice through squeezing, pounding, and soaking methods. You will now learn how to serve the prepared foodstuffs. Serving a meal is a process of laying the table ready for eating the prepared food. It involves arranging the food and serving utensils in good order ready for eating. There are different ways of serving meal before eating. These include serving the meal on the table or using a mat depending on the environment and customs of the society. You have to observe the following when serving a meal:

- i. Food safety and cleanliness.
- ii. Cleanliness and safety of the place where a meal is served.
- iii. Use clean and appropriate utensils according to the type of food prepared.

- iv. Use a tray or winnower to carry food when serving food on a table or on a mat.
- v. Arrange food and utensils orderly to allow people to be served comfortably.
- vi. Garnish the food to attract consumers.
- vii. Prepare clean safe water together with soap for washing hands before and after eating.

### **Serving meals on a mat**

The habit of serving meals on a mat is practised by different tribes in Tanzania. They use mats, animal skins or anything else depending on the environment. It is advised that everyone should use his or her own plate when eating as shown in Figure 4. This will prevent transmission of diseases such as tuberculosis from one person to another.

Things to be considered when serving food on a mat

- i. Prepare a big straw mat, animal skin, or any flat surface in a clean environment.
- ii. Serve food as well as clean and safe water for drinking and washing hands. Use clean utensils for keeping water.
- iii. Cover the food to prevent flies, and dirt from entering the food. You can use a clean piece of white cotton material or a net to cover the food to be served.



**Figure 4:** Meal served on a mat

### ***Serving meals on a table***

This is a good practice of serving meals. It avoids possible contamination by dust and sand. Observe the following when serving meals on a table:

- i. Serve the food on a clean table. It is advisable to cover the table with a clean attractive tablecloth.
- ii. Ensure that you set clean serving utensils such as plates, spoons, knives, forks and glasses at the right places as shown in Figure 5.
- iii. Arrange the food orderly as shown in Figure 5.
- iv. Put the fork on the left side of the plate and the knife and spoon on the right side of the plate.
- v. Make sure you provide enough serving utensils according to the types of food prepared.
- vi. Serve enough food according to the number of consumers.

- vii. Self-service is recommended. It is advisable to serve just enough food for you in order to avoid wastage.

**Note:** Remember to wash hands using clean, safe water and soap before and after eating. This will prevent you from getting communicable diseases.



**Figure 5:** Serving a meal on the table

### Food garnishing



Think

1. Have you ever seen garnished food?
2. Why is garnishing food necessary?



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Garnishing is a process of decorating prepared foodstuffs using various edible ingredients. Savoury foods are garnished while sweet foods are decorated. There are reasons for garnishing or decorating foodstuffs. The main reason is to make the food look attractive to the consumer in terms of colour and arrangement. Garnishing or decorating foodstuffs adds value and taste to the food. The environment where the food is served should also be well arranged to attract the consumer. You also need to be creative in garnishing or decorating foodstuffs. You should consider attractiveness, nutrient content and the taste of the food. Do not mix savoury and sweet dishes. Consider the colour of the food and ingredients to be used when garnishing or decorating a particular food. For example, you can use peas or carrots to garnish cooked rice served on a plate. It is not advisable to garnish rice by using a peeled cucumber because they have the same colour. Garnishing should be done on the food and not on the plates as shown in Figure 6.



**Figure 6:** *Decorated and garnished food*

**Source:** <https://www.kenyanvibe.com/5-inexpensive>

**Date accessed:** August 2019



### Exercise 3

1. Explain three reasons for garnishing or decorating foods.
2. Explain things to be considered when serving a meal before eating.
3. Identify the effect that you can get if you eat food that has been served and left uncovered for a long time.
4. Identify three types of harmful insects, which can contaminate food.

### Table manners



Think

What are you supposed to do before eating?

Table manners include all acceptable behaviours that should be practised while eating. Before eating, you should wash your hands with clean water and soap. Wash your hands thoroughly around the nails and between the fingers. Eating without washing hands can lead to diseases such as typhoid, diarrhoea, worms, and cholera. The following table manners should be considered when eating:

- i. Sit properly when eating to avoid dropping food.
- ii. Serve just enough food for you so that you can finish it. Consider the number of people who will eat the food.
- iii. Put enough food in the mouth. Do not put too much food in the mouth to avoid choking and spilling food from the mouth while chewing.
- iv. Chew the food gently without opening the mouth. Do not speak with food in your mouth.
- v. Eat the required and appropriate amount of food. Do not overfeed yourself.

- vi. Avoid scratching yourself while eating, especially in the hair, because hair may get into the food.
- vii. Cover your mouth with your hand or handkerchief when coughing or sneezing.
- viii. Avoid drinking water when chewing food to avoid choking.
- ix. Avoid being selfish or gluttonous when eating.

It is advisable to thank those who prepared the meal after having it; then wash your hands with clean water and soap. It is good to wash your mouth after eating. Avoid picking-out food remains from the mouth in front of people. It is not advisable to stay with a toothpick in the mouth for a long time because it can harm you, or you can swallow it. It is also not healthy.

#### Exercise 4

1. Explain the effects of putting a lot of food in the mouth when you are eating.
2. Mention the effects of keeping a toothpick in the mouth for a long time.
3. What will happen if you do not wash your hands with clean water and soap before and after a meal?
4. Explain how you will educate your fellow pupils on table manners.

#### Cleaning utensils

It is advisable to remove utensils immediately after eating. This will prevent attracting houseflies, cockroaches and small black ants, which can spread diseases. Leftover foods may also cause bad odours. Cleaning utensils immediately after eating is important, though most people take it for granted. Therefore, it is important to wash utensils immediately after eating to avoid bad odours and harmful insects. The following should be done before washing utensils:

- i. Remove all leftovers from the utensils and put them in a dustbin.
- ii. Put the utensils in clean water to smoothen the dirt.
- iii. Separate the utensils according to their type and amount of dirt.
- iv. You can wash the utensils in a sink or a washing basin.
- v. Do not overlap glasses or cups because they can stick to each other and break when removing.
- vi. Prepare appropriate material for washing utensils such as washing sponge, sand, ash, soap and steel wool for scrubbing steel or tin utensils.

**Steps to be followed in washing utensils:** The following steps should be followed in washing utensils:

- i. Prepare warm water with soap. Start washing utensils with less dirt (for instance glasses); rinse them with clean water and put them in a rack to dry. You can dry the utensils using a clean dishcloth which absorbs water or by drying them in the rack;
- ii. Wash spoons in warm water and soap, rinse with hot water, and dry them;
- iii. Wash plates and other utensils such as trays and bowls, rinse, and dry them;
- iv. Wash pans or pots used for cooking with warm water and soap. Scrub pans with sand, ash, or a hard brush. Rinse with clean water and dry them well;
- v. Keep all the dried utensils in the cupboard or basin for further use; and
- vi. Clean the surrounding environment after washing the utensils. Wash the material and equipment used for washing and leave them to dry.

**Note:** In most villages, utensils are dried on locally made racks instead of drying them using a dishcloth.

## Packed meals



Think

1. Why is it important to pack meals when travelling?
2. What are the appropriate methods for preparing packed meals for travelling?
3. Which types of foodstuffs are appropriate for packing when travelling?
4. How will you use proper methods and materials to pack meals for a traveller?

Packed meals are suitable when one is travelling, working away from home, attending a picnic or a distant school. You can pack or buy food from different places such as hotels and restaurants. Sometimes, when travelling, there might be no hotels or restaurants. Besides, a restaurant might be so dirty that you do not feel comfortable to buy food there. Apart from that, you can get a car breakdown while travelling, which may force you to spend a night on the way. It is important, therefore, to pack enough food according to the number of people travelling together.

Since you have learnt about preparing food and juice using different methods, you can now use the same knowledge in preparing packed meals. Packed meals should be prepared in such a way that they last long. The best methods for preparing packed meals include frying, grilling, baking and roasting. These methods are appropriate, as they remove large amounts of water from the foodstuffs. Generally, foodstuffs prepared using such methods can be kept for a long time without being spoiled. A packed meal must be balanced no matter how simple it is.

Remember, in Standard Five, you learnt about food groups which include body-building foods, energy-yielding foods and body-protecting foods. When packing a meal, you should consider food groups constituting a balanced diet. Packed foods that are suitable during travelling include grilled or fried fish, grilled or fried meat like *barbecue*, boiled eggs, and

groundnuts. Others include buns, chapatti, bread, roasted or fried cassava, chips, coconut rice pancakes (vitumbua), fried or roasted bananas, and other dry bites. It is also important to pack fruits which are not easily spoiled such as oranges and pineapples.

It is wise to carry hot water, powdered milk, sugar and tea bags or coffee for preparing a hot drink. It is also important to carry clean and safe drinking water. You can also pack other drinks like juice. However, home-made juice is easily spoiled; therefore, it should be used immediately after being made. You can keep the juice in a cool container to avoid spoilage.

### **Packing foodstuffs**

It is important to prepare and pack food for travelling in such a way that harmful insects can not spoil it. You should be careful when cooking and packing food to avoid spoilage. Make sure you observe cleanliness and safety when packing food. Use clean and dry utensils. Pack each food in a separate container to avoid taste and smell interference. However, fruits that are not peeled or chopped do not need to be packed in a special container.

Foods for travelling can be packed using different methods. There are traditional methods of packing foods for travelling such as using banana leaves. This method is practised by different tribes, especially when people go to farms that are very far away from their homes. This method has been used by many people, although it is not as good as modern methods. Advancement in science and technology has led to the creation of modern equipment for packing foods. The modern equipment includes thermos flasks, water and juice bottles, plastic containers, paper bags, plain paper, tins, and special packing bowls. Some of these modern items should be kept orderly in a basket or a bag. Put whole fruits and other utensils such as cups, glasses, knives, spoons and plates in a basket or a bag. Cover the foods with a clean piece of material or clean paper to prevent them from dirt. Refer to Figure 7 showing various ways of packing meals.





**Figure 7:** Packed meals

**Source:** <https://www.pinterest.com>. Date accessed: August 2019

### Activity 3

1. In groups, select and prepare balanced meals containing three types of packed foodstuffs for travelling.
2. Pack the prepared foodstuffs using appropriate equipment or utensils.

### Exercise 5

**A. Answer the following questions in your exercise book.**

1. Describe three characteristics of packed meals.
2. Identify four effects of improper packaging of foods for travelling.
3. Mention five types of packed meals appropriate for travelling and their appropriate packaging equipment.
4. Explain three reasons for packing foods when you are travelling.

**B. Choose the most correct answer and write it in your exercise book.**

1. Which type of food among the listed ones is suitable for packing when travelling?
  - (a) Ugali and fish stew
  - (b) Coconut rice with beans
  - (c) Fried potatoes with fish
  - (d) Succotash (kande)
  
2. The following are ingredients for kebabs preparation **except** \_\_\_\_\_.
  - (a) meat
  - (b) oil
  - (c) egg
  - (d) yeast
  
3. What amount of oil in the pan is required for frying buns?
  - (a) One third
  - (b) Two thirds
  - (c) Quarter
  - (d) One litre
  
4. What challenges may occur when deep-frying?
  - (a) Oil explosion and spillover
  - (b) Proper cooking and nice colour of the food
  - (c) Food does not absorb oil
  - (d) Make sure the food is dry
  
5. The importance of fruits in the body:
  - (a) Proteins
  - (b) Carbohydrates
  - (c) Heat
  - (d) Vitamins

6. What is the appropriate time for washing hands with clean safe water and soap?
- (a) Before eating
  - (b) After eating
  - (c) Before and after eating
  - (d) All the time when eating

## Vocabulary

Gluttony	the habit of eating or drinking too much
Syrup	a thick mixture made by boiling water and sugar used for making juice or a thick sweet liquid made by boiling water and sugar
Tumbler	a tall aluminium utensil that looks like a cup but without a handle used for drinking liquid such as juice, water or other watery substances

## Chapter Four

### Musical instruments

#### Introduction

*In Standard Five, you learnt about singing as an activity of performing songs or tunes by making musical sounds with the voice. You also learnt about types of Tanzanian musical instruments and principles of singing. Moreover, you learnt how to sing the National Anthem, patriotic songs, and recite traditional poems. In this chapter, you will learn more about musical instruments, their classification and origins. Therefore, the content of this chapter will help you to classify musical instruments and clarify their origins.*

#### Musical instruments

Musical instruments are tools that are used in music and dance performances. These instruments are used to accompany the singing of different songs, dancing of various traditional and contemporary dances. Musical instruments guide singers and dancers to sing and dance follows the rhythm and the melody of the song.

#### Classification of musical instruments


Musical instruments differ in terms of their origins and classes. There are musical instruments that originated in different Tanzanian ethnic groups. These instruments are known as Tanzania traditional musical instruments. In addition, some musical instruments originated in Europe, America, and Asia; these musical instruments are referred to as foreign musical instruments. Generally, musical instruments are grouped into five classes as follows:

- 1. Wind instruments:** Some wind musical instruments are played by blowing air into a reed, which is attached by windpipe to the instruments. Others are played by blowing air directly into a pipe using a hole that can allow

air to go through the pipe. There are two categories of wind musical instruments. These are melodic and non-melodic wind instruments.

(a) *Melodic wind instruments*: These instruments produce melodic sounds. Examples of these are flutes, trumpets and saxophones. Sometimes, these melodic wind instruments are used in school bands and mass choirs.



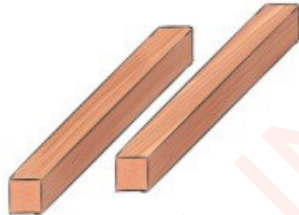



(b) *Non-melodic wind instruments*: These instruments produce non-melodic sounds. Examples of such musical instruments are animal horns, commonly referred to as 'baragumu' in Tanzania and a bugle. These are available in most of the regions in Tanzania. Another one is 'lipenenga'. Lipenenga is made from a pumpkin that has a hard shell used as a container (gourds). The instrument is commonly used in Mbeya and Ruvuma regions. Figure 1 shows some local and foreign wind musical instruments.

Wind musical instruments	
Tanzania wind instruments	Foreign wind instruments
 <p>Baragumu</p>  <p>Lipenenga</p>	 <p>Trumpet</p>  <p>Saxophone</p>  <p>Bugle</p>

**Figure 1:** Wind musical instruments



**2. Percussion instruments:** Percussion musical instruments produce non-melodic sounds. Percussion musical instruments are commonly available in our environments. Examples of such instruments are triangles, 'dufu', 'kayamba', 'njuga', shakers, bells, sticks, and cymbals. Percussion musical instruments can be played by striking with a drumstick or a flat palm of the hand. Cymbals are struck against one another or brushed with a percussion brush to produce sound. Figure 2 shows different percussion musical instruments.






Percussion musical instruments	
Tanzania percussion instruments	Foreign percussion instruments
 Sticks	 Triangle
 Wooden bars	 Cymbals
 Kayamba	 Shaker

**Figure 2:** Percussion musical instruments

**3. String instruments:** There are many types of string musical instruments. The string musical instruments are divided into two categories which are melodic and non-melodic.

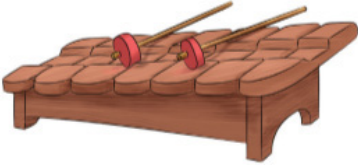
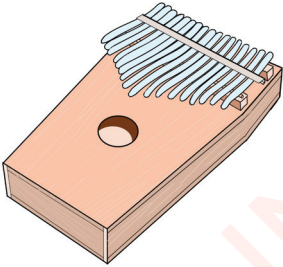


(a) *Melodic string instruments:* These musical instruments produce melodic sounds. The most common Tanzanian string musical instruments are zeze, which originated in Dodoma, Singida and Morogoro Regions. Another string musical instrument is 'enanga,' which originated in Kagera Region. In addition, there is 'litungu', which originated in Mara Region. Besides, there are foreign string musical instruments which include electric guitars, violins, and acoustic guitars.

(b) *Non-melodic string instruments:* These musical instruments produce non-melodic sounds. One of them is 'ndono', which originated in Dodoma, Shinyanga, Mwanza, Simiyu and Singida Regions. Figure 3 shows different string musical instruments.

String musical instruments	
Tanzanian string instruments	Foreign string instruments
 Litungu  Zeze  Enanga	 Violin  Electric guitar




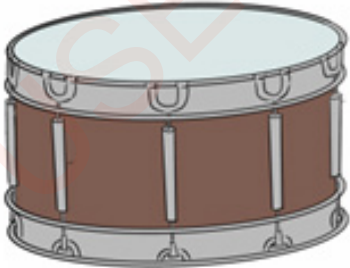
**Figure 3:** String musical instruments

**4. Keyboard instruments:** These are piano and organs. Tanzanian keyboard musical instruments are marimba ya mbao and 'marimba ya mkono'. Marimba ya mkono are played by plucking using both thumbs. These originated in Dodoma, Tabora, Shinyanga and Mwanza Regions. Marimba ya mbao are struck with drumsticks. Marimba ya mbao originated in Lindi, Mtwara, Morogoro and Coastal Regions. Electronic organ, piano and other types of xylophone are from overseas. Figure 4 shows different keyboard musical instruments that are commonly used in our society.

Keyboard musical instruments	
Tanzanian keyboards	Foreign keyboards
 <p>Marimba ya mbao</p>  <p>Marimba ya mkono</p>	 <p>Electronic organ</p>  <p>Xylophone</p>

**Figure 4:** Keyboard musical instruments

**5. Drums:** These are musical instruments that are mostly used in many musical performances. Drums are commonly used in school bands brass bands, military bands, traditional dances, *qasida* and church choirs also use drums. Drums can be played by hitting them using drumsticks. Figure 5 shows the different types of drums. Some drums are made in Tanzania but others are made in other countries.

Drums	
Tanzanian drums	Foreign drums
	
	
Tanzanian drums	Foreign drums

**Figure 5:** *Different types of drums*

Note that some musical instruments are used as a call sign. The call may aim at informing people to attend a meeting. In some cases, the call is meant to inform people about a particular event in the community. They usually blow animal horns in a specific and unique style. In case of drumming, the call has a specific and unique way of drumming. In all communities that use musical instruments as a call sign, the call is accompanied with words telling people what is going on. Normally, community members are aware of the call and, when they hear it, they respond to it promptly.



### Activity 1

1. Make a local musical instrument using materials that are available within your school or community.
2. Choose any patriotic song. Then sing and play the instrument by following its rhythm and melody correctly.
3. Improvise any musical instrument of your choice by using the available materials. Explain how it will be used in singing.

### Exercise

**Section A: Choose the most correct answer from each of the following items:**

1. Musical instruments make singers \_\_\_\_\_.
  - a) enjoy when singing in a choir
  - b) sing without moving from the proper key
  - c) sing and dance appropriately
  - d) play drums and melodic instruments.
2. Wind musical instruments comprise the following instruments \_\_\_\_\_.
  - a) flute, *lipenenga*, and animal horn
  - b) zeze, flute, and *marimba ya mkono*
  - c) flute, animal horn, and guitar
  - d) flute, wooden xylophone, and *lipenenga*

**Section B: Fill in the blanks.**

1. Provide three examples of keyboard musical instruments
  - i) \_\_\_\_\_
  - ii) \_\_\_\_\_
  - iii) \_\_\_\_\_
2. One of the string musical instruments that produce melodic sounds is \_\_\_\_\_.
3. Name three types of percussion musical instruments that are available within your school or community.
  - i) \_\_\_\_\_
  - ii) \_\_\_\_\_
  - iii) \_\_\_\_\_
4. A saxophone is a wind musical instrument that originated in \_\_\_\_\_.



**Section C: Answer the following questions giving elaborate answers.**

1. (a) What are musical instruments?  
(b) What are the different groups of musical instruments?
2. What materials are used for making a *baragumu*?
3. Why do we use musical instruments in singing?
4. Why is it important to use musical instruments in performing traditional dances?

## Vocabulary

Baragumu	a musical instrument which is made of an animal horn
Kayamba	a percussion musical instrument made of small bamboo sticks with some seeds inside
Musical instruments	tools used in musical performances
Njuga	a small bell used as a percussion musical instrument made of a small iron container with a iron ball inside it
Reed	a small thin piece of metal in musical instruments that moves very quickly when air is blown over it thus producing a sound
Saxophone	a wind curved musical instrument made of metal: It is played by blowing into it and pressing buttons. It is used in jazz and brass bands

## Chapter Five

### Mastering acting principles

#### Introduction

*In Standard Five, you learnt about drama, acting, types of acting, and basics of acting. In this chapter, you will learn the concept of drama, acting, costumes and props used in acting. You will learn how to recite dramatic poetry, particularly 'Ngonjera' and heroic recitations. Moreover, the chapter will cover a specific technique of acting by creating still images. Therefore, learning the skills and specific techniques of acting will help you to master the principles of acting.*

#### The concept of drama

Drama is an art form dominated by a dialogue, which depends on the actors as the main performers. Acting is an art of imitation. It is an imitation of real-life experiences in front of a live audience. Acting can take place on stage, television, film or radio depending primarily on the actors as the main performers. Actors are people who communicate an intended message to an audience. Acting may involve movements and actions with or without words. Actors may take a role in, for example, children plays, story-telling, poetic drama, and drama. However, acting needs creativity to convey the intended message artistically and to attract the attention of the audience.

#### Costumes, make-ups, and props in acting

Costumes are materials or clothes worn by actors during acting. There are different types of costumes. Some costumes can be worn covering the whole body. Other costumes are worn on hands, legs, heads, ears, waists, shoulders, and neck. Such costumes include chains, rings, earrings, ornaments, neckties, animal skins, and masks. Since an actor portrays a particular character, the costumes worn must also reflect

gender, age, occupation, environment, and the social-economic status of the character portrayed by the actor. In acting, costumes help to tell stories to the audience and assist in relating the story to people's real situations.

Make-ups refer to the substances applied by an actor on the face or body for personal beauty. Such make-ups include mascara, lipsticks, lip shiners, powder and other cosmetics that are not harmful to the human face and body. Some people use ocrea to smear face while others paint their faces with facial make-ups. Some paints are used on the legs, hands, faces, and lips. Despite being applied for beauty purposes, make-ups support the character's visibility while on stage.

The word "Prop" is the short form for Properties. These are movable objects used by actors during acting. Props can vary from one place to the other depending on the nature of the story. Props are used by actors to complement their roles. For example, if an actor is acting as a farmer, one of the props that he or she can use to make the audience relate to his or her character is a hoe. Or if an actor plays the role of a doctor in a hospital, his or her props will include a *stethoscope*.

Generally, costumes, props and make-ups are useful in telling stories. These help an actor to portray a character reflecting the life experiences. Figure 1 shows two actors in different costumes and props.



**Figure 1:** Actors in some costume

### Activity 1.

1. In groups, act different kinds of behaviour practised by your community members. You may consider singing, planting trees and giving first aid to a patient.
2. Make some costumes or make-ups to be worn or applied by an actor during a performance.
3. In collaboration with your fellow pupils, visit any acting group which is near your school.

### Reciting *ngonjera* guided by its basics



In groups, discuss the following questions.

1. What do you know about 'ngonjera'?
2. Have you ever recited *ngonjera*?
3. What steps should be followed when reciting *ngonjera*?
4. What are the basic characteristics of a person reciting *ngonjera*?

*Ngonjera* is a unique form of performance introduced in Tanzania. It is comprised of poetic verses designed to be performed by two people or more. In most cases, they are designed in question and answer form. Therefore, there are two sides. The first person can ask a question or pose an argument in one stanza, and the second one can answer it in the stanza that follows. However, in the end, the two sides need to reach a consensus. Normally, one side should agree with the side whose arguments reflect better ethical and moral values. In some cases, *ngonjera* can be a single talk. One of the unique characteristics of *ngonjera* is the use of the Kiswahili in its delivery.

**Basic characteristics of a *ngonjera* 'reciter':** The *Ngonjera* 'reciter' needs to have the following characteristics: He or she should:

- i. have the ability to articulate words correctly and loudly;

- ii. be very charming;
- iii. act according to the intended message;
- iv. be able to communicate well with his or her fellow group members and the audience; and
- v. be able to use his parts of the body in the performance. This means legs, hands, and other parts of the body should be used effectively. Moreover, use facial expressions according to message communicated to the audience.

**Steps to be followed in reciting *ngonjera*:** The following steps should be followed in reciting *ngonjera*:

- i. Prepare your *ngonjera*;
- ii. Distribute all *ngonjera* stanza to the performers according to their number;
- iii. Read thoroughly and recite your part to your fellow performers;
- iv. Read again to get actions to be performed according to the message; and
- v. Recite *ngonjera* correctly while paying attention to the basic characteristics of the *ngonjera* 'reciter'.

## Activity 2

Recite the following Swahili *ngonjera* following its steps.

### (a) Maisha ya mjini na vijijini

- (i) Hodi hodi twaingia, uwanjani tumefika,  
Salamu zetu twatoa, kwa wadada na wakaka,  
Ni mengi tutayatoa, muyapokee hakika.  
*Maisha yaliyo bora, wapi twaweza yapata?*
- (ii) Salamu twawatumia, mijini na vijijini,  
Wala msije umia, mezani sogeleeni,



Mawazo kujivunia, pamoja tuwe mezani,  
*Maisha yaliyo bora, wapi twaweza yapata?*

(iii) Hebu kwanza sikiliza, jibu sasa unapata,  
Ni mengi mnayowaza, majibu mtayapata,  
Ni vizuri kujifunza, ukweli mkaupata,  
*Maisha yaliyo bora, vijijini mtapata.*

(iv) Mengi tunayoyaona, mijini kote fedheha,  
Aibu hata hawana, kila kukicha kuhaha,  
Mipango inagongana, wakimbia kama mbweha,  
*Maisha yaliyo bora, vijijini mtapata.*

(v) Hebu kwanza nyamazeni, mpate kunijulisha,  
Leteni hoja mezani, tatizo kubainisha,  
Mmekereka na nini, msitake nififisha,  
*Maisha yaliyo bora, tapataje vijijini?*

(vi) Wale wote vijijini, ni wale hawakusoma,  
Sisi wale wa mjini, ni wale tuliosoma,  
Ndugu zetu vijijini, kimaisha wamekwama,  
*Maisha yaliyo bora, tapataje vijijini?*

(vii) Hata kidogo si kweli, hayo unayobaini,  
Vyakula vyetu asili, wala si vya viwandani,  
Tunazijenga akili, afya zetu ni makini,  
*Maisha yaliyo bora, vijijini mtapata.*

(viii) Acheni yenu maneno, mjini kumeshajaa,  
Tazama msongamano, majumbani kumejaa,  
Mtafaidi vinono, vijijini kirejea,

*Maisha yaliyo bora, vijijini mtapata.*

- (ix) Siyo kweli msemayo, na tena siyo makini,  
Kwa sasa fateni nyayo, mjionee mijini,  
Maisha tena si hayo, yalivyokuwa zamani,  
*Mijini kunapendeza, karibu mjionee.*
- (x) Bajaji na bodaboda, usafiri rahisisha,  
Kina kaka kina dada, wanafaidi maisha,  
Acheni makidakida, mijini kwafurahisha,  
*Mijini kunapendeza, karibu mjionee.*
- (xi) Maisha ya maigizo, huu si wakati wake,  
Acheni yenu mizozo, wanaume wanawake,  
Vijijini ni tulizo, ukweli siyo makeke,  
*Maisha yaliyo bora, vijijini mtapata.*
- (xii) Viyoyozi nazo feni, magonjwa jizalishia,  
Mtapata ahueni, vijijini kirejea,  
Kumbukeni majumbani, makwenu mje rejea,  
*Maisha yaliyo bora, vijijini mtapata.*
- (xiii) Kweli sasa naelewa, ukweli nimetambua,  
Nilikuwa nimelewa, maisha kuzuzukia,  
Shime wenzangu elewa, vijijini kurejea,  
*Maisha yaliyo bora, vijijini tutapata.*

**(b) Rushwa ni sawa na Nyoka**

- (i) Hodi hodi naingia, uwanjani nimefika,  
Nakuja eleza nia, yaniondoke mashaka,

Na lengo kulifikia, linaloleta mwafaka,  
*Nyoka kiumbe mbaya, na tena hakumbatiwi.*

- (ii) Watutia mashakani, nyoka kumuongelea,  
Nyoka huyu nyoka gani, unayemuongelea?  
Ni yule wa msituni, ama nyoka wa kufugwa?  
*Nyoka kiumbe mbaya, kwa nini hakumbatiwi?*
- (iii) Nyoka kimkumbatia, lazima atakung'ata,  
Sumuye takupatia, mauti yatakukuta,  
Rushwa kafanania, kwa tabia na utata,  
*Rushwa ni sawa na nyoka, kimgusa takung'ata.*
- (iv) Mnyama huyu hatari, hupenda haribu watu,  
Ni laghai na mahiri, kuteka akili zetu,  
Ukikaa jihadhari, kucheza usithubutu,  
*Rushwa ni sawa na nyoka, usije mkumbatia.*
- (v) Kaenea ofisini, kazini hata shuleni,  
Anafanya uhaini, haki kutia kapuni,  
Yabidi kuwa makini, usimtie kwapani,  
*Rushwa kiikumbatia, daima takuharibu.*
- (vi) Watu wengi makazini, hongo nyingi hupokea,  
Askari barabarani, mlungula hujipatia,  
Haki zetu matatani, ni wapi takimbilia,  
*Rushwa kiikumbatia, daima takuharibu.*
- (vii) Rushwa ukiizoea, wajibu hutotimiza,  
Ni bora kuizomea, wajibu kuutukuza,

Wanyonge watuonea, sheria kuzipuuza,  
*Rushwa adui wa haki, hukwamisha maendeleo.*

(viii) Sasa kweli naelewa, rushwa ni sawa na nyoka,  
Elimu ingetolewa, ya sheria kwa hakika,  
Haki zetu kuelewa, sote tungenufaika,  
*Rushwa ni sawa na nyoka, usije ikumbatia.*

(ix) Sasa tuchapeni kazi, maendeleo takuja,  
Pia tung'oe mizizi, na kazi iwe na tija,  
Maendeleo ni kazi, na siyo vitu vya kuja,  
*Rushwa adui wa haki, hudumaza maendeleo.*

### Activity 3

1. Compose a four-stanza *ngonjera* on the danger of stealing public property.
2. Recite your composed *ngonjera*.

### Exercise 1

**Section A: Write TRUE if the sentence is true and FALSE if the sentence is not true.**

1. A single person can recite a *ngonjera* \_\_\_\_\_.
2. A *ngonjera* can be composed following the rules of traditional poems \_\_\_\_\_.
3. A *ngonjera* does not have an audience \_\_\_\_\_.
4. A *ngonjera* starts by two sides arguing against each other but, in the end, both sides should reach a consensus \_\_\_\_\_.

### Section B: Answer the following questions.

1. What is a *ngonjera*?
2. What steps should a *ngonjera* reciter follow?.
3. Can you show some actions when reciting a *ngonjera*? How?
4. What are the basic characteristics of a *ngonjera* reciter?

### Heroic recitation

Reciting using different themes



In groups, answer the following questions.

1. What do you understand by the term 'reciting'?
2. What is heroic recitation?
3. What are the characteristics of a heroic recitation performer?
4. Have you ever heard of or witnessed people performing heroic recitations?

Heroic recitations are poetic praise verses designed to be spoken or sung. An artist recites using words and actions. The actions normally reflect various things that happened to him or her in the past within the community. Examples of such things are winning a war, being a good hunter, being a good leader, and praising a school for its victory in sports and art competitions.

Recitation can be performed by one, two, or more performers. Sometimes, they involve two or more sides. In this case, the artists recite against each side, demonstrating their strength, knowledge, and skills in a certain thing. When reciting, an artist may establish praises based on personal traits, family strengths, ethnic group, or national achievements.



### Characteristics of a recitation performer

A recitation performer needs to have some key characteristics. The performer should be able to do the following:

- i. use language properly;
- ii. articulate words correctly and loudly;
- iii. be charming and confident; and
- iv. use body, gestures, and facial expressions in line with the message communicated to the audience.

**Advantages of recitations:** Recitations are advantageous because they:

- i. entertain community members;
- ii. build self-confidence to the performers
- iii. build self-expression skills to the performers;
- iv. build heroism and confidence to community members;
- v. instil the cultural norms of a society to the next generation;
- vi. build patriotism;
- vii. build skills of developing logical argument; and
- viii. consolidate good cooperation among community members.

Read the following recitation. Choose one of the two characters either Water or Fire. Then perform it.

1. I am Water.

I am the one who makes all living things survive all over the world.  
Rural and urban areas depend highly on me.  
When I disappear, the lives of living things become nothing.  
Who is more than me?

2. I am Fire.

I am the source of human development all over the world.  
Modern and scientific tools are made by me.  
Who is above me?

3. Who lied to you?

Remember! human beings from birth to death depend on me.  
I make them drink, I wash their bodies, I wash their clothes,  
I make them cultivate their farms. Human life without me is nothing.  
Who is above me?

4. Be quite! I always lighten them during the dark.

I am the sign of human communication.  
No human being can afford eating food without me.  
Who is above me?

5. Why are you so proud?

All human beings, wild animals and plants depend highly on me.  
More than 70% of the human body is covered by me.  
No human life without me.  
Who is above me?

6. Who is proud?

Listen to me, please. I am Fire, a true friend of human beings.  
When I appear some where all human enemies disappear.  
You are the one who always causes calamities to people.  
Who is above me?

7. I am Water. Different living things live in me.

Fish and attractive plants live in me.  
I am the source of sea breeze and fresh air which is good for  
human life.  
Who is above me?

8. I don't want to hear your words.

No human being can survive without me.

I am the one who makes food for them to eat.

I cook meat, banana and fish.

I am Fire. Who is above me?

9. Shut up your mouth!

I am Water. People travel in me.

They earn money through fishing.

I am Water, Water.

Who is above me?

10. I am Fire! Fire!

Inside me no existence of an enemy.

Even you Water, I can boil you and become hot.

Stay far away from me. I am Fire.

Who is above me?

11. The world depends on me.

People in different places like industries, mining, Mosques and Churches depend on me. When I miss somewhere, everyone will suffer.

I am able to silence you Fire. And whenever you cause calamities.

I have been called to silence you once.

I am Water. Who is above me?

12. Keep quiet! Nobody can silence me. I am very powerful, think of when I decide to invade a forest, houses and markets.

Who else can stay there? I am fire, a king of living things.

Who is above me?

#### Activity 4

1. Form a group of not less than 6 members and select things to recite.
2. In a group recite things you selected in number 1.
3. Select a member who will recite on behalf of the group.
4. Recite in front of the class.

#### Acting by creating still images

Acting by creating still images is one of the types of acting that allows the actor to act without any movement of the body. The actor is not allowed to move or say anything. In this style of acting, the actor behaves like a monument. A good example of this type of acting is in the celebration of Tanganyika Independence Day. People, particularly children, create postures using their bodies to form words, which are readable to the audience. Sometimes, depending on their dressing variation, they may form an image of the Tanzanian National Flag. They can also form an image of some numbers that correspond to particular historical event.

This kind of acting also allows the audience to interpret the meaning expressed by the presented image. For example, two actors can stand still in a fighting mode while facing each other. In most cases, acting by creating still images does not need special costumes, props, and make-ups.

**Advantages of acting by creating still images:** Still images help the actor to do the following:

- i. Consolidate cooperation among each other;
- ii. Build confidence;
- iii. Develop a creative mind;
- iv. Build a healthy body; and
- v. Build listening skills.

### Activity 5

- In your groups, act the following:
  - A person concentrating on reading
  - A woman cooking food
  - A child apologizing to his or her parents
- Visit an acting group that is near your school. Then observe how acting by creating still images is done. Or watch a video that shows how acting by creating still images is done.
- Write a report on the performed tasks. Make a class presentation.

### Exercise 2

**Section A: Match the descriptions in Group B with their appropriate answers in Group A. Write the letters of the answers in the spaces provided.**

No	Group A		Group B
1	<i>Ngonjera</i> ( )	A	A logical idea or point or a set of reasons one uses to try to convince people about something
2	Argument( )	B	A group of lines in a repeated pattern that forms a unit in some types of poem
3	Stanza ( )	C	a style of composition of dramatic poetry that allows two or more people to argue against each other
4	Acting ( )	D	Two parts in the same line
5	Drama ( )	E	An art form dominated by a dialogue, which depends on the actors as main performers.
		F	An imitation of real-life experiences in front of a live audience



**Section B: Write “True” if the sentence is correct or “False” if the sentence is incorrect.**

1. Costumes include things such as rings, earrings, and chains. \_\_\_\_\_
2. *Ngonjera* is a style of composition that follows a new way of composing poetic drama. \_\_\_\_\_
3. Recitation does not develop speaking skills. \_\_\_\_\_
4. Among the advantages of acting by creating still images is to build cooperation, confidence, and listening skills. \_\_\_\_\_

**Section C: Answer the following questions.**

1. What is recitation?
2. What are five advantages of recitation in the community.
3. What are the characteristics of a recitation performer.
4. What events that a recitation performer can recite.

## Vocabulary

Acting	an imitation of real-life experiences in front of a live audience
Cosmetics	substances that are applied on the face or body to make it more attractive
Costumes	materials or clothes worn by actors when acting
Make-ups	substances applied by an actor on the face or body for personal beauty

Ngonjera	are poetic verses that are in question-and-answer form, designed to be performed by two or more people
Props	objects used by actors in performance
Recitation	poetic praise verses designed to be spoken or sung loudly using words and actions
Stanza	a group of lines in a repeated pattern that forms a unit in poetry

## Chapter Six

### Pictures, play gear, and printmaking

#### Introduction

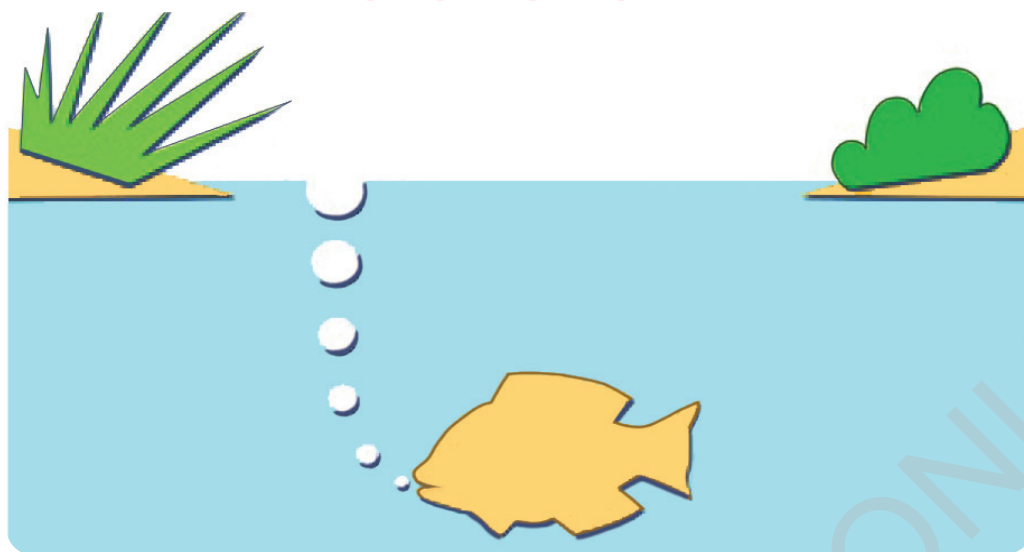
*In Standard Five, you learnt about picture-making using different methods. Such methods are pencil and colour drawing. You also learnt about weaving and modelling various items. In this chapter, you will learn about collage art using a variety of materials, the concept of motif and motif development, making frames, and the rules that govern pictorial art. Therefore, learning about collage art, motif development and printing, and making frame will help you generate income and make art works for yourself.*

#### Collage

Collage is the art of making pictures by sticking pieces of materials such as paper, leaves, seeds, fabrics, sand, feathers, fur and others. Pictures can be put into two categories: visual pictures and tactile pictures. Visual pictures appeal to the eyes but cannot be touched. Examples of such pictures are drawings, paintings, prints, and photographs. Tactile pictures appeal to the sense of touch. Examples of tactile pictures are collages and reliefs. There are several ways of making them. One of the ways is called collage. The collage materials must be held on a picture frame. Frames can be made of card paper, tin, leather, plastic, and mural. Sticking materials to make pictures must be done following the rules of pictorial art. Some of these rules are balance, colour harmony, and correct use of the picture frame.

#### Making a collage

In making a collage, you can start by preparing the materials and the frame. Figure 1 shows a collage.



**Figure 1:** A collage

**Preparation of materials:** Materials for a collage can be obtained from the following sources:

- i. Fabrics – from tailors and tailoring marts
- ii. Leather or canvas – from cobblers, sofa seats, and bag makers
- iii. Sand – from different areas such as building sites
- iv. Plastics – from the environment, especially discarded plastics
- v. Seeds – from a market, shops, field, and gardens
- vi. Beads – from shops
- vii. Broad leaves – from plantains and sugar canes

Materials for collage should be clean. Dirty materials make the picture look unpleasant. Additionally, dirt hinders the glue from bonding the materials. Each type of material for collage is cleaned in a particular way, for instance:

- i. Fabric – dusted, washed and ironed

- ii. Leather – dusted by brushing
- iii. Sand – soaked in water to remove dust and other unwanted materials
- iv. Plastic – moped by a piece of cloth or cleaned with water and soap.
- v. Seeds – cleaned by weaning
- vi. Beads - cleaned by water and drying them
- vii. Broad leaves – moped and dusted

**Preparing a picture frame:** A picture frame is a surface onto which the picture is held. We normally use card papers, cardboards, ceiling boards, plastic slabs, sheets of a tin or pieces of leather to make picture frames. A picture frame is cut according to the size of the picture to be made. The cut frame is cleaned or processed ready for composing a picture.

**Composition of the collage:** After preparing materials and frames, the artist composes a picture. To compose a picture is to imagine a picture and put the idea on a visible presentation. The idea is put according to some elements of art composition. These elements are balance, contrast, emphasis, rhythm, pattern, unity and variety.

**Characteristics of a collage:** There are aspects that a collage artist should observe when making a collage. These aspects are as follows:

- i. Figures must be correct;
- ii. Figures should not have very small patterns;
- iii. Materials used should allow bonding by using glue;
- iv. Materials should be dry and long-lasting;
- v. Materials should not diminish in colour with time;
- vi. Seeds should be protected against pests and animals that eat or destroy them. This is done by spraying fixative on the picture's face; and
- vii. Add no colour onto the collage materials other than the original one that the materials carry.



### Arranging a collage on the frame

The arrangement should be in a manner that the image appears meaningful. The arrangement consists of trials of shifts and re-arrangements until the last composition is balanced. Pictures have three grounds, namely foreground, middle ground and background. The foreground carries the figures that should appear at the front of the picture plane. The middle ground carries the figures that stand behind the foreground. The background carries the figures that appear at the far end of the picture plane. The foreground figures look larger and vivid. The middle ground figures look a bit smaller than the front ones and less vivid. The background figures look smaller than the rest, seemingly undetailed and hazy. A well-composed picture must fill the picture plane. It is very important to observe these rules when composing a picture. Figure 2 shows the three parts of the picture composition.



**Figure 2:** *The three parts of picture composition*

### **Sticking materials into the picture frame**

After the arrangement of figures on the picture frame, the following stage is sticking. Apply glue at the back of the figure to be stuck and not on the surface to stick on the figure. This helps to prevent the glue from spreading on the picture surface. A clean picture attracts attention and sells easily. The neatness of a picture is mostly due to clean materials, a clean working site, and a clean application of glue. Besides, the picture body must be strong. That means the framing material should be strong and durable; furthermore, the sticking should be well done. Likewise, heaviness of the materials to be stuck must tally with the strength of the frame. For example, shells and pebbles should be stuck on a wooden or plastic slab frame using heavy glue such as wood glue.

**Completing a picture:** To complete a picture means to make final touches on the composition. This involves doing the following:

- i. Inspect to identify parts of the picture that are not well bonded. Add glue on those parts, if any;
- ii. Add decorations to shine the picture;
- iii. Spray the picture with fixative to cover it against pests if seeds are used;
- iv. Leave the picture for a while so that it dries gradually in the shade or room temperature; and
- v. Frame the picture.

**Steps to be followed in papering a collage:** Paper is potential in collage art. This is because the paper has many qualities that make it applicable to collage art. For example, it is available in various colours and textures; it is easy to cut, shape and stick; additionally, it is easily available, and it lasts long. The following are the steps to follow when doing paper collage:

- i. Collect papers of different types and colours;
- ii. Prepare the papers by classifying, cleaning, cutting, and pressing;
- iii. Imagine a picture to make;

- iv. Prepare a picture frame that will accommodate your collage;
- v. Make a picture composition;
- vi. Stick papers to create images that you want;
- vii. Examine the picture to ensure that the papers bond well;
- viii. Spray fixative to protect the picture if necessary; and
- ix. Keep the picture in the shade or room temperature to dry.

### Activity 1

1. Make one paper collage of your choice. Use box paper. The collage work should measure 40 cm x 30 cm.
2. In groups of not more than five, make a collage using seeds of different colours. Note that the measurements should be 30 cm x 60 cm. Consider all the steps to be followed in making a collage.

### Exercise 1

Write a short essay on the subject "Keeping the environment through collage art".

### Inventing printmaking sources

Printmaking is the art of reproducing or copying a mark, symbol, sign or picture on a surface using different methods such as block, stencil, and machine. Printing gives multiple copies of the same likeness. Out of printing, we get art products such as calendars, books, newspapers, cards, posters, and pictures. Besides, printing is applied in textiles where we get decorated clothes, curtains, carpets, tablecloths and other things. In this section, printmaking begins with imagining and preparing motifs.

### What is a motif?

A motif is a key symbol in printing. Figure 3 shows 3 different symbols. Figure 4 shows the same motifs arranged in a certain plan.



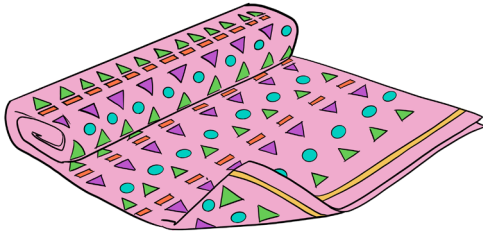
Figure 3: *Motifs*



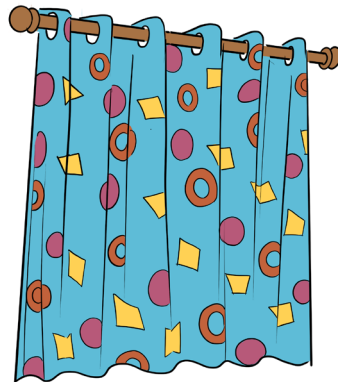
Figure 4: *Patterns*

Each symbol is called a motif. The arrangement of motifs repeatedly forms a pattern. Figure 4 shows three different ways of arranging the patterns. Patterns are achieved when motifs are used repeatedly in a certain arrangement. There are numerous patterns that are found in our environment. Patterns of different kinds can be found on bodies of insects, animals, and birds. They can also be found on curtains, honeycombs, cobwebs and other things. Figure 5 shows patterns on different domestic items and animal bodies.

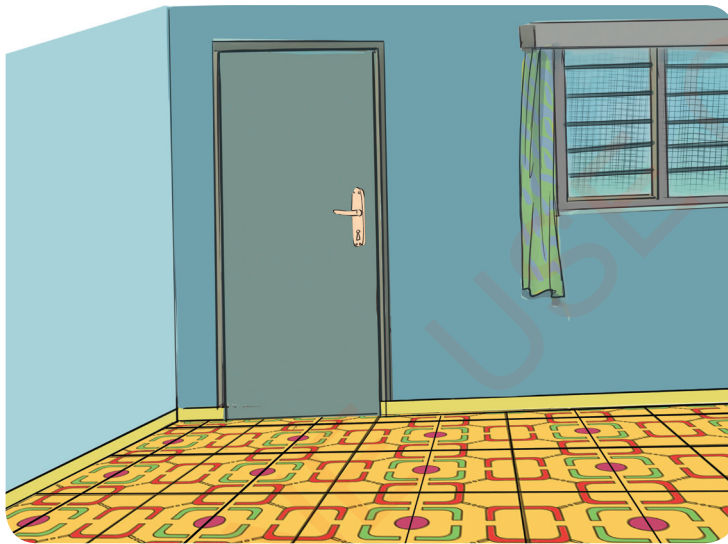




Patterns on fabric



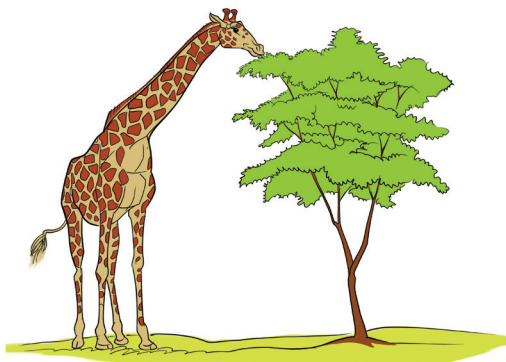
Patterns on a curtain



Patterns on a carpet



Patterns on the peacock's feathers



Patterns on the giraffe's body

**Figure 5:** Patterns indicated on different things



Pattens are made out of motifs. There are natural and man-made motifs. Natural motifs refer to the ones found in a natural setting. These include leaf shapes, human palms, animal paws, and fruit shells. Man-made motifs are in two types. The first are motifs that are carved on blocks. These may include geometric shapes, numbers, letters, and symbols. The second involves coincidental motifs. They were not initially intended for being motifs, but they are improvised. For instance, the roundness of bottle mouths, the pentagon shape of a nut and cut leaf stalks. The invention of motifs requires an artistically creative mind in using the environment. This will help to come up with motifs that will suit one's printing needs. Bear in mind that motifs to be invented should reflect the themes of the patterns to be made. For instance, fruit motifs would fit for a tablecloth pattern. In designing motifs, the artist needs to use sharp knives and blades. The blocks to be cut should be made of soft materials such as round potato, cassava, rubber, and softwood.

The following steps should be followed in cutting motifs:

- i. Procure soft materials like round potatoes;
- ii. Clean the materials;
- iii. Cut the potato into two halves in order to get a flat surface;
- iv. Draw the motif shape on the flat surface; and
- v. Cut the shape of the motif from the drawn surface to let the motif appear high on the surface of the potato.

In carving the motif, the artist should observe the following:

- i. Neatness in cutting;
- ii. Correctness of the shape;
- iii. Sharpness of carving tools;
- iv. Avoidance of very small details;
- v. Appearance of the motif shape should be high on the surface of the potato; and
- vi. Safety precautions against sharp tools.

### Printing a pattern of geometric motifs

A pattern is a repetition of motifs in an intended arrangement. *Khanga and vitenge* exemplify motifs that are arranged to produce certain patterns. If you examine these pieces of the garment, you will discover a formal layout of the motifs. This means that motifs are done by following some principles. These principles are:

- i. Balance
- ii. Contrast
- iii. Unity and variety
- iv. Emphasis
- v. Rhythm

Patterns are therefore made to conform to these principles.

**i. Balance:** In order to produce a good pattern, motifs are supposed to be arranged in a balanced order. This type of balance in art is referred to as an outcome of visual weight. The motifs in a picture must feature equally on all sides of the picture composition. The sides include top and bottom, left and right. Figure 6 shows balanced motifs in a pattern.



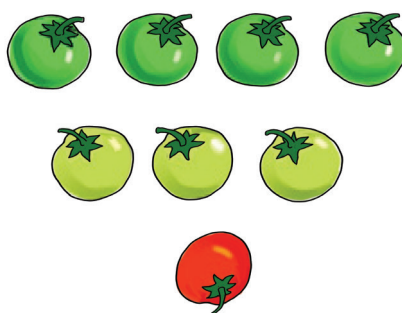
**Figure 6:** *Balanced motifs in a pattern*

**ii. Contrast:** This refers to the differences in some aspects of motifs in a pattern. Motifs can differ in their colours such as yellow against black and red against green. Some motifs face upwards while others face downwards. Figure 7 is illustrative.



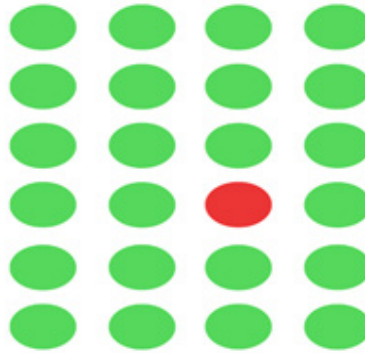
**Figure 7:** Differences of motifs in a pattern

**iii. Unity and variety:** As regards unity and variety, motifs resemble in one aspect and vary in other aspects. For example, in Figure 8, the tomatoes resemble in form, which is spherical, but differ in colour and placement. The figure shows that the green tomatoes with stalks are facing rightwards. In the second row, the yellow tomatoes have their stalks facing leftwards. The last tomato is red and its stalk is facing downwards. We, therefore, say that the tomatoes are united by their similar shape, but they vary in colour and the directions of their stalks.



**Figure 8:** Unity and variety

**iv. Emphasis:** Emphasis refers to the point of a composition where one element draws the attention of the audience. This can be noticed when one motif seems to have a captivating colour, as it is surrounded by other colours. Figure 9 shows emphasis in that pattern.



**Figure 9:** The red motif in the pattern becomes the centre of attention

**v. Rhythm:** This is one of the principles of designing whereby motifs in a pattern show a sense of having direction and movement. The illustration in Figure 10 shows a sense of direction and movement.



**Figure 10:** Rhythm in a pattern

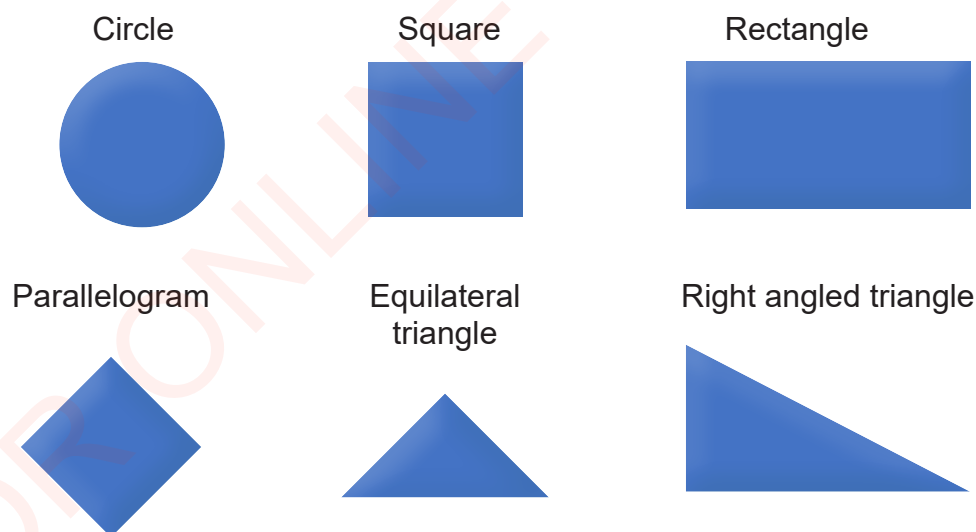
### Steps to be followed in printing patterns

Pattern printing involves the following steps:

- i. Think of an item to be printed – such as a tablecloth;
- ii. Think of relevant motifs for the tablecloth;
- iii. Prepare materials and tools for making and printing motifs;
- iv. Cut or carve motifs;
- v. Measure and mark the size of the pattern on a sheet of paper;
- vi. Plan placement of motifs on the sheet of paper;
- vii. Print motifs on the sheet of paper into its pattern; and
- viii. Keep the printed paper under shade to dry.

### Geometrical forms

Geometrical forms are a good source of motifs. Some of these forms are a circle, a square, a rectangle, a parallelogram, an equilateral triangle, a right-angled triangle and a pentagon.



**Figure 11:** Geometrical form motifs

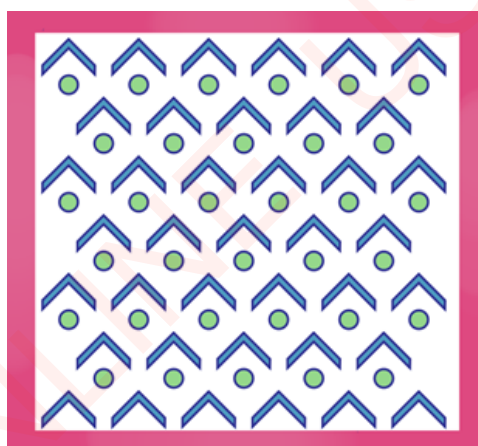


## Activity 2

1. Choose any three geometrical forms
2. Make a motif of each of the forms
3. Print a pattern on a piece of paper using those motifs.

**Note:** Make sure that you print following the steps of printing patterns. Use only three colours.

**Framing the pattern:** There are two types of picture frames. The first type is the background onto which the picture is printed. The second type is a stripe lining that is attached around the edges of the picture, which is aimed at making the picture look good. Figure 12 shows the stripe type of framing.



**Figure 12:** A stripe framed pattern

**Steps to be followed in framing a pattern:** In framing a pattern, the artist has to do the following:

- i. Prepare a strong type of paper for a stripe. The colour of this stripe should be in harmony with the colours of the pattern;
- ii. Measure the size of the pattern frame and stripe;

- iii. Cut the stripe according to the measurements;
- iv. Apply glue on one side of the stripe; and
- v. Stick the stripe firmly around the edges of the frame.

### Making decorations

There are many ways of making decorations. Some of the ways are printing, drawing, constructing, and assembling. In this section, you will learn how to make decorations by printing.

**Steps to be followed in printing a decoration:** Below are the steps to be followed in printing decorations:

- i. Select a wide and rough-textured leaf;
- ii. Measure and cut a frame to mount the decoration;
- iii. Cut the frame the size you want;
- iv. Cover the frame by sticking a sheet of white paper. You can also cover it by applying two layers of paint;
- v. Select about three hues of oil paints that you will be using. The paints should be mixed with paraffin to soften them;
- vi. Obtain three broad leaves that are similar in size;
- vii. Apply paint on the top side of the leaf with a brush. Use one brush for one colour;
- viii. Ensure that the colour is evenly spread on the leaf's surface;
- ix. Lay the leaf on the frame to be printed. The coloured face of the leaf should be in contact with the frame;
- x. Press the backside of the leaf using palms. You can also use fingers to ensure a total contact of the leaf on the framed paper. Then lift the leaf.
- xi. Go on printing the leaf by shifting it until it covers one-third of the frame;
- xii. Repeat the same procedure for the second leaf using the second colour;

- xiii. Complete printing by using the third colour;
- xiv. Finish the decoration by applying colour in the parts that are not yet printed; and
- xv. Keep the print in the shade or room temperature to dry.

**Note:** When you print leaf motifs, make sure that they overlap. Figure 13 shows steps to be followed in printing motifs using leaves.



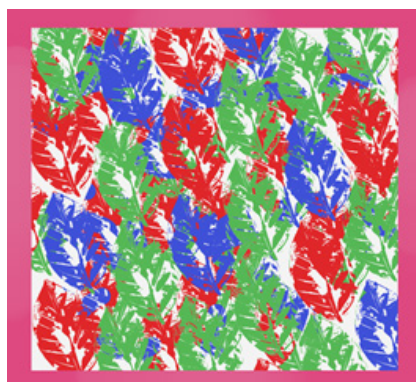
**Figure 13:** Steps to be followed in leaf motif printing

### **Framing printed decoration by a stripe**

Materials: ruler, manila paper of different colours, pair of scissors, pencil and glue.

Steps to be followed:

- i. Measure the size of the decoration frame;
- ii. Select paper with the colour which is in harmony with those of the decoration;
- iii. Measure and cut pieces of stripes of 2 cm – 3 cm wide to cover the sides of the decoration;
- iv. Apply glue on the stripes and press them on the frame edge; and
- v. Keep your pattern in a cool place to dry. Figure 14 shows the stripe pattern framed.



**Figure 14:** A stripe framed printed decoration

### Activity 3

Print a decoration of wide leaves motifs. Use primary colours: yellow, blue, and red. Apply one colour per leaf or motif. The decoration should be neat and its motifs should overlap. Its size can be 24 cm x 35 cm for a classroom exercise.

### Making costumes

People use costumes and decorations in various activities. The activities can be acting, scare-crowing, and festivals. Normally, actors tend to dress according to the theme of the performance. In this section, you will learn how to make costumes using polythene and paper.

#### Materials

polythene bag, string, big needle, pair of scissors, flat brushes, primary oil colours, paraffin, small containers (tins) and cloth pegs

**Steps to be followed in making costumes:** The following steps have to be observed in making costumes:

- i. Find a polythene bag and clean it.
- ii. Measure the length and width of your chest and torso. Take the same measures on the polythene bag and put marks.

- iii. Mark the opening of the neck at the centre on the bottom side of the polythene bag. Cut the marked area as it is shown in Figure 15 to get the intended size;
- iv. Cut that part to get the neck and make two openings at each of the two angles of the bottom side of the bag. These will be for the arms;
- v. Hem the neck and arm openings by a blanket stitch; and
- vi. Paint images, marks, and symbols on the polythene material dress. The drawings, colours and marks should reflect the theme of the occasion in question. For example, in the case of HIV/AIDS, the drawn image should be the skull and crossbones symbol.

**Painting on the polythene dress:** Take the following steps when you are painting on a polythene bag:

- i. Draw an outline of the figure in ink on the polythene dress;
- ii. Draw the look of the figure in ink;
- iii. Paint the image. Make sure that the colours are not mixed. Therefore, wait for the first layer of paint to dry before adding another one;
- iv. Try to use contrasting colours such as white against blue or white against black;
- v. You can decorate the dress or costume by drawing or printing directly; and
- vi. Print letters that can be read from a distance. Figure 15 shows a symbol printed on the polythene costume.



**Figure 15:** A printed polythene costume



#### Activity 4

Form groups of five and make polythene costumes. The theme of the occasion should be “International Fruit Day”.

The costume must have the following aspects:

1. Hemmed in the neck and hand openings;
2. Have motifs of different fruits;
3. Be clean; and
4. Have vivid marks, letters, and decorations.

#### Exercise 2

1. Differentiate between a motif and a pattern.
2. List five sources of natural motifs.
3. Explain the advantages of having pattern printing skills.

#### Making play gear

Play gear is the equipment used to facilitate playing. It comprises items such as a ball, draught-board, *bao*, a discus, dolls, snakes and a ladder board. One can make numerous play gadgets. Some of them are simple to make while others are very difficult to make. In this section, you are going to learn how to make simple play gear.

#### Snake and Ladder

This type of play gear belongs to the board games. On the game board, there are numbers, ladders, and snakes of different colours. Playing the game of this type is done by using a die, which has 6 sides with numbers ranging from 1 to 6 inscribed on it. The role of the ladder is to lift the die from lower numbers to the upper ones. On the contrary, snakes swallow the die and bring it down from top numbers to the bottom ones. People benefit from this game in that it entertains, challenges the mind, and

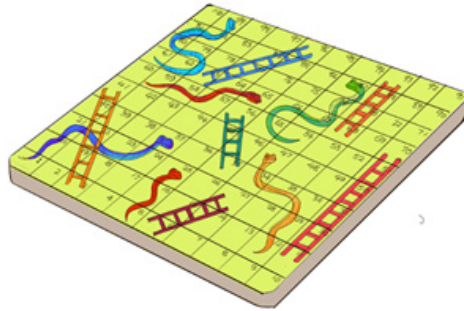
promotes competitive behaviour. Knowledge and skills in making a snake and ladder board will enable the maker to earn income.

**Materials:** A piece of cardboard measuring 30 cm x 30 cm; white watercolour (emulsion), ruler, oil colours (paints) blue, red and green, a hard flat brush and paraffin.

**Steps to making play gear:** The following are the steps to be followed in making a snake and ladder board:

- i. Obtain a cardboard piece measuring 35 cm x 45 cm;
- ii. Apply the first coat of white paint on the rough side of the board by a brush. Leave a bordering space of about 2 cm around the board;
- iii. Apply the second coat of the same colour as was the case with the first coat;
- iv. Let the paint dry;
- v. Apply another coat of an attractive colour of your choice. This will be the colour of the background of the board;
- vi. Wait again for this coat of the colour to dry;
- vii. Measure and mark square rooms of 1cm x 5 cm width and 1cm x 6 cm length on the board;
- viii. Draw lines to create square rooms. You have to get 100 rooms;
- ix. Mark numbers from 1 up to 100 in the rooms by black colour. Then allow the colour to dry as well;
- x. Draw about six ladders using different colours spread over the board in a balanced manner;
- xi. Allow the colours of the ladders to dry;
- xii. Draw six snake figures. These should be of different lengths. (Two should be short; the other two should be long while the rest two should be of medium size). They will be equally distributed along the face of the board. Their colours must be visible;

- xiii. Let the colours of the snakes dry; and
- xiv. Select one colour that will fit for the bordering of the playing board and paint it there. When the last colour dries, this means the board is ready. Figure 16 shows an image of the snake and ladder board.



**Figure 16:** Snake and ladder board

### Die

Die is a small cube. It has six sides. Its sides are dotted in a range of 1 – 6. The dots stand in places of number 1 - 6. The dice are used for games, especially board and table games. It is easy to make die. Use soft materials such as rubber or softwood. Cut a cube. Make sure that its sides are equal in size. Mark the dots on each side using a pointed device. Introduce colour to the marks. The die is put into a die box. The die box is shaken. The die is then dropped on the table. One number appears on the top side of the die. The player uses this number to play on the snake and ladder board. That number is represented by a dot or dots.



**Figure 17:** The dice and dice box for playing the snake and ladder game

### Activity 5

1. Use a cardboard to make a snake and ladder board. Use water or oil colours. Its size should be 20 cm x 30 cm.
2. In groups of five, make dice measuring 1 cm x 1 cm. Use rubber or softwood with oil colours.

**Features of the snake and ladder board:** The board should be clean with conspicuous colours. Numerals and pictures should be vivid and smart.

### Draughts

It is one of the board or chess games. It is played by a pair of players. It uses 24 round pieces that are moved by the players. The game benefits the players in many ways. For instance, players sharpen their thinking and reasoning capacities. It also promotes a sense of competition and mathematical skills. In this section, you will learn how to make a draught-board.

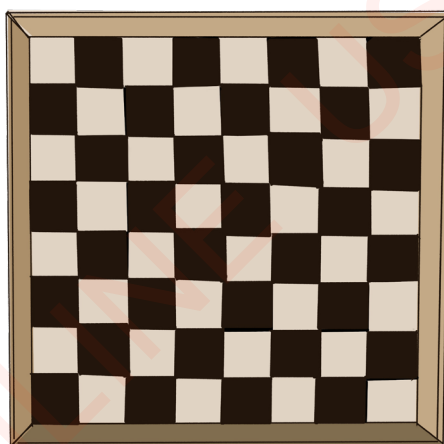
### Materials

A cardboard measuring 35 cm length and 35 cm width, white emulsion, pencil, ruler, two contrasting oil paints, 12 round pieces of one colour and other 12 pieces of a different colour, hard and flat brushes, paraffin, and four little containers

**Steps to be followed in making draughts:** The following are steps to make draughts:

- i. Measure and cut a piece of cardboard measuring 35 cm x 35 cm;
- ii. Apply white emulsion on the rough surface of the cardboard. Wait until this paint dries;
- iii. Apply a second coat as you did in the second step;
- iv. Leave a border of 3cm around the edges of the board;

- v. Measure area of 32 cm x 32 cm. Divide this area into blocks of 4 cm x 4 cm. You will get 64 rooms of 4 cm x 4 cm each;
- vi. Draw 64 rooms with a size of 4 cm x 4 cm each;
- vii. Paint the first 32 rooms with one colour. Do it by painting in the first room and leap the second. Paint the third and leap the fourth. Go on like this until you are done with the first 32 rooms;
- viii. Do the same procedure for the second 32 rooms, but this time with a different colour;
- ix. Prepare 24 round pieces, 12 with similar colour and the other 12 with another colour. The round pieces here can be soda, water or juice bottle stoppers; and
- x. Wash the used brushes and containers using paraffin. Figure 18 shows a draughtsboard.



**Figure 18:** *Draughts board*

### Activity 6

1. Make a draughts board as instructed in the text. You can use a ceiling board, a piece of iron sheet, or a plastic slab.
2. Prepare round pieces for playing draughts.
3. The draughts should have:



- a) 64 squares of 3 cm x 3 cm each;
- b) 32 squares of one colour and other 32 of a different colour;
- c) A bordering line of 3 cm width;
- d) A clean look; and
- e) 12 round pieces of one colour and another 12 round pieces of different colour.

### Exercise 3

**A. Choose the correct answer and write its letter in your exercise book.**

1. Materials for works of art come from different sources except \_\_\_\_\_.
  - a) Fabrics
  - b) Leather or canvas
  - c) Sand
  - d) Drum
2. Picture composition means having an idea of a picture and presenting it in \_\_\_\_\_.
  - a) a visible image
  - b) a picture frame
  - c) a picture size
  - d) a pictorial figure.
3. Some of the things an artist is supposed to consider in collage art is \_\_\_\_\_.
  - a) the collage to have small details
  - b) the collage figures to be correct

- c) materials to be of glass
  - d) materials to wither in colour and shrink.
4. \_\_\_\_\_ is to make final touches and keeping the picture.
- a) Designing a picture
  - b) Completing a picture
  - c) Sticking a picture
  - d) Decorating a picture
5. Motif cutting should consider the following aspects except \_\_\_\_\_.
- a) neatness in cutting
  - b) the correctness of the motif shape
  - c) the sharpness of the cutting tools
  - d) shape to have small details

**B. Answer the following questions.**

1. Why should we use the top face of the leaf in printing by pressing?
2. What have you observed as the colours mingle when printing leaves by pressing?
3. What are the uses of printed patterns or decoration?

## Vocabulary

Costume	a set of clothes actors put on to facilitate the acting
Dice	are small cubes with six sides each marked with a number ranging between 1 and 6 and are used for playing some board games
Motif	a mark, symbol or shape that is used in printing patterns
Ornamentation	decoration made on a surface, cloth, body or things to beautify
Pattern	motifs arranged in a certain order to create a design

## Chapter Seven

### Modelling, weaving, and models

#### Introduction

*In Standard Five, you learnt about modelling and weaving. In this chapter, you will learn how to make different items by using materials available around the school environment. Such materials include paper, plastic, wire, polythene, rubber, “ukindu” and many others. You will model using papier-mache to make decorative figures and models as well as to sew baskets. The skill for making models will enable you to become self-reliant and earn income. Therefore, the content of this chapter will help you to be self-reliant, able to make different items, model papier-mache and sew baskets using the required skills.*

#### Modelling by papier-mache

Modelling is an art of making figures using malleable or plastic materials. Examples of malleable materials are clay, plasticine, wax, and papier-mache. In this section, you will learn about modelling using papier mache. Papier mache is paper that has been crushed and mixed with water to form a pulp. The pulp is mixed with glue or tapioca to make it malleable. The tractable nature of the paste makes it possible to model various figures.

#### Preparing papier-mache

Materials and equipment for making papier-mache are water, mortar, pestle, clean used papers, wooden sticks of pencil size, and plastic bottles. Other items are wood glue, cassava flour, source pan, paints, brushes, a stirring tool and a small bucket.

**Steps to be followed in making papier-mache:** The following steps should be observed in making papier-mache:

- i. Collect soft and clean pieces of paper;
- ii. Soak the paper in water for about two days;
- iii. Remove papers from the water and then pound them in a mortar;
- iv. Pound until the papers get smoothly crushed;
- v. Add some water to get a pulp. Remove the pulp from the mortar and load it in a bucket; and
- vi. Mix the pulp with glue or cassava flour paste. This will make the pulp malleable and ready as a papier-mache moulding material.

After preparing papier-mache, the next step is to design and make the intended model.

**Modelling a pawpaw figure using papier mache:** The following steps must be followed:

- i. Study the pawpaw figure;
- ii. Use an empty one-litre water bottle for a framework;
- iii. Make holes around the bottle;
- iv. Insert small wood sticks across the holes you made. The sticks should shoot out of the bottle surface;
- v. Plaster the bottle with papier-mache pulp up until a pawpaw figure is attained;
- vi. Smoothen the surface of the figure using a smooth object like a spoon;
- vii. Keep the figure in the shade to allow it to dry;
- viii. Add some glue lightly and stick the figure with pieces of paper to attain a pawpaw figure;
- ix. Paint the figure with colour to make it resemble an actual ripe or unripe pawpaw fruit; and
- x. Make some final touches.

The pawpaw figure can be used in many ways. It can be used as a teaching aid in class or a decoration on a dining table; it can also be sold to earn money.



### Activity 1

1. Make a pawpaw model using papier mache. The model should have the following attributes:
  - (a) actual pawpaw size;
  - (b) a pawpaw figure;
  - (c) thoroughly dried;
  - (d) neat; and
  - (e) decorated
2. Make any figure of your choice. The figure must resemble the actual thing it represents. It should also:
  - (a) have the size bigger or smaller than the actual thing;
  - (b) be well dried;
  - (c) be decorated and well coloured; and
  - (d) be neat.

### Exercise 1

1. Explain the meaning of a model.
2. What is the role of a framework in making figures?
3. Explain what decoration is and give reasons for making decorations.

### Decorative figures:

Besides printed decorative figures, there are modelled decorative figures. Modelled decorative figures have wire or wood frameworks inside them. Such frameworks help the modelled figures to attain their form. In this section, you will learn how to make a mobile decorative figure with a round shape. These decoration figures can be hung in classrooms, offices and sitting rooms.

**Materials:** Prepare a balloon, a thin manila string, a pair of scissors, glittering pieces of paper, glue, glittering ribbons, cello tape and glittering powder.

**Steps to be followed in making mobile decorations:** The following are the steps to be followed in making a decorative figure:

- i. Blow up the balloon to a full size and close it;
- ii. Tie a long thin manila string around the nozzle of the balloon;
- iii. Make pieces of glittering papers;
- iv. Take white pieces of paper and stick them around the balloon to cover it;
- v. Stick the pieces of glittering paper to cover the layer of the white paper around the balloon;
- vi. Scatter glittering ribbons around the balloon;
- vii. Smear glue at the scattered places on the balloon and then stick the glittering powder;
- viii. Apply the glittering powder around the balloon to stick glued parts: and
- ix. Hang the mobile decorative on the ceiling using the long thin manila string. Figure 1 shows a hung mobile decorative balloon.



**Figure 1:** The hung decorative balloon

## Activity 2

In groups of not more than five, do the following activity:

Make any decorative figure by following the steps you have learnt. Start with any framework found in your school surrounding. For example, you can use an empty plastic bottle of 1-litre capacity as your framework.

### Doll making:

A doll is a toy that looks like a human being. One can make a doll by using different materials. In this section, you will learn how to make a doll.

### Materials:

Pieces of fabric, pieces of wire, thin sticks of pencil size, paints of different colours, brush, plastic container (gallon), glue, paper, string, and knife.

**Steps to be followed in doll making:** Making a doll involves the following steps:

- i. Think of the type of doll you want to make;
- ii. Select an empty bottle or a gallon with the same size as the doll you want to make;
- iii. Make holes at the lower end of the gallon or bottle. Take sticks with the same length and stick them under the gallon or bottle. Those are the legs of the doll;
- iv. Cut and bend pieces of wire to form arms of the doll and insert the wire on the top of the gallon or bottle to make hands of the doll;
- v. Use fabric or paper and glue it to cover all parts of the model; and
- vi. Paint the doll with relevant colours. The doll is ready.

### Activity 3

In your groups, do the following activities:

1. Make a doll using a one-litre plastic container (bottle) as the framework.
2. Use sticks and pieces of wire to make arms and legs of the doll.
3. Wrap the wooden sticks and wire with windings of paper or fabric.

### Exercise 2

Answer the following questions in writing.

1. What is a framework?
2. Why do we begin with a framework when making a figure?
3. Is there another figure we can use as a framework besides a plastic bottle?
4. How can figure making help to conserve environment?

### Making fish and dog models

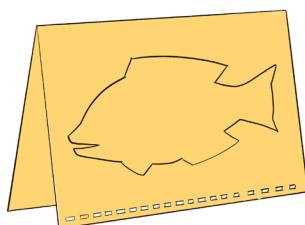
A model is a figure of something made out of wood, clay, or another material. A model of something can be of the same size, bigger, or smaller than that of the actual thing. Models have various uses such as teaching and game tools. In this section, you will learn how to make fish and dog models using paper and plastic.

### Materials and equipment

The following are materials used to make fish models: used calendar paper sheets, newspapers, manila papers, a pair of scissors, glue, thin manila string, and paper or plastic bottle cylinders.

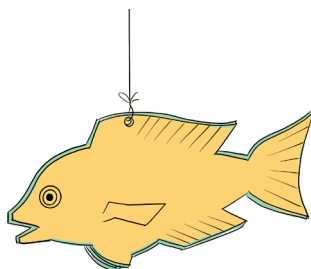
**Steps to be followed in making a fish model:** The following are the steps to be followed in making a fish model:

- i. Study different figures of fish from different sources;
- ii. Select one type of fish with the simplest figure to make;
- iii. Fold calendar paper or any other paper into two halves;
- iv. Draw a figure of a fish on one side of the folded paper. Make sure the written sides of the paper are on the inside. Look at Figure 2.



**Figure 2:** An outline of a fish on one side of a folded paper

- i. Cut out the fish outline in such a way that you get two equal pieces;
  - ii. Put glue along the borderlines of the two pieces of paper but leave an opening where the mouth should be. This opening will also be used in stuffing in paper pieces;
  - iii. Stick the two pieces of paper together and wait for the glue to hold firmly;
  - iv. Make a fish eye and stick it to its correct place;
  - v. Fill pieces of soft paper or fabric into the figure until the figure is full;
  - vi. Close the part used in filling the pieces of paper or fabric; and
  - vii. Attach a thin manila string to the top centre of the figure to hang it.
- Figure 3 presents a fish model.



**Figure 3:** A hanging fish model



#### Activity 4

Make a fish model using paper. Observe the following measurements and instructions:

1. Length: 30 cm
2. Width: 20 cm
3. It should have a string for hanging.
4. It should be well filled with stuffing materials such as pieces of soft paper.

#### Exercise 3

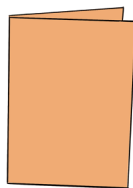
Write a short essay about the benefits of being skilled in making models using paper.

#### Materials for making a dog figure

Materials for making a dog figure are gloss paper such as calendars, newspapers, manila papers, a pair of scissors, glue, a thin manila string, cylindrical figures of hard paper or plastic, paints of different colours, brushes, and colour pencils.

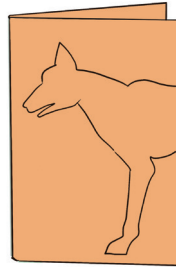
#### Steps to be followed in making a dog figure

- i. Fold a card paper into two halves. The height of the folded piece should be about 10 cm. Do the same steps as shown from Figure 4 to Figure 9 below.

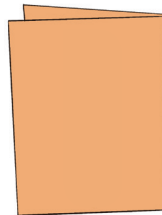


**Figure 4:** Card paper folded into two halves

- ii. Draw the front part of the dog, from head to the shoulders, on the folded paper. Cut that drawn part following the drawing.

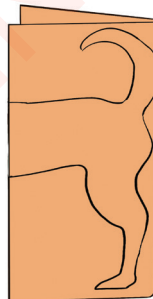


**Figure 5:** *Front part of the dog*



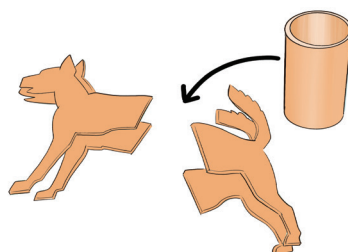
**Figure 6:** *Card paper folded into two halves*

- iii. Draw the back part of the dog and cut that part following the outline.



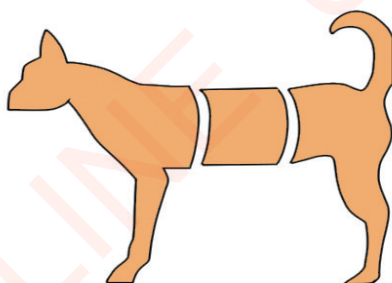
**Figure 7:** *Back part of the dog*

- iv. Fold a card paper to get a cylindrical figure. The cylinder should measure 12 cm in length and 2.5 cm in diameter. Use this cylinder piece to join the front and back parts of the figure.



**Figure 8:** *Parts of the dog's figure before joining*

- v. Apply glue on the inside of the front part of the figure. Join it to the forepart of the cylinder.
- vi. Apply glue on the inside of the back part of the figure. Join this part to the foreside of the hind part of the dog.
- vii. Mark important features of the dog figure such as eyes, nostrils, and the mouth using colour paints.
- viii. Decorate the figure by colouring.



**Figure 9:** *A full model of the dog*

### Activity 5

1. In your group, make a dog's model following the steps shown above. Use materials obtained from your environment.
2. Think of any animal and make its figure applying the steps you have learnt above.

Your work should have the following attributes:

- i) Resemble the actual animal
- ii) Be a well-balanced figure – on the front and back sides
- iii) Be well decorated
- iv) Be neat

### Sewing and decorating twill weave items

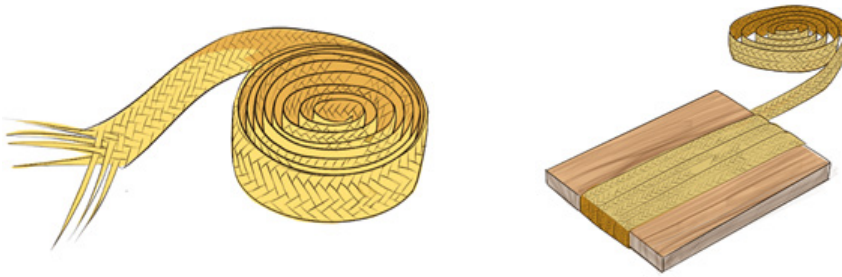
There are two stages in weaving. The first stage is weaving a twill band. The second stage is sewing the twill band to get an intended item. Examples of these items are *kawa*, baskets, hats, hand fans, and mats. In this section, you will learn how to weave a mat and decorate it.

### Materials and equipment

In sewing and decorating such items, one needs to have the following materials: plain and decorated twill bands, a sewing board, a knife, a sailor's needle, and a strong thin thread.

**Steps to be followed in sewing and decorating a mat model:** The following are steps for sewing and decorating a mat model:

- i. Prepare a sewing board measuring 30 cm in length and 15 cm in width. The twill band will be wrapped around the board in making the mat;
- ii. Thread the sailor's needle;
- iii. Take a pair of plain and decorated twill bands of about 6 feet long. Sew them using the sailor's needle and thread;
- iv. Lay the pairs of the twill bands on the sewing board such that their sides touch each other. Sew them using the sailor's needle and thread;
- v. Continue sewing the twill bands while winding around the board again and again till the length reaches the end as shown in Figure 10;



*Twill band*

*Twill band wrapped around the sewing board*

**Figure 10:** Preparation for sewing

- vi. The rounded twill bands must be well attached to each other to enhance proper sewing;
- vii. Sew by attaching two or three spaces from each twill band and tight them well. If this stage is properly done, you will get a strong mat;
- viii. Go on sewing the twill band while turning the board around repeatedly until you reach the end of the twill. You will get a cylinder-shaped mat;
- ix. Cut one side of the cylindrical shape of the item with a sharp knife to get a flat sheet of the mat. This sheet has loose and rough edges due to the knife cut;
- x. Measure the lengths of the rough edges. Use the same measurements to get a ribbon that will be hemmed along the edges to stop the mat from fraying; and
- xi. Hem the ribbons to cover the edges of the mat. The mat model is ready.



**Figure 11:** A hemmed mat model



### Activity 8

Sew a mat model of 30 cm in length and 18 cm in width.

### Exercise 4

**A. Pick the correct words from the list and use them to fill in the blanks. *Weaving, two, twill band, papier mache, decorative, malleable***

1. Modelling is an art of making figures by using ..... materials.
2. .... figures are easily made by beginning with a framework.
3. There are ..... stages in weaving a basket
4. The woven belt that is used to sew basketry items is called .....
5. When papers are crushed and mixed with water we get .....

**B. Essay writing**

Write a short essay on “**Making a mat model**”.

## Vocabulary

Model	a copy of a thing that shows what it looks like or how it works
Pulp	a soft wet shapeless mass of materials
Sailor's needle	a large sharp needle with little curved edge used to sew heavy materials like sacks, sails and tents
Tapioca	hard white grains obtained from a cassava plant

## Chapter Eight

### Entrepreneurial skills

#### Introduction

*In Standard Five, you learnt about the importance of using varieties of entrepreneurial skills to run enterprises in a way that they will make a profitable income for you. In this chapter, you will learn how to find new knowledge and skills in doing different entrepreneurial activities by participating in debates and curiosity. You will also learn how to identify types of customers based on the products produced as well as the best packaging methods and the valid scales used to measure the products. In addition, you will discover various ways in which cheating is practised in entrepreneurial activities. Learning entrepreneurial skills will enable you to identify and use available opportunities to make a profitable income.*

#### Developing readiness for learning

Entrepreneurship is one of the ways to solve problems and earn an income for individuals, groups and society. Everyone can be an entrepreneur provided that she or he is ready to take risks. This can be done in various ways such as starting and managing a business. In order for entrepreneurs to benefit from their activities, they must have the basic knowledge and skills to carry out entrepreneurial activities. It is important for the entrepreneur to develop readiness for learning. Among the important things to be learnt is how to develop the capacity to identify available opportunities. This will help to create and develop enterprises in society. In addition, a person must be courageous to use available business opportunities to establish and run enterprises and overcome challenges that may arise. The society is constantly changing; therefore, it is clear that an aspiring entrepreneur must be ready to learn continuously. There are a number of ways by which a person can develop entrepreneurial skills and knowledge that will

enable him or her to run his or her enterprises successfully. Some of the methods are to participate in entrepreneurial debates and curiosity.

### Learning through entrepreneurial debates



Think

1. What is the meaning of a debate?
2. What did you learn from the debate or debates you have participated in at school or watched on the media?

A debate is a discussion on a particular issue about which participants express their views in order to reach a consensus. Each side creates favourable arguments on its part and a conclusion is finally reached. Entrepreneurial topics are viewed differently by participants. Therefore, it is important for the entrepreneur to participate in entrepreneurial debates. This will help him or her to acquire new knowledge and learn new skills.

***The importance of entrepreneurial debates:*** The entrepreneur's participation in debates enables him or her to do the following:

- i. Develop critical thinking skills.
- ii. Develop the ability to analyse issues.
- iii. Enhance teamwork skills and cooperation.
- iv. Acquire public speaking skills.
- v. Activate the capacity to search and discover new ideas.
- vi. Develop the ability to ask and answer questions.
- vii. Promote life-long learning skills.

For the entrepreneur to run his or her enterprises successfully, it is very important to develop the mentioned skills.

### Activity 1

1. Prepare two groups, and debate on the topic “To be an entrepreneur is a matter of learning, as it is not inborn”.
2. With the guidance of your teacher, prepare and participate in other entrepreneurial debate topics.
3. Write a summary of what you learnt in each debate.

### Learning entrepreneurship through curiosity

Curiosity is one of the ways to gain knowledge and skills in entrepreneurship. Identifying and using business opportunities are among the key issues to be curious about. Since the world is constantly changing, needs and opportunities arise. Thus, a successful entrepreneur must always be inquisitive to develop creativity. Curiosity in entrepreneurship can be achieved in various ways. Face-to-face conversations, observation, and reading books are some of them.

### Read carefully the following case study and answer the questions that follow.

Pendo and Baraka are twins. They are in Standard Six at Mashujaa Primary School. During the holiday, they went to visit their aunt who lives in Makuyuni village. They were always interested in accompanying their aunt to her activities. Their aunt is an entrepreneur who owns a shop. One day, they sat with their aunt at her business place. They had an opportunity to ask about entrepreneurial issues. Their conversation was as follows:

**Pendo:** Aunt, can I also be an entrepreneur like you?

**Baraka:** Pendo, as if you were in my mind! I also wanted to ask her the same question.

**Aunt:** Yes, everyone can be an entrepreneur.

**Baraka:** I want to be an entrepreneur who sells products like those in your shop because they are needed by many customers.



**Pendo:** I also want to be an entrepreneur who owns a large shop and sells as many products as you sell because you earn a lot of money.

**Aunt:** You have good ideas. Listen, in order to achieve your dreams, you need to learn the basics of entrepreneurship.

**Baraka:** What else do we need to learn? For the time we've spent with you, we've already learnt how to sell. Again, the day before yesterday you praised us for doing a good job.

**Aunt:** Indeed, you did a good job; however, being an entrepreneur and running an enterprise are not just an imitation. You're required to learn the basic entrepreneurial skills.

**Pendo:** Please, aunt, what are the most useful things to learn?

**Aunt:** There are so many. Where do you expect to establish enterprises next year after completing your studies?

**Pendo:** I'll do it in my village; specifically, in our street.

**Baraka:** Me too! When I complete studies, I'll do it in our village. But I'll do it in Mtakuja street which is far from our home because there is no shop. It's my hope that I'll get many customers.



**Figure 1:** Aunt's shop



**Aunt:** Well! In order to run the enterprise successfully, you need to be aware of the needs of your customers in terms of quality and quantity.

**Pendo:** You have said that there's much to learn! Is there anything else?

**Aunt:** Not only that, but you'll also need to know the purchasing power of your intended customers for the products or services you are going to provide.

**Pendo:** Aunt, you said to provide services! What services are that?

**Aunt:** There are many services that can be offered including washing and ironing clothes, hairdressing, decorating, entertainment, financial services, and many more.

**Pendo:** Oh Aunt! At school we have learnt weaving, washing and ironing clothes, sewing, decorating and various food recipes in the Vocational Skills subject. I didn't know if I can do all these in my business.

**Baraka:** Me too. I've learnt about singing and acting in Vocational Skills and I really love them. My teacher tells me that I am doing fine. So it's also an enterprising opportunity! I'll convince my fellow pupils who like to sing and act to form a group which will be entertaining people in our village. I believe that after completing our studies, we'll be able to offer entertainment services in other places as well.

**Aunt:** That's very good, Baraka. You've also reminded me of something important that I didn't tell you. It's important to assess yourself in order to identify your strengths and weaknesses in the business of your choice. Meanwhile, however, continue with your studies to develop your talents further. When you complete your studies, you'll be able to carry out entrepreneurial activities effectively.

**Pendo:** Aunt, what do you mean by assessing one's strengths and weaknesses?

**Aunt:** That's a good question. It means that you should assess your ability to run entrepreneurial activities. It is what you can do best.

Is it singing or drawing, running a shop or a restaurant? What you can do best is your strength and what you can not do well is your weakness. Having misconceptions about entrepreneurship is also a weakness.

**Baraka:** Aunt, what are the misconceptions about entrepreneurship?

**Aunt:** There are many. Some of them are the belief that entrepreneurship is only engaging in small businesses; entrepreneurship should be done by uneducated people; entrepreneurship is inborn; entrepreneurship is gambling or a game of chance, and entrepreneurship only needs large business capital. Likewise, one cannot be an entrepreneur because she is a girl, has a disability, or is shy and the like.

**Pendo:** Thank you so much, Aunt! I have learnt a lot from you about entrepreneurship.

**Baraka:** Thank you very much, Aunt! I have learnt from you real-life experience about running an enterprise.

**Aunt:** I'm glad to be with you. I hope next holiday you'll visit me again. Remember that there are a lot of things to be learnt in order to become a successful entrepreneur. So, continue developing readiness for learning. This will greatly help you to reach your goals.

### Exercise 1

**Answer the following questions.**

1. What is the case study about?
2. What is the occupation of Pendo and Baraka's aunt?
3. What was the most important thing that Pendo and Baraka needed to have in order to reach their goal of becoming entrepreneurs?
4. What are the three basic things to do before starting a business that Pendo and Baraka inquired from their aunt?

5. What are the skills learnt in the Vocational Skills subject that Pendo identified as business opportunities for her?
6. What business was Baraka determined to engage in based on the skills he learnt in the Vocational Skills subject? Why did he choose those skills?
7. What kind of abilities does an entrepreneur need to have in order to be successful?
8. What things do you think might hinder success in entrepreneurship?
9. Mention any four misconceptions about entrepreneurial activities.
10. Are the ideas of Baraka to start an entertainment business and that of Pendo to open a shop when they finish Standard Seven correct? Why do you think so?

## Activity 2

1. Using the skills you have learnt, find out whether there are practical entrepreneurial opportunities in your area or neighbourhood. Examples are catering, lawns and garden care as well as drama, modelling, braiding, weaving, picture-making and singing or music-making.
2. Prepare a report on the findings and make a class presentation.

## Customers



Think

1. Who are the customers of the goods or services offered by entrepreneurs?
2. How are those customers found?

A customer is a person who goes to buy goods or services at a particular place such as a shop or an office. Customers are the most important elements in any entrepreneurial activity. Entrepreneurial activities depend on customers. Therefore, it is important to identify and analyse the types of customers in order to run your business successfully. It is also important to learn how to obtain and maintain them.

### Type of customers

Customers can be classified in different ways. Some of them are on the basis of the quantity they purchase or their behaviour.

**1. Types of customers based on the quantity they purchase:** There are three types of customers based on the quantity they purchase. These types are large-size, medium-size, and retail customers.

(a) Large-size customers

These are customers who buy products in large quantities from manufacturers and then sell them to medium-size customers.

(b) Medium-size customers

These are customers who buy products in large quantities though not like that of the large-size ones. Then they sell them to retail customers.

(c) Retail customers

These are consumers of a specific product or service. They often buy a small amount of a product or the required service that can be afforded.

**2. Types of customers based on their behaviour:** These are as follows:

(a) Loyal customers

These customers are the most important to focus on so that you do not lose them. They purchase products regularly provided that the products meet the acceptable quality and they are well cared. They are usually few, but they make up at least 50 percent of the revenue of the business. Loyal customers are likely to recommend your products to other people.

Therefore, it is important to get their feedback on your business and to work on it accordingly. They should always be provided with the best customer care and high-quality products as much as possible.

(b) Impulsive customers

These are customers who do not have a specific shopping list in mind. They purchase products unexpectedly. They are often drawn by feelings after seeing a product or service. They can also be influenced by the advertisement of a certain product. In addition, they are willing to listen and accept new ideas or recommendations on products. They are second to loyal customers in generating sales revenue. They should be provided with the best customer care, products and right information on products or services. These will make them easier to purchase the products.

(c) Price-based customers

These are customers who rarely purchase products at full price. They buy only low-cost products. They shop around for the lowest price. They move on when better price reductions are available. They are usually the least loyal part of customers. Focus on this type of customers is also important, as they also promote part of the profit into the business. These customers can be cared for by telling them about the value of the product in relation to the price. It is also important to continue respecting them even if they do not agree with the existing price. Their purchasing power may later be raised. Hence, they can change their decisions.

(d) Need-based customers

These are customers who are driven by a specific need or occasion. They usually enter the business place quickly, purchase what they need, and leave. To care for these customers, you have to understand specific customers' needs that occur in the community at different periods of time. This will enable you to provide them with what they need timely. It is also important to note that need-based customers can be easily converted into loyal customers. This could be achieved by showing them ways and



reasons to switch to other similar products and services. These customers could be lost if they are not well cared for.

#### (e) Wandering customers

Such customers have no specific need or desire in mind about the products. They explore features of most noticeable products in the market but they do not buy. Some of the wandering customers are attracted by the location of the business more than anything else. They enjoy the social interaction of the experience of shopping. Wandering customers usually make up the smallest part of sales revenue. To attract these customers, you should properly inform them about the various positive features of the products or services. This can stimulate their interests and make them purchase the products or services.

In the Vocational Skills subject, you have learnt about the production of various products such as flowers, vegetables, food and drinks, decorations, picture costumes, and toys. You have also learnt about a variety of art skills including drama, modelling, braiding, weaving, picture-making, and singing or music-making. In selling the products or services, you must take into account these types of customers. You also need to consider three basic things that enable you to sell the product or service, namely whether the product or service is needed by the customers, whether the customers can purchase the product or service, and whether the product or service is acceptable to the customers.

With this knowledge, you can identify the customers of the products or services you are producing or selling in a specific location. However, customers' acceptance of your product or service also depends on several other factors. First, understand your customers' needs so that you can provide them with the products or services needed. Second understand your competitors so that you can improve your products. Next, care for your customers and focus on satisfying them always. You should also develop honesty and reputation by fulfilling your promise of providing your customers with products or services on time.

### Activity 3

1. Identify the products and services you can produce from the Vocational Skills subject.
2. Identify the places where you can sell each product or service.
3. Identify the types of customers who purchase each of the products or services you produce.
4. Are there any other people who are not buying those products or services that you produce? If any, which approach will you use to get them to buy your products or services?

### Packaging and measuring devices



Think

1. What are the things that need to be done in the packaging of products and services offered by entrepreneurs?
2. Which products need to be packaged?
3. What are the purposes of packaging products or packing services?
4. Which devices are used to measure the products in packaging?

Packaging is a technique of wrapping goods to meet the needs of the customer. Packaging has to be done using valid measurements. It is advisable to sell or purchase packaged products using valid measurements of weight, volume, and quantity or number. The use of invalid measurements or fake measuring devices is a fraud, and it should be avoided by sellers and buyers.

Packaging can be done using various packaging materials and in different measurements depending on the type of the product. Table 1 shows materials and measurements to be used in packaging some of the products that you have produced in Vocational Skills practical work.

**Table 1: Packaging materials and measurements for some products**

Product	Packaging material	Measurement
Flowers	Boxes or basket or vases	Bouquet or numbers
Vegetables	Boxes or baskets	Kilograms or numbers
Fruits	Boxes or baskets	Kilograms or numbers
Bans	Transparent paper bags	Numbers
Breads	Transparent paper bags	Kilograms or grams
Crips	Transparent paper bags	Kilograms or grams
<i>Bajja</i>	Transparent paper bags	Kilograms, gram or numbers
Kebabs	Transparent paper bags	Kilograms, grams or numbers
Cake	Boxes or transparent paper bags depending on size	Kilograms or numbers
Fried fish	Boxes, transparent paper bags or containers	Numbers or kilograms
Fried peanuts	Transparent paper bags or containers	Kilograms or grams
Chips	Aluminium containers	Kilograms
Juice	Bottles, special paper packets, buckets or small gallons	Litre or millilitre
Milk	Bottles, special paper packets, buckets, cans or small gallons	Litre or millilitre
Pictures	Transparent boxes	Numbers
Ornaments	Transparent boxes	Numbers
Toys	Transparent boxes	Numbers
Drama costumes	Transparent paper bags	Numbers

Look at Figure 2 to see some examples of various products' packaging.



(a) Packaging in wooden, plastic and paper boxes



(b) Packaging in transparent nylon bags



(c) Packaging in an opaque flax and paper bags



(d) Packaging in transparent glasses with lids

**Figure 2:** Packaging for different products

The packaging materials for the products must be:

- i. clean and safe to the users and the environment;
- ii. stable and resistant to all conditions such as rain and heat;



- iii. compatible with the storage environment of the product; for example, products that are not supposed to get wet like cake and some ornaments should be packaged in materials that do not allow moisture to penetrate;
- iv. attractive to the customers in terms of shape and other features; and
- v. suitable to customer's needs, especially in quantity; for example, packages for pupils should preferably be small because pupils may not afford to purchase large quantities.

The products packaged, especially in packets and bags, should be sealed to ensure their quality. However, in order to meet quality standards, it is advisable to package products in accordance with Tanzania's packaging regulations for the domestic market. Likewise, packaging must comply with international regulations for the export market. Each packaged product must be labelled with important information. The information must include (a) the business name, (b) product's name, (c) manufacturer's name and address, (d) weight or volume, (e) list of the ingredients by weight or quantity, (f) instructions on how to use and store, and (g) the date of manufacture or processing as well as the date of expiry. In addition, the labels on the package should have the colour and layout that attract customers. Selling or offering better products or services will convince customers to purchase frequently. This will strengthen the entrepreneur's sales revenue.

The following are the benefits of using both quality packaging materials and valid measurements:

- i. They help to attract customers.
- ii. They enable customers to keep the product for a long time.
- iii. They increase the product's value.
- iv. They facilitate convenient and safe transportation of the product.
- v. They protect customers and build their trust in the safety, quality and quantity of the products based on their value.

**Note:** Services that are related can be packed in a group and being offered as a single package so as to improve their sales.



#### Activity 4

1. Make a visit to a nearby entrepreneurial place and do the following:
  - (a) Explore packaging materials and measurements for selling various products.
  - (b) Identify the packaging materials used. What are their advantages and disadvantages?
  - (c) Identify the valid and invalid measuring devices that are used. Show their advantages and disadvantages.
  - (d) Prepare a report for all you have learned or experienced and give a class presentation.
2. Package various products that you have produced by using appropriate materials and measurements.
3. Make a label for each item and attach it to the item.
4. What challenges did you face in doing the tasks? How did you deal with them?

#### Cheating in business



Think

1. Have you ever made or been subjected to cheating in buying or selling products?
2. What cheating did you make or were you subjected to?
3. How did you deal with the cheating?

Cheating describes various dishonest actions intended to obtain unfair advantages. In business, several ways of cheating can be done by people with whom you associate. Cheating in business can occur in different ways. First a customer can demand a change twice. Secondly, a customer can steal products while the seller is serving other customers. Thirdly, a customer can pay less money. Lastly, a customer can provide false information to other customers. All these types of cheating weaken the business.

Likewise, an entrepreneur can cheat in various ways. A good example of such cheating is to tamper with the measuring devices thus offering items of small quantities to customers. The entrepreneur's cheating also weakens his or her business because when customers detect the act of cheating, they will lose trust in him or her. Therefore, they will be annoyed and no longer buy his or her products or services.

To avoid cheating, selling products must be done carefully. Serve one customer at a time while requesting other customers to wait for a while. Carefully count the money you have received from the customer and return the correct change. If you are not good enough at arithmetic, make efforts to improve. Avoid cheating customers, since doing so, they will be annoyed; they will avoid buying from you in future. Moreover, use attractive language to win your customers.

### Activity 5

1. (a) Under the guidance of the teacher, form groups. Each group should prepare a role-play that shows the effects of cheating in a business. Then, perform it in class.  
  
(b) Write a summary of the lessons learnt in the role-play.
2. Pay a visit to a market or business centre near your school. Find out how customers or entrepreneurs cheat in business and how cheating is dealt with. Write a report on your visit and present it in class.

### Exercise 2

**A. Answer the following questions by choosing the letter of the correct answer.**

1. A skill that enables one to innovate and start a variety of enterprises is referred to as \_\_\_\_\_.  
(a) curiosity  
(b) business  
(c) entrepreneurship  
(d) buying and selling

2. In order for an entrepreneur to be accepted by his or her customers, what does he or she have to do?
  - (a) Identify their needs and deliver products to their home
  - (b) Identify their needs and income
  - (c) Identify their needs and lend them regularly
  - (d) Identify their needs and satisfy them
3. What cheating can be done by some dishonest entrepreneurs?
  - (a) Increasing money change to customers during transactions
  - (b) Tampering with the measuring devices
  - (c) Providing customer care
  - (d) Paying taxes
4. What are the proper materials to be used in packaging products like fruits, cakes, fish and bread?
  - (a) Transparent boxes or paper bags
  - (b) Transparent bottles
  - (c) Large transparent cans
  - (d) Transparent fabrics
5. The following are the benefits of packaging products except \_\_\_\_\_.
  - (a) increasing the value of a product
  - (b) attracting customers
  - (c) preserving a product for a short period
  - (d) simplifying the transportation of products

**B. Answer the following questions:**

1. Identify the three key elements required for the availability of market for a product.
2. Identify five things to consider in choosing a product's packaging material.
3. Mention two valid measuring devices used in product packaging.
4. Explain two advantages of using valid measuring devices in packaging.
5. Why is it important to seal the packaged products?
6. Describe three qualities that the label on the product should have.

## Chapter Nine

### Money management

#### Introduction

*In Standard Five, you learnt about keeping records of income and expenditure, saving money and mobile money services. In this chapter, you will learn about record keeping, types of taxes, preparation of a balance sheet and budgeting. Learning these skills will enable you to monitor flow entry and use of money. Consequently, these will help you to run your entrepreneurial activities efficiently.*

#### The importance of keeping business records

Think



1. What is business record keeping?
2. Why do we keep business records?
3. What are the effects of incorrect record keeping in business?

Keeping business records is one of the principles required in every business. Keeping business records involves writing down all the important business information.

#### Common records kept in small businesses

The common records that are mostly kept in small businesses include: expense or purchase, sales, cash and bank transactions, and details of debtors. However, other businesses may have other more records. These include assets and liabilities, payment to employees, inventory, taxes payable and agreements with customers or suppliers. These records are elaborated as follows:

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1. Purchase or expense record: This is the record that shows the quantities of goods and services bought by your business at any point in time and their costs. It includes: the daily, monthly and yearly record of purchase or expenses. The record includes: written proofs such as purchase or expense invoices, purchase or expense receipts, bank deposit slips and account statements.
2. Sales record: This is the record that shows the quantities of goods and services sold in your business at any point in time and their costs. It is the daily, monthly and yearly record of sales. The record includes: written proofs such as sales invoices, sales vouchers or receipts, bank deposit slips and account statements.
3. Cash transactions record: This is a record of the money that your business receives and disburses every day and the total amount of money in your cash box.
4. Details of debtor's record: This record shows how much your customer owes you.
5. Assets and liabilities records: On one hand, assets record shows the value of your assets and how long each asset has been used. On the other hand, liabilities record shows the amount your business owes to other people or businesses. These are important for managing your business assets and liabilities.
6. Payment to employees' record: It is a timely record of how much you pay your employees. This record is important for managing labour costs. It also record any fringe benefits provided to your employees.
7. Inventory record: This record shows you the value of the stock in your business. If your business stores large amount of raw materials for production or finished goods for sale, you should keep this record.
8. Tax payable record: This is a record of all the taxes that the business is required to pay. Businesses are subjected to different types of taxes, such as value added tax, corporate income tax, payroll tax, capital gains tax and others.



9. Agreements with customers or suppliers record: All agreements with customers or suppliers should be in writing, preferably in the form of a contract. The agreements include: price, delivery and payment terms. This record is important for managing relationships with different organisations and individuals that provide services or goods.

### Written proofs for transactions

Written proofs for every transaction are always required regardless of how small the payment is. Therefore, you should have written proofs for money coming into and going out of your business.

### Written proofs for money coming into business

These include copies of receipts that you give to your customers. In Tanzania, nowadays fiscal receipts are used. For some small businesses where fiscal receipts are not used, a daily cash sales register is used instead. This register has four columns which are: Item, Quantity sold, Unit price and Amount. The columns are used as follows:

**Column 1 (Item):** Make a list of all the items you have for sale.

**Column 2 (Quantity sold):** Every time you sell one item, immediately make a tally in an appropriate cell in Column 2. At the end of the day, count the number of tallies to get the number of items sold.

**Column 3 (Unit price):** Write the unit price of each item.

**Column 4 (Amount):** Calculate the amount received for each item sold by multiplying the figures in Columns 2 (Quantity sold) and 3 (Unit price) in the same row. Finally, work out the total cash received on that day by adding all of the amounts in Column 4. The total will tell you how much cash came into the business from sales of all items per a given day.

You will need a copy of the Daily cash sales register every day, so you need to print or photocopy enough copies to last longer. You can create one Daily cash sales register and then make multiple copies for use every day. Table 1 shows an example of Daily cash sales register.

**Table 1: Example of daily cash sales register**

Daily cash sales register					
Date: 10/01/2020					
S/N	Item	Quantity sold		Unit price (Tsh)	Amount (Tsh)
1	Glass of juice		22	1,000	22,000
2	Cup of milk tea		18	700	12,600
3	Cup of black tea		15	500	7,500
4	Chapattis		20	500	10,000
5	Piece of cake		23	500	11,500
6	Packet of groundnut		15	500	7,000
7	½ Litre mineral water		25	500	12,500
8	1 Litre mineral water		20	1,000	20,000
<b>Total</b>					<b>103,100</b>

### Written proofs for money going out of your business

These include receipts and invoices that you receive when you buy goods or raw materials. When you use money from your cash box for daily expenses, keep the receipts you get for all cash disbursements. For example: Receipts for buying raw materials or goods to resell; Payslips for wages and salaries; and Invoices or receipts for rent, telephone and all other business expenses.

If your suppliers do not provide you with written proofs, make your own by writing down the details of the transactions. You can use a blank sheet of paper to write down the information.

**Note:** An entrepreneur can have a single book where several basic records of his or her business such as cash transactions, bank transactions, sales and purchases can be kept all together. Such a book is sometimes referred to as a Basic record book. However, all the written proofs should carefully be kept.

## **Methods of keeping business records**

There are two major methods of keeping business records. These are paper-based method and computer-based method.

### **1. Paper-based method**

This refers to the use of paper books to keep business records. You can buy ready-made books with an analysis of each record you want to keep. You may also use any other suitable book that allows you to draw the columns for recording information of your choice. The paper based method works well if your business is small and simple, and requires just a few record books or registers.

### **2. Computer-based method**

If your business is large and requires using several record books, a computer can simplify and improve your record keeping. With computer-based method, you can use excel worksheets for keeping records. By using excel worksheets, you can fill in the information in same way as you do with a paper book. In addition, all calculations are easier. You may also use one of accounting software programmes under the advice of accounting expert. The advantages of this method are: It is easy to correct an inaccurate entry; You can quickly find recorded information when needed; and All calculations are made automatically.

## **Importance of keeping and using business records**

### **1. Helps the entrepreneur to control his or her cash**

The entrepreneur's records show how much cash his or her business should have in hand at any time. Therefore, the entrepreneur has to use his or her records to detect and prevent losing or misuse of money.

### **2. Shows the entrepreneur how his or her business is performing**

The business records helps the entrepreneur to identify problems before it is too late. Therefore, the entrepreneur has to use his or her records to find out the causes and solutions when he or she detects something wrong in his or her business. For example, if costs are too high or if sales are falling.

### 3. Show others how the business is performing

The entrepreneur needs proper financial records to apply for loan, to pay his or her taxes and for other business activities. Therefore, the entrepreneur can use the records to show them to the bankers, investors or other interested parties when required.

### 4. Help the entrepreneur to plan for the future

Records show how well the business did in the past and how well it is currently doing. The business trend can be used to determine how well the business will do in the future.

### Read the following case story carefully

Masanja is a furniture entrepreneur. One day, he sold a cupboard worth 1,000,000 Tanzanian shillings. When the customer took the cupboard, he had no cash to pay. He thus, promised to pay at the end of the month. At agreed time, Masanja approached his customer to ask for his money. The customer replied that the cupboard was sold to him on credit worth 900,000 Tanzanian shillings only. There was a serious quarrel between the people. In the end, Masanja had no evidence that he had sold the cupboard on credit worth 1,000,000 Tanzanian shillings. Thus, Masanja had to accept the 900,000 Tanzanian shillings.

#### Exercise 1

#### Answer the following questions.

1. Why did Masanja agree to be paid 900,000 Tanzanian shillings instead of 1,000,000 shillings?
2. Why was Masanja deceived?
3. What was Masanja supposed to do to get his money as agreed?
4. What kind of behaviour was demonstrated by the customer?

### Activity 1

1. Think of the commodities you have made in Vocational Skills subject practicals. Identify them.
2. Suppose you have a business which involve production and selling those commodities. Identify records which you should keep.
3. Prepare a sample sheet to write all important information for each kind of the identified record you wish to keep.
4. Present your work to the class.

### Taxes

Taxes are the main source of government revenue. The government depends on taxes from businesses and other sources. It uses taxes to run its own activities such as building schools, hospitals and roads. In addition, it uses taxes to improve infrastructures related to water, electricity and to pay civil servants' salaries. Paying tax is the responsibility of every citizen. Therefore, everyone should work to earn income and pay tax.

### Types of taxes

1. The tax charged on individual income: This type of tax is known as income tax. This is a percentage of charges deducted after work or business gives you income. In this tax, every income earner is charged a certain percentage based on his or her gross annual income such as salary, self-employment activities, high income from business people, and civil servants.
2. The tax charged on the prices of goods or services offered: An example of this type of tax is the Value Added Tax (VAT). This tax is charged on value-added products from the factory based on the percentage of the product price. This extra amount as charges is paid by the customer through the price of a specific product.
3. Taxes that depend on people's assets: Taxes of this kind are taxes on residential and rented houses, land and farms.
4. The excise duty tax: This kind of tax is charged by considering the value of a particular commodity.



**Read the following case study and then answer the questions in the exercise 2**

Kibonge engages in a business of buying and selling charcoal. He buys this charcoal from the village and brings it to the city for selling. He buys one sack of charcoal for 40,000 Tanzanian shillings and transports to the city for 12,000 shillings. Along the way, there are roadblocks; 5% of the sack price is charged as excise duty on each sack of charcoal.

**Exercise 2**

**Answer the following questions.**

1. If the excise duty is 5%, how much will Kibonge pay for one sack?
2. When Kibonge pays the 5% excise duty and adds its profit of 10,000.00 Tsh, how much will he sell one sack of charcoal upon delivery in the city?

**Balance sheet**

A balance sheet is a tool that shows your business' assets (what your business owns) and the liabilities (what your business owes to others). The balance sheet helps you to find out the value of your business remaining after deduction of all debts from the possessions at particular period. It must be made at least once a year. However, it may be made monthly, quarterly or semi-annually if you wish to evaluate your business on the status of the assets, liabilities and net worth more often.

**Preparation of a balance sheet**

To make a balance sheet, write down the value of the assets and liabilities of your business as shown in Table 2 by going through the following steps:

1. Find the total amount of cash that you currently have in your cash box and your bank account and write it next to number 1.
2. Find out the total balances of your Customers' accounts record and enter it next to number 2. This is determined by whether your business sells to your customers on credit. If so, this means that you will not receive money for the sale until the credit customers pay you. The amount of money that is to be paid by your credit customers

is called your Accounts receivable. You can find out your Accounts receivable by adding all the current balances in your Customers' accounts record. Therefore, this total current balance amount is the one entered next to number 2.

3. Find out the total amount of money that the stock of your business (inventory) is worth and enter it next to number 3. If your business has very limited stock or has no stock at all, write zero next to number 3. If your business has a considerable amount of stock and you kept a record of your inventory, the current balance of your Inventory record shows how much your stock is worth. Therefore, this current balance amount is the one entered next to number 3.
4. Find out the total amount of money that the property and equipment is worth and enter it next to number 4. The property and equipment here should only include items for which you calculate the depreciation, such as buildings or high value equipment. You can work out the current value of your property and equipment by looking at your Asset register. Take the Asset register and look at the remaining value of each item. This is the current value of each asset. The total of the "remaining value" column is the total current value of your property and equipment. Therefore, that total is the one entered next to number 4.
5. Find out the total value of Assets of your business and enter it next to number 5. This is found by adding up all the amounts in steps 1, 2, 3 and 4.
6. Find out the total amount of Accounts payable for your business and enter it next to number 6. This is determined by whether your business buy supplies or materials on credit. If it does, you may owe your suppliers cash for what you have bought. The amount of cash that you owe to suppliers for credit purchases is your Accounts payable. This is a liability because it is money that your business owes to someone else. To determine your Accounts payable, take the current balance from your Creditors' record or add up the amount from your invoices that have not yet paid in cash.
7. Find out the total amount of Taxes payable for your business and enter it next to number 7. Your business may owe the tax authority for income tax on your past profits or for VAT. You can get this amount by

looking at the current balance of your Taxes payable record or your tax bills that you have not yet paid.

8. Find out the total amount of unpaid loans in your business and enter it next to number 8. This is determined by whether your business received any loan for which it is still making payment. If so, the unpaid amount of this loan is a liability. To find the amount of your outstanding loans, look at the balance column of your Loans record.
9. Find out the total liabilities of your business and enter it next to number 9. This is found by adding up the figures in step 6, 7 and 8. This is the amount that your business owes to others.
10. Find out the Net worth of your business by subtracting figure in number 9 (total liabilities) from figure in number 5 (total assets) and enter it next to number 10. This is the amount of your business' assets minus its liabilities.

**Table 2: Example of a balance sheet**

	<b>Assets</b>	<b>Amount (Tsh)</b>		<b>Liabilities</b>	<b>Amount (Tsh)</b>
1.	Cash	250,000	6.	Accounts payable	3,300,000
2.	Accounts receivable	200,000	7.	Taxes payable	300,000
3.	Inventory	4,780,000	8.	Loans outstanding	0
4.	Property & equipment	3,550,000			
5.	<b>Total assets</b>	<b>8,780,000</b>	9.	<b>Total liabilities</b>	<b>3,600,000</b>
			10.	<b>Net worth</b>	<b>5,180,000</b>

If the value of total assets exceeds the value of liabilities as it is shown in Table 2, the difference is entered as net worth on the liabilities side. This means that the business is able to pay all its debts and still has a balance to continue running. If the value of total liabilities exceeds the value of assets, the difference is entered as net loss on the assets side. This means that the business cannot pay all its debts and thus may not be able to continue running.

**Note:** The balance sheets for consecutive periods of a particular business have to be compared so as to find out whether the net capital is growing.

## Budgeting



### Reflection

1. What is a budget?
2. Why is it important?

A budget is a summary of the estimated income and expenditure over a defined period. The money that is earned is referred to as income and the money that you spend is referred to as expenses or expenditures. The budget describes sources of income on one side, and expenditures or expenses on the other side. Therefore, budgeting is the process of planning expenses in relation to income.

## Importance of budgeting

1. It helps to identify key priorities such as buying clothes, buying food, and paying school fees.
2. It ensures that you always have enough money for the things you need.
3. Following the budget helps to keep you out of debt.
4. It helps you to balance your expenses with your income.
5. It makes you accountable to your plans, parents, family members, banks and investors.

## Steps for making a budget

1. Identify the regular and irregular sources of income and expenses within a certain period.
2. Estimate the amount of money from respective sources of income and expenses.
3. Sum up the amounts to get total amounts of income and expenses.
4. Calculate the difference between total amount of income and expenses. That is:

*Total income - Total expenses = Surplus or Deficit or Equilibrium*

When the difference is positive, this means there is a surplus. When the difference is negative, this means there is a deficit. To balance it, you have either to increase your income or cut down unnecessary expenses. Remember that if you borrow some money to balance your budget you may face problems in future. When total income equals to total expenses, this means there is a balance or equilibrium. Table 3 shows an example of a monthly budget for livestock and garden enterprises.

**Table 3: Livestock and garden enterprises monthly budget**

Monthly income	Amount (Tsh)	Monthly expenses	Amount (Tsh)
<b>Regular Income (RI)</b>		<b>Regular Expenses (RE)</b>	
Milk selling	1,500,000	Livestock feeding costs	1,500,000
Vegetables selling	1,350,000	Garden inputs costs	450,000
Fruits selling	650,000	Livestock attendant	400,000
Eggs selling	1,285,000	Garden attendant	400,000
<b>Total (RI)</b>	4,785,000	Transport	150,000
		Savings	1,500,000
		Health care expenses	150,000
		Phone & Internet costs	30,000
		Emergency fund	200,000
		Taxes	95,000
		<b>Total (RE)</b>	4,875,000
<b>Irregular Income (II)</b>		<b>Irregular Expenses (IE)</b>	
Poultry selling	240,000	Vices & diseases control	150,000
<b>Total (II)</b>	240,000	<b>Total (IE)</b>	150,000
<b>Total monthly income (RI + II)</b>	5,025,000	<b>Total monthly expenses (RE + IE)</b>	5,025,000

### Things to be considered for successful budgeting

The budget needs to be accurate, otherwise it will not work. The following are some of the tips on how to be a successful budget maker:

1. Keep accurate and clear records
2. Avoid an unnecessary expenses
3. Beware of the little expenses that are not included in your budget
4. Test your budget for some time to find out if it works



## Activity 2

Consider all your regular and irregular personal or family sources of income and expenses. If you do not know the exact income and expenses of your family, share with the other members of your family, then:

- (a) Formulate a budget for one month
- (b) Is there a surplus or a deficit? Give explanation
- (c) If you have a surplus in your budget, how you would use it?
- (d) If you have a deficit in your budget how would you balance it?
- (e) What decisions have you made to save in your budget?
- (f) What challenges did you face in doing this activity? How did you solve them?
- (h) What lessons have you learnt from this activity?

## Exercise 3

### Section A

Write **TRUE** if the sentence is true and **FALSE** if the sentence is not true.

1. Capital is the amount of money or assets invested for business progress. \_\_\_\_\_
2. Taxes on houses and plots are taxes based on people's property. \_\_\_\_\_
3. A balance sheet is a statement about expenditures only. \_\_\_\_\_
4. Financial records can be kept using computer accounting programmes. \_\_\_\_\_
5. The income and expenditure registers are used to record the incoming money and that is used by the entrepreneur in the business. \_\_\_\_\_

### Section B

Answer the following questions.

1. Mention the types of taxes discussed in this chapter.
2. List any two advantages of paying tax.

3. List any four common records in small businesses.
4. Explain any five possible consequences that an entrepreneur may face if he or she fails to keep his or her records in a proper order.
5. How receipts or daily cash sales register help in running business?
6. Explain four ways in which record keeping will enable the entrepreneur to improve his or her business.
7. (a) Explain the meaning of balance sheet  
(b) Why is it important to prepare a balance for your business?
8. What is the importance of budgeting?

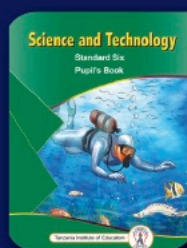
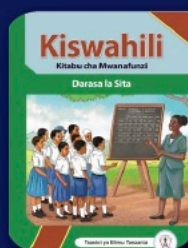
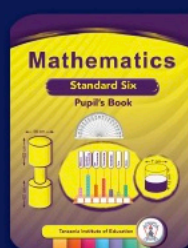
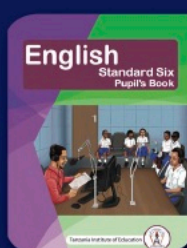
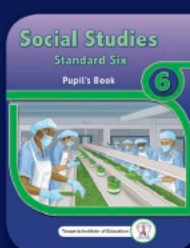
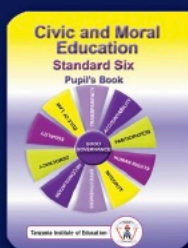
## Vocabulary

Assets	the valuable items such as cash or equipment that the business owns
Basic record book	a book used to record all the money that came into and went out of the business
Contract	a written agreement between two people or groups that is intended to be enforced by law
Fringe benefit	something that the employee gets because of his or her job which is additional to his or her pay but is not in form of money
Invoice	list of items provided or work done together with their cost, for payment at a later time
Liabilities	something or some amount of money that your business owes to someone else, such as a loan or an unpaid bill.
Receipt	written proof that money was received in payment for goods or services
Register	written record containing regular entries of items or details
Voucher	receipt or other written proof of a transaction. The information on the voucher should be transposed into a basic record book daily

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ISBN 978-9987-09-122-5



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