

# TALULAR

## A USER'S GUIDE

Teaching and learning using locally  
available resources

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Teaching and learning using  
locally available resources

*Prepared and published by*

Malawi Institute of Education  
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Malawi

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# Preface

All education is based on the conviction that human thought can be developed and expanded. In the classroom, the teacher, through conversation and constructive questioning, can stir the children's imagination and thoughts, and stimulate their minds into activity. The teacher's ability to think and reason in terms of what can be fetched, made and used grows with experience and commitment, which will bring about expertise and excellence. To give the child the opportunity to create and to obtain experience with knowledge is the best preparation for future creative work. A very important part of this manual is how to obtain, prepare and use locally available resources to promote quality teaching and learning in the classroom. This guide can be used as both a training guide and reference resource for teachers and other educational professionals.

In order to make the work participatory, some activities have been included in the units. Participants are expected to work as individuals, or as groups. A plenary session sometimes follows group work and is meant for consolidation of the group work. The feedback session is for both checking participants' competence in the activities and sharing some experiences about the topic at hand. Teachers are encouraged to be creative and use TALULAR as variously as they can to suit different learners, situations and subjects. For instance, the resources that are suggested for use in developing literacy can also be used in teaching numeracy, HIV/AIDS, democracy, continuous assessment and many other topics. Teachers can also develop their own TALULAR over and above those suggested which best address their needs. It is hoped that participants as well as practising teachers will find the work inspiring and stimulating.

# Acknowledgements

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The Institute is grateful to Gibson Zembeni and Andy Byers for preparing the original draft of the guide. Dr Jane Schubert and Dr Shirley Miske both of AIR deserve thanks for encouragement and reading parts of the original draft respectively. Gratitude should also go to Charmaine Llagas for assembling various Talular materials by Zembeni and Byers into the first draft of the Talular user's guide.

Cecilia Kamlongera, Eastman Katoki Simbeye, Joyce Kasambara and Max J Iphani reviewed in a workshop setting the whole manual and made many useful suggestions. Rawlings Demba re-drew some of the illustrations in the original manual. Jayne Matemba Bvumbwe and Masozi Christina Chisambi typed and typeset the final draft. The whole work of reviewing and preparing the manual for printing was coordinated by Max J Iphani of Malawi Institute of Education who also edited the final draft. Finally, the Institute is grateful to many other individuals too numerous to list but whose contributions were nonetheless invaluable.

# Unit 1

## TALULAR

### Introduction

Many teachers think of teaching and learning resources as commercially produced instructional materials only, such as printed charts, pupils' books, teachers' guides, globes, marker pens and radios. The government is normally seen as the only source of these materials. If they are not provided, teachers have a ready excuse for not using teaching and learning resources. Such a narrow view of what constitutes educational resources can negatively affect the quality of teaching and learning.

This unit provides insights into what constitutes a teaching and learning resource and the justification for the use of TALULAR. Emphasis is on effective and efficient use of what is locally available.

### Objectives

By the end of this unit you will be able to:

- explain the meaning of the term talular
- identify types of locally available teaching and learning resources
- explain the purpose of TALULAR
- identify the challenges of using TALULAR
- create a TALULAR bank

### The meaning of the term TALULAR

TALULAR (pronounced ta-lu-lar or talu-lar) is an acronym that stands for Teaching And Learning Using Locally Available Resources.

### Types of locally available resources

#### Activity 1

Identify locally available resources around your school which can be used in teaching and learning.

The resources you may have identified can be categorized as follows:

#### Human resources

Human resources are people who facilitate learning apart from the class teacher. For example, guest speakers from the community such as craft persons to assist in skills development; village heads to talk about their duties or some cultural practices or historical events; medical personnel to discuss health issues and the police to talk about crimes. Teachers may also collaborate with other



teachers through joint planning, team teaching, mentorship, peer observation and supervision. Pupils can be used to facilitate their own learning through demonstration, experiences, sharing their dramatizing events and collecting or producing learning resources.

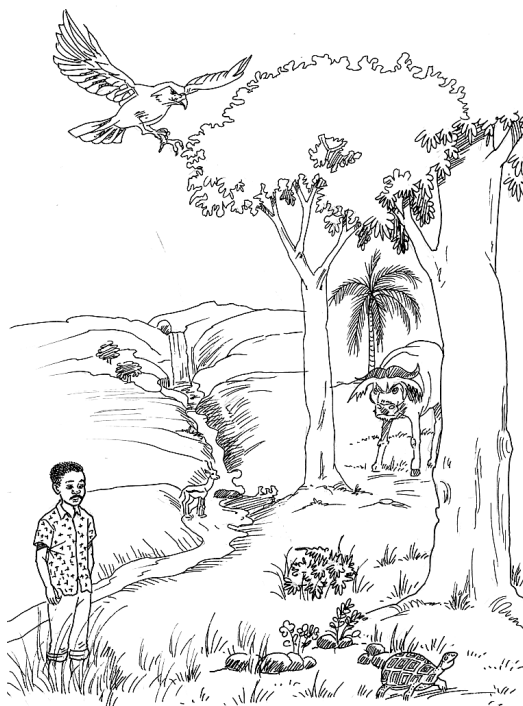
### **Animal resources**

- Farm animals such as cattle, goats, sheep, fowls and pigeons
- Pets such as cats and dogs
- Wildlife such as lions, elephants, crocodiles, monkeys, guinea-fowls and other birds
- Animal products such as skins, leather, milk, cheese and meat

### **Plants**

This category includes:

- Fruit trees such as mangoes, guavas, peaches, oranges and apples
- Vegetables such as cabbage, lettuce, carrot, tomatoes and spinach
- Tubers such as potatoes, yams, cassava and beet
- Grass
- Indigenous trees
- Exotic trees such as blue-gum, Cinderella and pine



**Animal and plant resources**

## **Activity 2: Animal and plant resources**

Explain how animal and plant resources can be used in the teaching and learning of different subjects.

### **Material resources**

This category includes objects such as charts, water, soil, stones, bottles, tins, cloth and plastic sheets.

## **Non-material resources**

**TALULAR** also involves the use of non-material resources such as

- Time
- Personal knowledge, skills, talents and experiences
- Personal qualities such as sense of humour, perseverance
- Language
- Culture eg games, songs, dances, art, proverbs

## **Other types of resources**

**Relia:** These are real objects used as teaching and learning resources. For example, showing a stone, a car, a leaf or a goat during language teaching when these form part of the topic for discussion. Sometimes relia may be difficult to use. For instance, some of them may be dangerous to handle such as live snakes, bees or crocodiles. Other relia may be too large to be brought into the classroom or too small to be seen with the naked eye. In such circumstances it is convenient to use a model.

**Models:** a model is a recognizable representation of something real.

**Pictures and drawings:** Photographs or drawings may be used as teaching and learning resources. Pictures or drawings can be obtained from newspapers, magazines and textbooks or may be specially drawn.

## **Benefits of TALULAR**

### **Activity 3**

Explain why teachers should use TALULAR in their lessons.

The use of TALULAR serves to:

- promote meaningful communication
- ensure better retention of knowledge
- provide first-hand or direct experience with the realities of the social and physical environment
- stimulate and motivate students to learn
- help develop interest in other areas of learning
- encourage active participation, especially if students are allowed to manipulate the materials
- help simplify complicated topics
- reduce the need for a teacher's verbal expression
- consolidate knowledge, skills and attitudes that students have already learned
- help summarise main points
- encourage creativity
- cost little or nothing, thus increasing sustainability
- encourage the reduction, recycling and reuse of litter hence they are environmentally friendly

### **Activity 4**

Identify ten things from your local environment that you could use in teaching a particular subject.

How many subjects could you use each one of the things for?

How could you use each one of the items?

## **Challenges of TALULAR**

The provision of resources that are locally available is a challenge for the following reasons.

- It is a challenge to know which resources can be used for teaching and learning.
- It is a challenge to know which one thing can be used in several situations or subjects. For example, bottle caps can be used in several situations such as counting, identification of numbers, identification of letters of the alphabet and word formation, as containers, as coins and as wheels to a car model.
- It is a challenge to know which different things can be used in the same situation. For instance, sticks, stones, seeds, leaves, coins, bottle caps, tins, clay balls and seed pods can be used as counters.
- It is a challenge to know how to use talular appropriately.

## **Creating a TALULAR bank**

A teacher can create a TALULAR bank in the following way:

- Study syllabuses, teachers' guides and pupils' textbooks and identify the teaching and learning resources that have been suggested
- Visit the local environment and identify resources available
- Collect the objects you have identified. You may use pupils or the community to help you
- Sort out the resources into those to be used directly and those that require modification or recycling to suit your convenience
- Record the samples for easy access during production or use in teaching
- Keep the collected TALULAR in a storage place. Containers are needed. Label the containers for easy access. This is your TALULAR bank.

# Unit 2

## BENEFITS OF TALULAR

### Introduction

As implied in the previous unit, there are many benefits of using TALULAR. This unit discusses these benefits in more detail.

### Objectives

By the end of this unit, you will be able to:

- describe the benefits of using TALULAR

### Activity 1

Suggest the benefits of using TALULAR.

The benefits of using TALULAR may be summarized as follows:

#### Encourages creativity

TALULAR, how they are made and how they are used in the classroom give teachers an insight into how they can stimulate creativity in learners. For example, simply showing learners a car is not as effective in evoking their creativity as giving them some wire or clay for them to come up with their own car models.



**Motivates learners**

Since talular are readily available in the local environment, they are within the experience of the student and using them fulfills the principle of going from the known to the unknown to capture learners' interest and captivate them to learn.

**Promotes variety**

TALULAR enables the teacher to organize a variety of activities and contexts to enhance the effectiveness of teaching and learning.

**Promotes productivity**

An educated community or society is a productive society. The community benefits from it and this evokes their interest in the education of their children. Consequently, community members are encouraged to contribute various objects for modification and use in the school.

**Transformation**

TALULAR promote effective transformation through acquisition of knowledge, skills and positive change in attitudes and behaviours.

**Cost effective**

TALULAR are affordable, often costing little or nothing since the materials are obtained from the local environment.

**Sustainability**

TALULAR encourage reduction of litter, recycling and reusing of materials while emphasizing the value of resources in the local environment.

**Community participation**

TALULAR promotes community participation in the education of their children and thus promotes ownership of schools and what goes on there.

**Promotes success in school**

TALULAR are instrumental to bringing about success in teaching and learning because the teacher is encouraged to:

- use learners' experiences as a learning resource
- not to view the classroom walls as a boundary
- involve all learners in the learning process
- develop learners' confidence in their ability to investigate

# Unit 3

## DESIGNING, DEVELOPING AND USING TALULAR

### Introduction

This unit is concerned with the designing and development of TALULAR. It is useful for teachers to be able to design and develop their own talular because they are familiar with their pupils and the environment they work in.

### Objectives

By the end of this unit, you will be able to:

- explain the meaning of the term design
- describe criteria for designing TALULAR
- explain stages in the design process
- explain aspects of designing
- explain the advantages of designing and producing your own TALULAR

### Criteria for designing TALULAR

To design is to prepare a plan or sketch of something to be made or assembled. Design, as a noun, is a drawing or an outline which is used as a guide to making of something. The following criteria should be considered when designing and producing TALULAR. They should be:

- attractive to hold learners' interest
- accurate and up-to-date
- appropriate for learners' level of understanding
- suit different learning styles
- relevant to the syllabus topic
- bold and bright so that everyone can see
- clear for learners to get the message
- brief; carrying essential information only

### Stages in the design process

#### Activity 2

Working in groups, identify the stages you would go through when designing TALULAR.

The following are the stages in the design process:

#### Analysing the situation

- identify the need
- put yourself in the situation and image how learners would feel
- record your observations and thoughts

## **Answering questions**

The following questions are useful when designing TALULAR:

- 1 Who will use it?
- 2 What is the practical function of the design?
- 3 What part does appearance play in the design?
- 4 What materials are suitable for the design?
- 5 What construction methods are appropriate to the design?
- 6 What are the likely social and environmental effects of the design?

## **Planning**

Come up with an outline of how you are going to design.

## **Aspects of designing to be born in mind**

### **Symmetry and asymmetry**

Symmetry refers to a situation in which elements in a layout can be grouped into two equal parts by drawing a line through the central point of a design or picture. A picture can be symmetrical with regard to the horizontal or the vertical axis or both. Asymmetry, on the other hand, refers to a situation in which any line drawn through the central point divides the picture or design into two unique parts.

### **Design elements**

To achieve a desired effect one can use design elements. These are colour, shape, size, space, line, arrows and italics.

### **Production**

Production can include taking measurements, marking out, cutting, moulding, casting, fabricating, blazing, welding, pinning and joining.

### **Labelling**

When labeling, the following guidelines may be useful:

- write names of equal values in the same style and size
- in general, keep your labelling in the horizontal
- You could number places in a map or part of a diagram and write the names/labels outside it.

## **Advantages of designing and producing your own TALULAR**

Designing and producing your own TALULAR has the following advantages:

- It is less expensive than buying commercially produced resources.
- You can design and produce TALULAR to suit your purposes and your learners' needs.
- You can choose those that are directly relevant and appropriate to your local community or situation.
- Learners can work with you in planning and making the TALULAR available.
- Using your own TALULAR develops a sense of ownership and pride.

# Unit 4

## DRAWING SKILLS, A TALULAR RESOURCE FOR CLASSROOM COMMUNICATION

### Introduction

Classroom communication is enhanced by visuals, either through objects or illustrations. Visuals are resources that can be used in a lesson for pupils to see what the teacher is describing. Illustrations are drawings on the chalkboard or on chart paper. The art of drawing for classroom communication is extremely important to teachers and those who are interested in effective visual communication. Unfortunately, drawing is an underestimated talular resource because many teachers say drawing is difficult because they are not artists. This unit is intended to demonstrate how drawing can be done more effectively.

### Objectives

By the end of this unit, you will be able to:

- explain the meaning of the term drawing
- explain the meaning of the term proportion
- draw various objects for use in teaching
- apply knowledge to different teaching situations
- produce TALULAR paints for drawing

### The meaning of drawing

In order to make drawing simple, it is important to understand drawing and what it entails. Emphasis is on exercises that promote flexibility of the hand, freehand drawing, and the fact that the best drawings are made when the artist relaxes his/her body and limbs. The basic structures that constitute the drawing alphabet make it easy to draw step-by-step by simply joining lines to create desired objects.

### Activity 1

Express in your own words what you understand by the term drawing.

Drawing can be defined as the organization or arrangement of lines. Arrangement of lines refers to joining lines such as verticle, horizontal, slanting, zigzag and curved. The basic shapes produced by joining lines make the drawing alphabet. In order to make drawings simple, an artist draws the general outline of an object first and adds details later. Everyone can draw, only that those whose drawing skills are dormant or latent appear less artistic whereas those whose drawing skills are active or practised appear more artistic.



## Freehand drawing

The art of drawing for communication is important to teachers and those who are engaged in the delivery of instructions. The introductory exercises here are part of a stage by stage approach to simple drawing. Relax and try these to start:



The other important aspect is the size. Make drawings big. Muscle flexibility works better with sizeable artwork. Allow the body and limbs to move freely at a good speed. Now try to work on these structures fast:



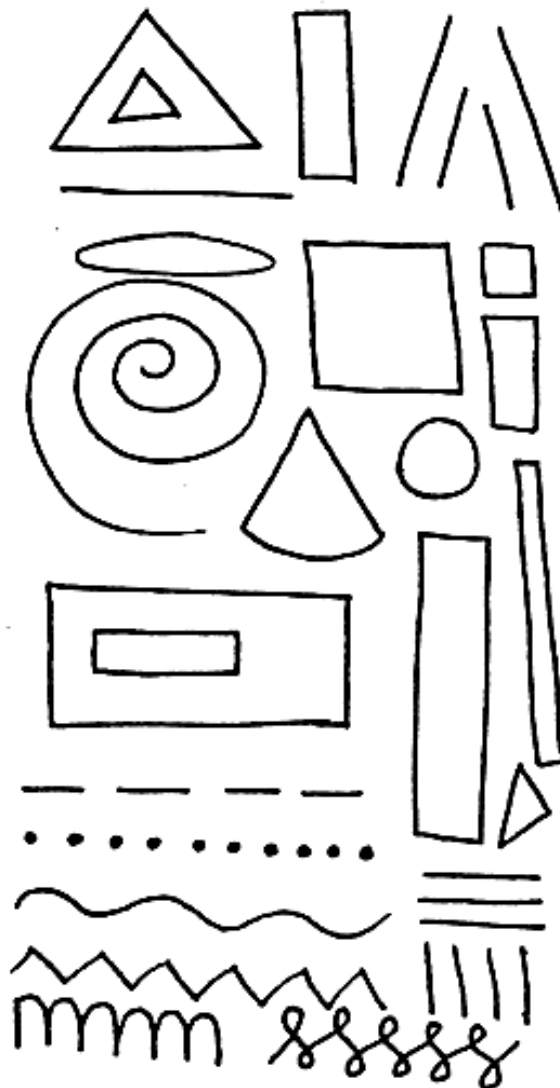
## Using the drawing alphabet

The drawing alphabet comprises lines and basic structures used to create simple drawings. Any possible shapes you can make with the basic structures mark the beginning of your ability to draw. There is no limit to the number of shapes you can produce.

### Activity

- 1 Explain what you understand by the term proportion.

- 2 Practise drawing basic structures and geometric shapes such as rectangles, squares, triangles, cones, circles, cylinders, spheres and cuboids.



- Proportion is the relative size of an object. This means the size of what is drawn compared to other parts or objects around it.
- Make drawings big to allow for its development.
- Practise regularly throughout the period you are engaged in drawing activities and application of drawing skills in particular contexts.
- Draw freehand various objects as much as possible to develop confidence.
- Allow the body and limbs to move freely at a good speed.
- Do not cancel a drawing unnecessarily.
- Use your imagination to discover other possibilities in coming up with other shapes.
- You can use pencil, charcoal or chalk to make your drawings.
- More complicated shapes can be built up from simple shapes such as square boxes or spheres, circles or cylinders, triangles, cones and pyramids.

## Drawing other things step-by-step

The basic structures and geometrical shapes that you have made are important in drawing. They create a starting point for other drawings by combining selected or appropriate structures that make meaningful representations.

### Activity 3

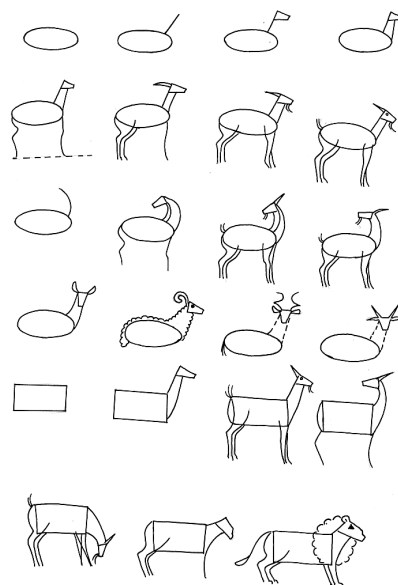
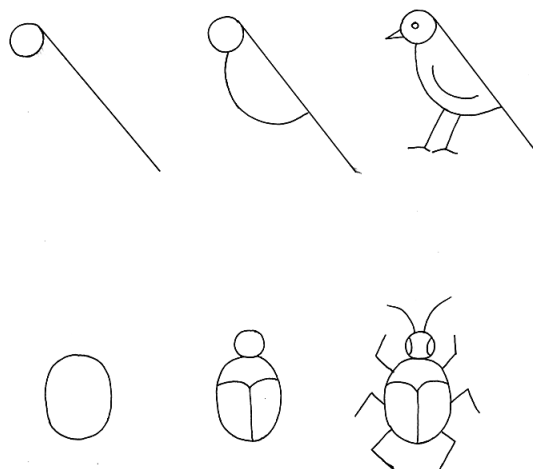
- 1 Explain why it is important to draw something step by step.
- 2 List down the basic structures you would use to draw a human figure step by step.

Draw some match stick figures.

Human figures are often regarded as the most difficult to draw because they have complicated shapes and can move into a considerable diversity of positions. Simple methods of drawing make the drawing of human and animal figures less frightening. Thinking of the general outline or the whole first before adding details is the norm. Drawing anything step-by-step simplifies the process of coming up with drawings. For example, the human figure may basically be made up of three ovals, two curved lines and some lines for the limbs. This can be summarized as:

- head - small oval
- chest - a big oval
- hips - a small oval
- neck - curved lines
- spine - long lines
- foot - a triangle

The body outline can then be added to give the frame some flesh. Finally, clothes may be added to complete the figure. Birds and other animals can also be drawn from basic shapes step-by-step.



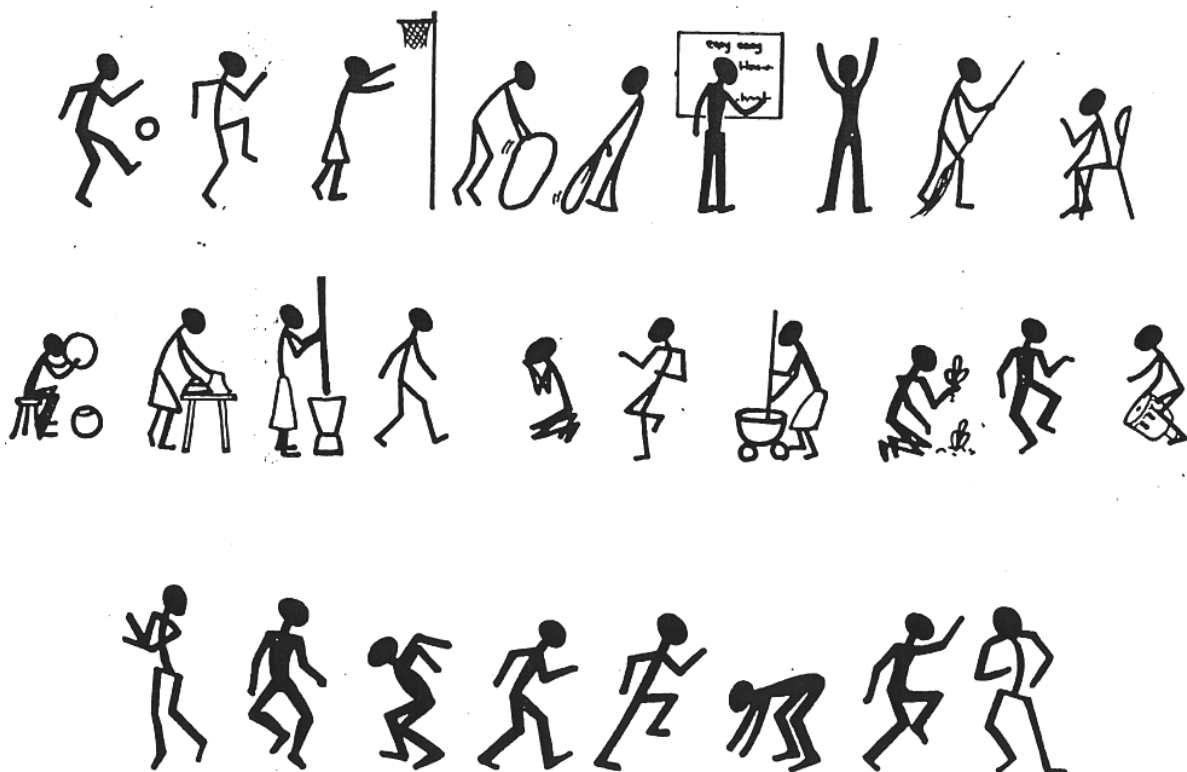
Drawing step by step

## Drawing action matchstick figures

Teachers often need illustrations to make a point clearer or reduce the amount of talking when explaining something. Action matchstick figures drawn quickly are equally as attractive as advanced action figures. Matchstick figures are simple and time is saved for actual teaching, instead of drawing an advanced figure.

### Activity 4

Draw matchstick figures to illustrate running, kicking a ball, digging, jumping, dancing, cooking and writing.

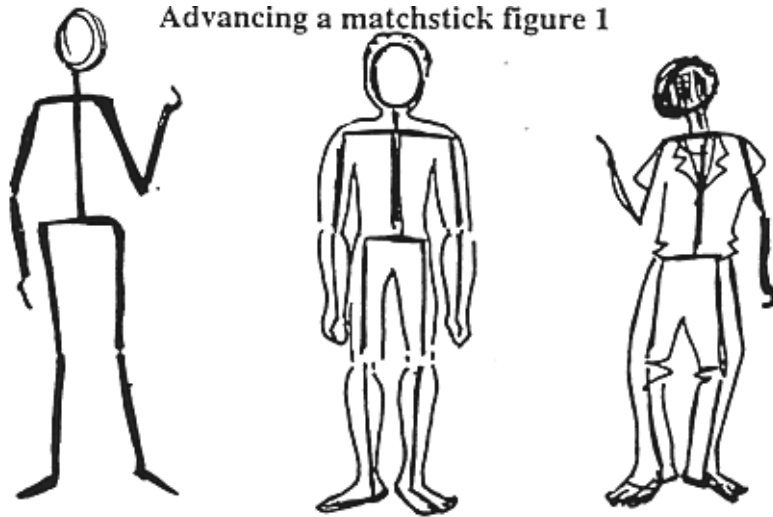


Action figures

### Activity 5

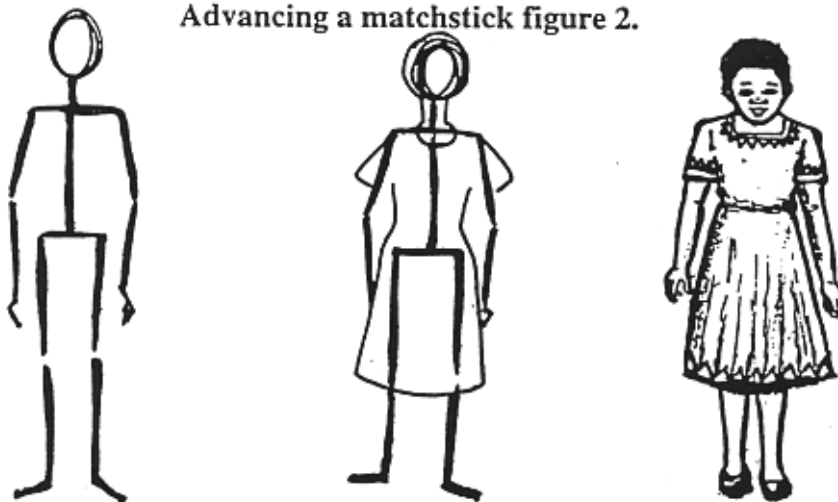
- 1 Draw matchstick figures with body parts such as head, neck, trunk, arm, hands, legs and feet as shown.
- 2 Add a few more lines and change the match stick figure into a woman.
- 3 Draw another matchstick figure and change it into a man.

Advancing a matchstick figure 1



Changing a matchstick figure 1

Advancing a matchstick figure 2.



Advancing a matchstick figure 2

## Drawing and shading

Shading can be done in pencil or charcoal to improve the impact of a drawing. When shading, use a soft lead pencil or sharpened charcoal to give a wide range of tones from light grey to dense black. Tone refers to the quality of colour or shading.

Colour is used in a drawing for a variety of purposes:

- through colour we see detail and variation in the features of what is drawn, as our attention is drawn from one part of the drawing to another
- making a drawing look attractive
- emphasis or highlighting, that is, making some features stand out
- representation, that is, using colour to stand for something, for example, green for vegetation, blue for water and brown for high ground
- expressing emotions. For example, colours can give a sense of warmth or coldness; warm colours include red, orange, and yellow; cool colours include violet or purple, blue and green

- association, that is, through our experiences, we come to associate different colours with particular situations, products or designs; examples include red for danger, green for safety, white for cleanliness, and so on

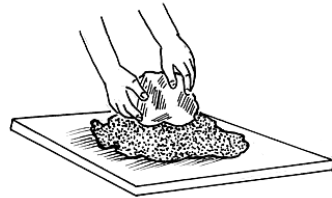
## **Resources required in the production of talular paints**

The following are some of the resources required in making talular paints:

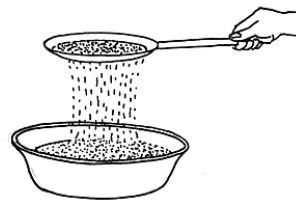
- clean bottles with lids for storage
- stones for crashing
- mortar and pestle for grinding
- scissors for cutting
- hoes for digging
- leaves, roots, stems
- bricks
- soils
- sieve
- water for mixing as well as washing
- a stove and tins for boiling as well as washing
- a sieve for refining the powder from brick, chalk, charcoal, soil, lime or white wash
- a piece of loosely woven cotton cloth or silk for filtering
- a funnel for filtering
- tissue paper for filtering
- cups for storage
- plates for storage
- tins with or without lids for storage
- plastic bottles cut to size for storage

## **Activity 9**

- 1 Go into the immediate environment and experiment making paints with soil/clay, vegetables (flowers, fruits, leaves, bark, roots) and other dyes or colours.
- 2 Take some of the materials, process them and make your own samples of talular paints. Store your paints in containers.



1. GRIND MATERIAL WITH STONE



2.2. SIEVE IF NECESSARY



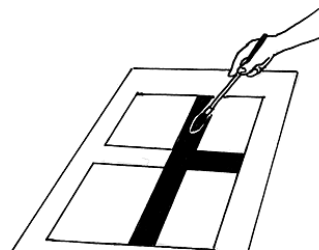
3. ADD WATER



4.4. ADD STARCH OR SUGAR TO THICKEN



5. STIR



Producing talular paint

### The following tips may also be useful

- Crush and soak flowers, leaves, fruits, bark or roots in water for two or more days
- filter the liquid with a loosely woven cloth
- boil the remaining soil particles with a little water for one or two minutes; add this to the liquid you obtained from crushing
- store dyes in sealed bottles or tins; label and store away from strong light
- add sugar to the water to make the paint more adhesive
- crush chalk, clay/soil, and brick or grind into powder, then mix the powder with glue
- mix clay with charcoal to produce different shades
- grind charcoal into powder, mix it with glue and paint; this can be used for writing numbers, letters, words and sentences
- crush and squeeze berries to produce a red colour
- crush hibiscus flowers to produce a red colour
- crush green pawpaw, pumpkin and avocado leaves to produce a green colour
- soak mango bark to produce a yellow colour
- crush curry, dry it and produce a yellow colour; the powder that is made should be stored in bottles or tins
- over-roast some nuts; use these to create a brown colour in your drawing
- mix ash with glue to obtain different shades of grey

Continue to experiment with colours with materials such as ink, crayon, coloured chalk, and felt pens or dead markers.

### **TALULAR resources for continuous assessment**

TALULAR can contribute to effective teaching through the production of valid continuous assessment instruments, construction and administration of remediation tasks and enrichment tasks.

### **Activity 3**

State reasons why some pupils may not do well in continuous assessment.  
Report your work in a plenary session.



# UNIT 5

## THE COMMUNITY, A TALULAR FOR THE SCHOOL

### Introduction

It is necessary for local communities in which schools are situated to participate in managing the schools. In order to achieve this, there should be a cordial relationship between the school and the community. This unit discusses how the school can use its community as a source of teaching and learning resources.

### Objectives

By the end of this unity, you will be able to:

- state in what way the school is a resource to the community
- describe different ways in which the community is a talular resource for the school
- explain the importance of visits to the community by school staff

### The school, a resource for the community

The school is an important resource for the community.

### Activity 1

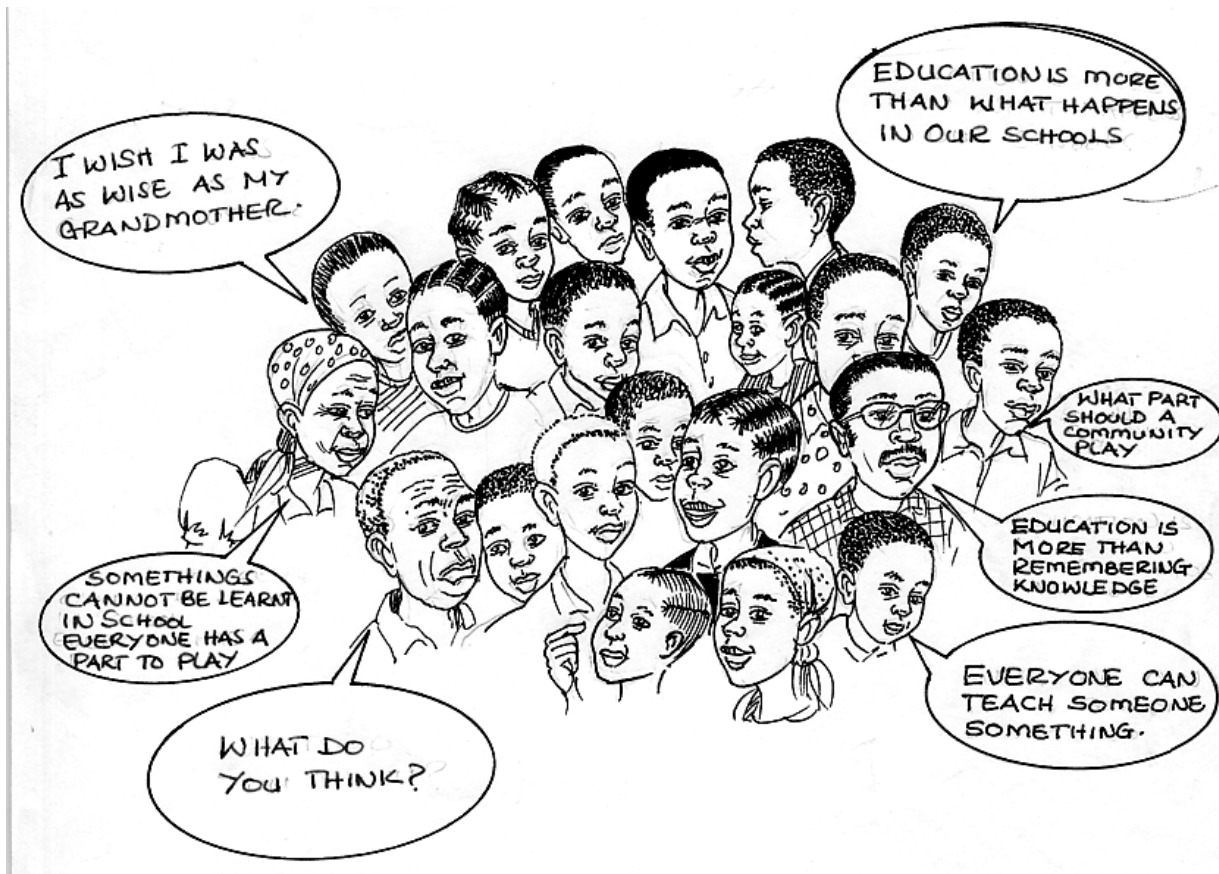
Discuss in what way the school is a resource for the community.

The school is an important resource for the community in the following ways:

- can function as a centre for adult literacy classes
- members of the community can use school buildings for meetings
- community members use school grounds for sports
- schools compile the history of the area and make the information accessible to members of the community
- schools sensitise the community on various issues
- school leavers take up leadership positions in the community and participate more effectively in development activities

### The community, a talular for the school

The community is an important resource for the school.



The community can play a role in educating children

## Activity 2

In what way is the community a TALULAR resource for the school?

The community is a resource for the school in a number of ways.

The community can:

- feed school children
- help in teaching various skills
- assist in construction of school infrastructure
- assist in making schools more accessible by constructing roads and bridges
- provide counselling services on various issues to children
- help in disciplining children
- provide security to children to and from school
- provide resource persons
- assist children with homework
- send children to school in good time
- provide the school with land for sports or agricultural activities
- provide supplementary reading resources such as books, magazines and newspapers

# UNIT 6

## TALULAR FOR DEVELOPING NUMERACY

### Introduction

Numeracy is essential in the life of every individual and the society to which they belong. It is therefore important that every effort be made to develop numeracy in every member of a community or society or nation. Many strategies can be employed in the development of numeracy. One of such strategies is TALULAR. This unit will discuss in detail how TALULAR can be used in the development of numeracy.

### Objectives

By the end of this unit, you will be able to:

- describe TALULAR for teaching pre-number work
- explain how TALULAR can be used for developing numeracy
- make sample TALULAR for teaching numeracy
- use TALULAR to develop numeracy

### Pre-number work for numeracy

TALULAR can help to prepare children for learning numeracy.

### Activity 1

Identify and describe pre-number activities for developing numeracy.

The following are some of the pre-number activities that pupils can do as a foundation for numeracy development:

**Sorting/classifying objects** - Pupils can collect various TALULAR from the school environment such as bottle tops, beans, stones, sticks, leaves and seedpods. They can be asked to name the objects collected and put them into groups according to similarities and differences in terms of size, colour, use, and shape.

**Matching objects** - This involves putting objects similar in characteristics side by side. Pupils are given two groups of objects and are asked to pair objects from one group to other objects in another group.

**Comparing and contrasting objects** - This is a process of describing similarities and differences between objects. Some of the features to consider in comparing and contrasting include size, weight, length, volume, colour and height.

**Ordering objects** - Ordering objects involves arranging things according to given characteristics such as length, size, volume, weight and height. For instance, pupils can arrange groups of objects from that which has the least number to that which has the most.

**Mixing objects** - This is putting objectives of different characteristics in one group. For example, pupils can put bottle tops, beans, stones and coins in one container and later find out the quantity of each kind of object in the mixture.

**Joining objects** - This involves fixing one or two objects onto another in order to extend its length or width or to form a given shape.

## **Developing numeracy through TALULAR**

The need to give learners the experience of handling concrete objects cannot be overemphasized. Numbers do not mean anything unless they are associated with real objects. TALULAR is one of the most convenient vehicles in promoting the link between reality and numbers. For example, manipulation of objects is easier than the use of symbols.

Working with TALULAR is real and interesting, so the learner can be motivated to go further. In this way, learners will learn to perform and understand mathematical operations.

## **Sample TALULAR for teaching numeracy**

Chart paper and other forms of paper are among the TALULAR that are mostly used in producing number cards, number grids, word cards, and reading charts. Here are some tips on making chart paper and other forms of TALULAR.

### **Chart paper**

#### **Materials**

- maize porridge
- A4 size sheets of paper printed on one side, exercise book sheets or covers
- Brushes
- Scissors or razor blades
- Chart paper written on one side
- Large board paper eg old calendars and used posters
- Large envelopes

#### **Method**

- With a brush, apply some porridge along the length of an A4 size sheet of paper 2 cm from the edge, with the blank side of the sheet facing upwards
- Take another sheet and let 2 cm from the edge along the length fall over the porridge area with the blank side facing upwards. Exercise book sheets, exercise

- book covers, calendars or large envelopes may be used.
- Press over the joint for the two sheets to stick together. Two sheets of A4 size paper make an A3 size sheet. You can make chart paper of your size by pasting them with the brush and the porridge.
- Cut out any pieces that may be sticking out along the edges after pasting in order to have straight edges.

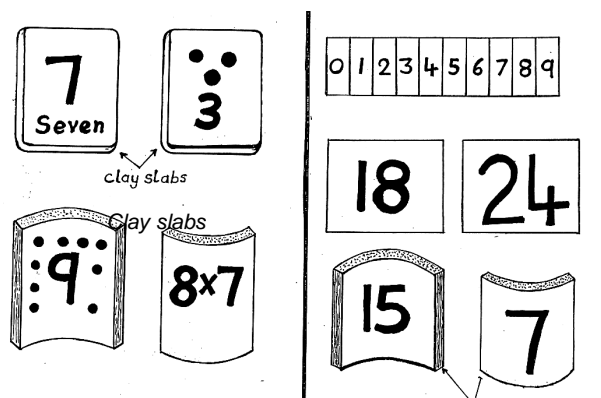
## Number cards

### Materials

- Scissors, razor blades or knives
- Biscuit boxes, surf boxes, milk boxes, shoe boxes, fruit juice boxes
- Cartons or cardboard
- Used envelopes (large and small sizes)
- Exercise book sheets, A4 size sheets printed on one side
- Porridge
- Brushes
- Used chart paper written on one side
- Old calendars
- Wrapping or mahewu packets

### Method

- Open the boxes and clean them if necessary
- Cut strips according to the size you want
- Longer strips may be cut out of old calendars or used chart paper (written on one side), chart paper, cartons or cardboard
- If the strips have prints, the prints may be covered by pasting small pieces of paper from the A4 size sheets with the blank side facing upwards.
- Envelopes are normally written on one side. The reverse side can be used for writing. Smear some porridge inside the envelope to close it and make it stiff.
- If the envelope is written on both sides, open it out. Cut out the flaps or paste them so that the inside part is free for writing.
- Some strips may be cut from exercise book sheets, exercise book covers, A4 size sheets printed on one side, or off-cuts from a printery.
- If the strips are flimsy, several pieces may be pasted together with the porridge to create stiff strips.



Bamboo reading and number bloc

Please note that there are many other talular resources that have good surfaces for writing such as pieces of plywood, split bamboo pieces, match boxes, toilet paper

tubes, old files, milk bottles, white or yellow plastic sheets and planks.

## **Number line**

A number line is a line drawn on a strip of paper, or wood. It is used for teaching positive and negative numbers. The number line may also be used as an introduction to graphs.

Sometimes it is difficult to understand why  $-8 + 6 = -2$ , or  $-4 - 2 = -6$  without the number line. By means of the number line the above expressions can easily be explained. For example, in  $-8 + 6 = -2$ , find  $-8$  on the number line, then move six spaces to the right, and you will discover that you stop at  $-2$ . Similarly  $-4 - 2 = -6$ , find  $-4$  on the number line, then move two spaces to the left. You will stop at  $-6$ .

## **Materials**

- Sheets of paper
- Pencils, crayons or pens
- Scissors, razor blades or knife
- Selo tape, gum, thick maize porridge

## **Method**

- Cut strips of paper 1 metre long and 8 cm wide
- Draw a straight line along the top edge of the strip
- Find the mid-point of the number line and write a zero and all the negative numbers  $-1$  to  $-10$  on the left hand side of the zero
- Stick the strip of paper to the wall with selo tape or thick maize porridge

Please note that a piece of cardboard or wood may be used instead of paper. It is also possible to draw the number line on the floor or ground to make the lesson more participatory by letting learners walk along the number line to arrive at a certain number.

## **Number strip**

This is a long strip of paper made by joining several strips of paper. It consists of numbers from zero to whatever limit. It is used for number recognition as well as dealing with the four mathematics processes of addition, subtraction, division and multiplication.

## **Materials**

- Sheets of paper
- Chart paper
- Pair of scissors, razor blades or knives
- Selo tape, gum, maize porridge or latex
- Sticks
- Cartons

### Method

- Cut several strips of paper and join them with selo tape or porridge (or other forms of glue)
- Several A4 size sheets of paper (written on one side) may be joined together to make a long strip of paper
- Write numbers on the strip of paper. Make the numbers big and bold to enhance legibility
- Provide rollers by fitting one stick to the left hand side of the strip and another stick to the right hand side, along its width, with glue, porridge, selo tape or by simply tying with a string.
- Make four holes, two at the roof of the carton and two other holes at the bottom part of the carton
- Fit the lower ends of the sticks into the bottom holes and the upper ends of the sticks into the roof of the carton
- The number strip is now ready for use
- Make sure that the number strip is fitted in such a way that only one number is shown or seen at a time
- With the rollers (sticks) you should be able to move backwards and forwards, and be able to do the following activities:
  - What number is this? (recognition)
  - If we move forward two steps, at which number will we be? (addition)
  - If we move backwards four steps, at which number will we stop? (subtraction)
  - What is this number multiplied by 8? (multiplication)
  - How many times does 5 go into this number? (division)

### Mathematics puzzle cards

A mathematical puzzle is a number problem the teacher gives to learners to practise all mathematical processes in order to their learners' thinking or consolidate a particular concept. There are many different kinds of mathematical puzzles. The form they take is determined by whoever devises them.

### Materials

- Sheets of paper
- Used envelopes
- Cardboard
- Pencils, crayons or pens
- Pair of scissors, razor blades or knives

### Method

- Cut 15 cm square pieces of paper.
  - Write appropriate numbers on the cards to suit each number puzzle you want.
- You may also write on the reverse side of used envelopes as shown below:



- Cut as many pieces of paper as possible. Cardboard is useful here. Learners may complete the mathematical puzzle cards in groups.

## Number grid

A number grid is a chart with numbers written in boxes or squares. The numbers may range from 1 to 100 or they may go beyond 100. Learners are asked to identify or recognise numbers. The number grid can also be used to practise all four mathematical processes. It is also possible to have blank squares or boxes on the grid and have the numbers for those squares written on separate cards for pupils to choose and put in the appropriate blank square.

### Materials

- chart paper
- cardboard
- ruler (split bamboo pieces make good rulers)
- pencils, crayons or pens
- maize porridge or glue
- string
- pair of scissors, razor blades or knives

### Method

Draw a hundred squares on chart paper

Write numbers ranging from 1 to 100

Paste the chart to the cardboard

Tie a string along the top edge of the cardboard for hanging

You can stick gum or thick maize porridge on the back of each card that is to be matched with a blank square or with another number on the grid

## TALULAR multiplication calculator

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

A TALULAR MULTIPLICATION  
A TALULAR multiplication calculator

The multiplication calculator is a chart or number grid specifically designed to enhance calculation of multiplication. To use the calculator in a participatory way, it should be hung on the wall and one or two learners may be requested to show the class how they arrive at an answer on the calculator. To find the product of any two numbers, for example,  $7 \times 8$ , take one stick and place it horizontally along the line of



squares where 8 marks the first square. The two sticks will cross each other at 56. Therefore,  $7 \times 8 = 56$ . The answer to any multiplication sum or sentence is found where the sticks cross each other when one is placed horizontally and the other one is placed vertically on the calculator.

### Materials

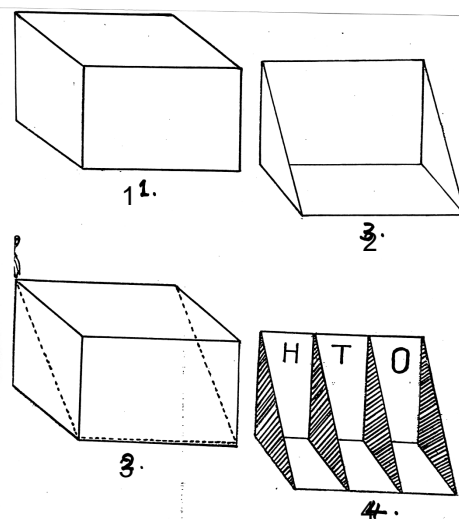
- chart paper
- cardboards
- rulers
- pencils, crayons or pens
- porridge, gum or glue
- scissors, razor blades or knives
- strings
- two sticks

### Method

- Draw 121 squares on chart paper
- Leave the first top square blank
- Write numbers 1 to 10 along the top line of squares
- Write numbers 1 to 10 below the blank square, along the left hand side line of squares
- Then for every number on the left hand side of the chart, write all the multiples of that number until you get to the last line of squares on the right hand side of the chart
- Paste the chart to a cardboard
- Tie a string along the top edge of the cardboard for hanging

### Number place value box

A number place value box or number tray is a talar resource used for teaching number values. In counting, relationships between ones, tens, and hundreds can be shown during the early stages of learning numeracy. Normally, it consists of three compartments marked HTO, respectively (Hundreds, Tens and Ones). Pieces of paper, sticks, stones, bottle tops, and seeds can be used to represent ones, tens and hundreds.



Number place value box

## Materials

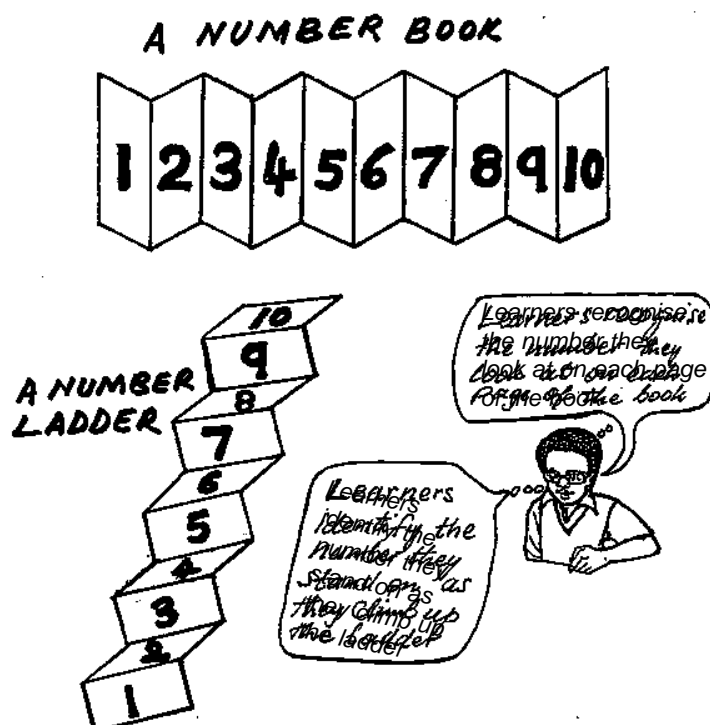
- Cardboard
- Crayons, paints and brushes
- A sheet of paper
- A pair of scissors, razor blades or knives
- Glue, porridge or sap from plants
- Bottle tops, stones, seed pods, beans, maize, bottles and maize cobs

## Method

- Make a box with rectangular sides, each side measuring 20cm long and 10cm wide
- Cut the box from one of the top corners diagonally
- Make 3 compartments by pasting triangular pieces of cardboard inside the structure obtained after cutting
- Sew the triangular pieces of cardboard with thread and needle if glue is not available for pasting
- Label the compartments H,T,O respectively to stand for Hundreds, Tens, and Ones
- Use the stones, bottle tops, seed pods, beans, sticks, maize or bottles to illustrate number values

## Zigzag number book/vertical number ladder

The zigzag number book is a strip of paper folded into pages. It is made in such a way that it can stand. Learners can be asked to recognise or identify the numbers. Also, they can put articles that correspond to particular numbers beside it.



## Materials

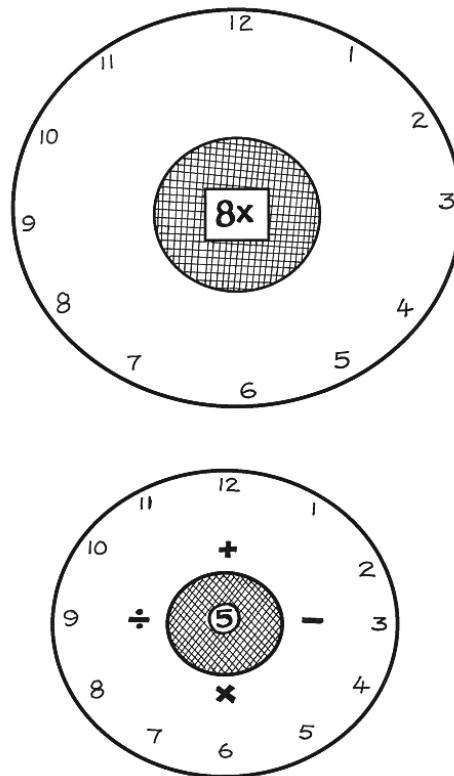
- Sheets of paper
- Pencils, crayons or pens
- Pair of scissors, knives or razor blades
- Porridge

### Method

- Cut strips of paper 1 metre by 10cm. Cut as many as possible
- Paste small pieces of paper with porridge to make a long piece, if chart paper for making the strips is not available
- Fold each strip at regular points to make the pages of the zigzag book
- Write numbers 1 to 10 or more, one number written on each page. The zigzag book is now ready for use
- Make a vertical number ladder by simply changing the position of the zigzag number book. Place the zigzag number book on the floor with the side numbers facing upwards to change it to a vertical number ladder

### Number circle

The number circle is a talar resource made in form of a clock face. It is used to practise and revise the four mathematical processes. A card with a number is put at the centre of the number circle. The number on the card is either a multiplier, a divisor, a multiple or a dividend for the other numbers. The teacher decides what should be done in each case.



Number circle

### Materials

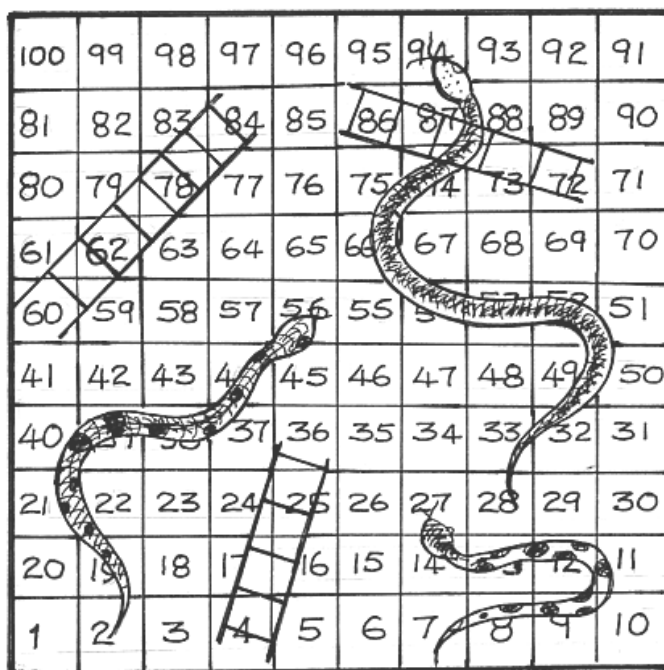
- Cardboard paper
- Sheets of paper
- Pencils, crayons or pens
- Pieces of flannel, sack or blanket
- Pair of scissors, knives or razor blades
- Glue or porridge
- Cotton wool
- Strings

## Method

- Cut a 30cm square piece of cardboard
- Cut a 30cm square piece of paper
- Stick the piece of paper on the front surface of the cardboard to give a background for the numbers that will be written on it
- Draw a circle with a string and a pencil or chalk
- Write numbers 1 to 12 along the circle
- Cut a piece of flannel, blanket or sack 10cm square or 5cm radius
- Stick the piece of flannel or blanket in the centre of the circle
- Cut pieces of paper 6cm square. Cut as many as possible, up to 30
- Stick cotton wool at random with the porridge, on the back of each card to be used with the number circle. It is possible to stick pieces of the same material you stick at the centre on the back of each card instead of cotton wool
- Stick an envelope on the back of the number circle for keeping the cards or the envelope may be kept separate. A separate box or tray may be used instead of an envelope
- Use sand paper, gum or pins instead of cotton wool, if available
- The number circle may be changed into a clock face for teaching time by pinning clock hands made from paper, cardboard, wood or bamboo in the centre of the circle

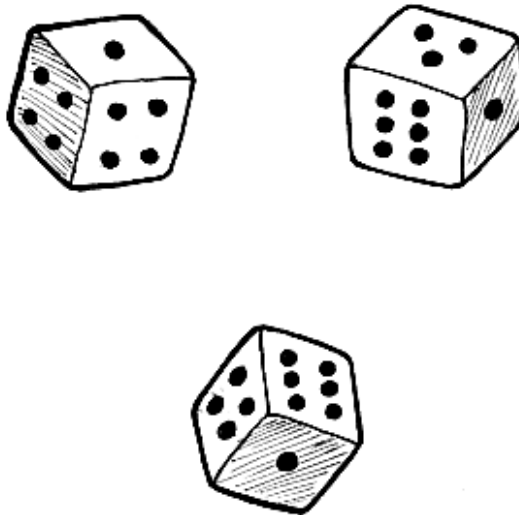
## Snakes and ladders

Snakes and ladders helps in consolidating addition and subtraction in the early stages. A piece of wood called a dice is thrown and the number shown when the dice stays still is used to determine the number of moves a player has to make on the snakes and ladders board. The ladders cause an upward movement as a gain, whereas the snakes effect a downward movement as a loss.



Snakes and ladders

# DICES

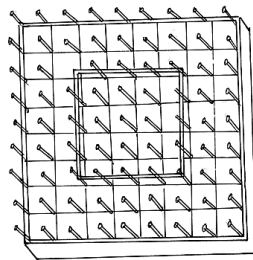
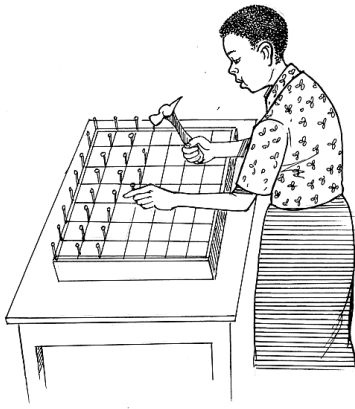


## Materials

- sheets of paper or cardboard
- pencils, crayons or pens
- pair of scissors, knives or razor blades
- pieces of wood
- buttons, seeds, stones, bottle tops

## Method

- Cut pieces of paper or cardboard 25cm square
- Divide each card into 100 2.5cm squares.
- Write numbers 1 to 100 beginning from the first square on the left hand side of the base line of squares
- Draw any number of ladders each joining any two squares on the card
- Draw any number of snakes each joining any two squares
- Make 1.5cm cubes from the piece of wood. Each cube is called a dice
- Make holes on the respective sides of the cubes as follows:
  - the first side has one hole to represent 1
  - the second side has two holes to represent 2
  - the third side has three holes to represent 3 and so on
- Cover each cube with pieces of paper and porridge
- Clay can be used to make the cubes instead of wood, by pasting pieces of paper on the surface. Numbers 1 to 6 can be represented by dots on the sides of each cube
- Use buttons, seeds, stones or bottle tops as pieces for playing the game



A geo-board

A geo-board is a wooden board made up of squares with nails or tacks hammered into each of the corners of every square. It may be used for:  
 making geometrical shapes with a rubber band  
 finding the perimeter, that is, the distance around something  
 relating the geo-board to other areas where knowledge about surface area is useful.  
 For example, associating it with the area of the walls of a house

### Materials

- wood
- pencils or pens
- nails or tacks
- hammers
- rubber bands or strings

### Method

- Get a large square piece of thick wood
- Draw a large square on this piece of wood
- Divide the large square into small squares
- Hammer carefully a tack or nail into the wood wherever the two lines cross. Be sure that there is a nail or tack at every point where the lines cross
- Try to hammer each nail so that the heads of all the nails are the same height
- Put thin rubber bands over the nails to form rubber band squares of different sizes
- Record the number of small squares inside the rubber band squares. This procedure may be used to explain the area of a surface.

# UNIT 7

## TALULAR FOR DEVELOPING LITERACY

### Introduction

In the previous unit you learnt how TALULAR helps to develop numeracy. In this unit, you will learn how TALULAR helps in developing literacy.

### Objectives

By the end of this unit, you will be able to:

- explain why it is important to use locally available resources for teaching language
- make sample TALULAR for literacy development

### Importance of using locally available resources for teaching language

#### Activity 1

List some TALULAR you have used in language teaching. Explain why it is important to use locally available resources for teaching language.

Using the local environment as a source of TALULAR is important in the following ways.

- It is a means of exposing children to various forms of writing
- The children are already familiar with the local environment
- When the local environment is used, children learn that reading is an activity that goes beyond the classroom
- There are many reading materials available that can be easily acquired by pupils at little or no cost
- Using local resources is one way of involving the community in the school's literacy work

### Making sample TALULAR for literacy development

#### A vowel grid

A vowel grid is a reading chart where vowels are written repeatedly, at random. Learners are asked to recognise the vowels.

#### Materials

- chart paper or cardboard
- pencils, crayons or coloured chalk
- tablets of soap

#### Method

Write the first line of vowels **a e i o u** in the normal order

Write the same vowels in the second line in reverse order beginning with **u** and ending with **a**

Write the line of vowels a third time beginning with **O** and so on

Write the vowels on individual cards for use side by side

Use a tablet of soap to run it over the writing if you write with coloured chalk. The soap prevents the writing from getting rubbed off

### **Vowel game**

The vowel game is played to consolidate learners' knowledge of vowels. It is based on recognition of the five vowels. Players use a dice that has letters printed on its sides instead of numbers. All the players start from the same point. A dice is thrown to determine where a player should go in terms of the vowel shown on the dice. The winner of the game is the first person to reach the last vowel in the home or the finish.

### **Materials**

- chart paper or cardboard
- pencils crayons or pens
- pieces of wood
- buttons, stones, seeds
- rulers
- scissors, knives or razor blades

### **Method**

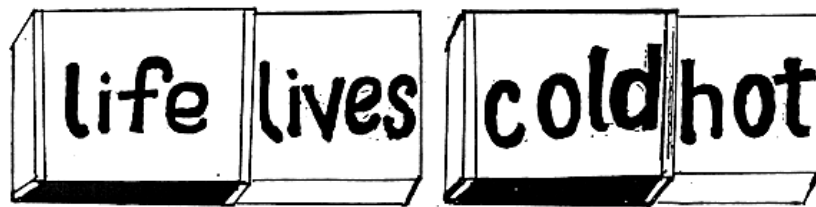
- Draw squares on the chart paper or cardboard
- Label the first square at the bottom: start
- Label another square at the end of the racing track finish or home
- Make a dice like the one for snakes and ladders
- Instead of printing dots, numbers or making holes in the dice, write vowels on the corresponding sides. A spinner is used instead of a dice. A spinner has the vowels written along its edge
- Buttons, seeds, or stones may be used as pieces for playing the game
- Write the vowels in the boxes on the chart next to START in the order they are usually read, starting with **a** until you reach the final box
- Paste a pocket or envelope on the back of the chart for keeping the dice and the players
- Make several charts with the vowel game to increase the chances for more groups to play it

### **Syllable grid and word formation match box**

Having learnt vowels, learners should learn how to form syllables eg **a + b = ba**

For more syllables refer to the syllable grid. As many words as possible can be formed by combining syllables in a syllable grid. For example **ba + mbo = bambo**





ba	be	bi	bo	bu	bi	bo	ba	bu	be	mba	mbe	mbi
da	de	di	do	du	de	da	di	du	do	mba	mbu	cha
fa	fe	fi	fo	fu	fi	fe	fo	fa	fu	che	chi	cho
ga	ge	gi	go	gu	ge	gi	go	ga	gu	chu	nda	nde
ha	he	hi	ho	hu	hi	ho	ha	hu	he	ndi	ndo	ndu
ja	je	ji	jo	ju	ja	ji	jo	je	ju	mfa	mfe	mfi
ka	ke	ki	ko	ku	ki	ka	ku	ko	ke	mfo	mfu	nga
la	le	li	lo	lu	le	li	lo	lu	lo	nge	ngi	ngo
ma	me	mi	mo	mu	ma	mo	mu	mi	me	ngu	nja	nje
na	ne	ni	no	nu	no	ne	na	nu	ni	nji	njo	nju
pa	pe	pi	po	pu	pi	po	pe	pa	pu	mka	mke	mki
ra	re	ri	ro	ru	re	ri	ro	ru	ra	mko	mku	mlo
sa	se	si	so	su	sa	se	so	si	su	mle	mli	mlo
ta	te	ti	to	tu	te	ti	to	tu	tu	milu	mima	mime
Va	ve	vi	vo	vu	vi	vo	ve	Va	Vu	mimi	mimo	mimu
Wa	we	wi	wo	wu	we	wi	wo	Wu	Wa	mpa	mpe	mpi
ya	ye	yi	yo	yu	yi	ye	ya	yo	yu	mpo	mpu	msa
za	ze	zi	zo	zu	zo	zi	ze	Zu	Za	mse	msi	msa
msu	mta	mte	mti	mtu	mtu	nsa	nse	nsi	nsa	nsu	mva	mve
mvi	mvo	mvu	mwa	mwe	mwi	nyo	nye	nyi	ngo	nyu	tse	tse
tsi	tso	tsu	mza	mze	mzi	mzo	mzu	nza	nze	nzi	nzo	nzu

Syllable grid and word formation match box

### Materials

- chart paper or cardboard
- pencils, crayons or pens
- scissors, knives, or razor blades
- match boxes
- porridge
- reeds
- strings

### Method

- Draw lines to make 8cm squares on the chart paper or cardboard
- Write syllables in the squares from ba to zu
- Vary the consonant combinations ranging from single consonants to multiple consonant combinations
- Take another piece of chart paper and cut it into pieces of cards, the same size as the boxes on the syllable grid

- Write the syllables on similar cards as those on the syllable grid. The cards are used in a matching activity whereby learners put cards over the boxes that have the same syllables as the cards
- Take match boxes
- Paste a card over the outer cover of a match box and another card over the back of the inner box that contains matchsticks
- Write one syllable on the outer cover and another syllable inside. Once pupils master reading the syllables, they can engage in word formation. Pull out the box inside the match box and match the syllable with the one outside it. For example, you could have mbu outside the matchbox, then zi inside, the resulting word is mbuzi (goat)
- Tie a string along the top edge of the chart for hanging purposes.

### **The alphabet grid**

- The alphabet grid is a chart where all the letters of the alphabet are written.

### **Materials**

- Chart paper or cardboard
- Pencils, crayons, pens or paints and paint brushes
- Scissors, knives or razor blades

### **Method**

- Draw lines on the chart or cardboard to make some 6cm squares
- Prepare two alphabet grids, one with small letters and the other one with capital letters by writing the letters in the squares

### **The alphabet chain**

The alphabet chain is a collection of alphabet cards. The letters are in the same case and hang on a line or string. Learners practise recognition of as well as mastering the order of the letters in the alphabet.

### **Materials**

- Cardboard
- Bamboo sheaths
- Charcoal
- Thin maize porridge
- Pencils, crayons or pens
- Strings or pieces of wire

### **Method**

- Cut a 10cm square cards from cardboard paper
- Write letters of the alphabet on the card. You can mix charcoal with thin maize porridge to make black paint with which you can write the letters of the alphabet
- Make two holes along the top part of each card
- Insert a string into the holes of each card. Wire can be used instead of a string
- Tie one end of the string to a nail or pole and then the other end to another nail or pole to display the cards

## A vocabulary chart with or without pictures

The vocabulary chart has a variety of words written on it for reading practice. Normally, the smaller vocabulary charts or cards contain related words by sound or spelling features in order to enhance learning by association. For example:

### Chichewa

*dzanja* (arm)  
*dzana* (the day before yesterday)  
*dzala* (full/ground for disposing waste)

*tsatsa* (stick for beating/advertise)  
*tsaya* (cheek)  
*tsala* (stay behind/land left fallow)

### English

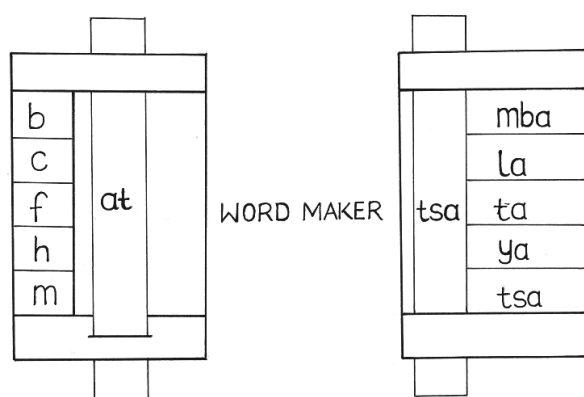
back	chalk	rough	delight
sack	walk	bough	light
black	talk	although	fight
lack	stalk	cough	tight

### Materials

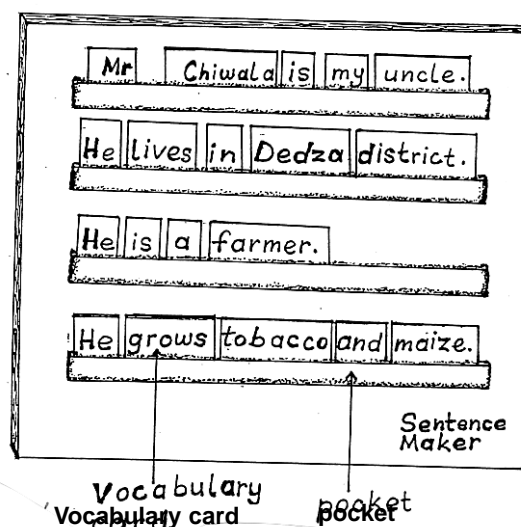
- chart paper or cardboard
- pencils, crayons or pens
- newspaper cutouts in the shape of pictures
- maize porridge

### Method

- Select and write words on chart paper or cardboard
- Make cards and write the same words as those on the chart paper
- Draw or paste pictures or place real objects on the chart that correspond to the words
- Display the chart on the wall for use



Word maker/sentence maker



A word/sentence maker is a board with pockets where learners make words with letter cards, or words are combined to make sentences. When the teacher calls out a word, learners pick out appropriate cards and arrange them in the pockets of the word and sentence maker. Similarly, when the teacher reads out a sentence, learners find appropriate cards that bear the words of the sentence and arrange the word cards to make the sentence.

### **Materials**

- chart paper, cardboard paper or old calendars
- pencils, crayons, or pens
- glue or porridge
- pair of scissors, knives or razor blades
- an envelope

### **Method**

- Cut a 80cm by 50cm piece of cardboard or of an old calendar, 60cm by 40cm
- Cut strips of paper the same width as the board. Short strips may be pasted together to make the required length
- Fold along one length of the strip and apply some porridge on the outer part of the folded area.
- Stick the area with porridge to the board across its width and press over the entire strip
- Close the ends of the strip with some porridge to make a pocket
- Do the same with other strips
- Space the pockets in such a way that the letter cards or word cards do not obstruct each other when put into the pockets
- Cut the chart paper or old calendar into letter cards and word cards. There should be several cards written with the same letters. The word cards are usually related to a story. Learners therefore can practise building up a story
- Paste an envelope on the back of the word and sentence maker for keeping the cards
- Make several word and sentence makers for practise on word formation and sentence construction.

### **Word board**

This board consists of a piece of wood or plank, nails and letter cards with holes for hanging. Learners form words on the board using letter cards. Learners can also practise making sentences with the words they form on the word board. The word board is sometimes called a sentence board because it is also used for sentence building.

### **Materials**

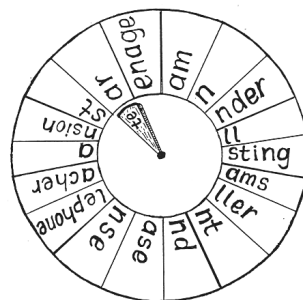
- planks
- nails
- paper
- ruler
- pencils, crayons or pens
- scissors, knives or razor blades
- punching machine
- paint and brushes

## Method

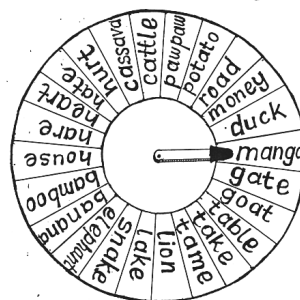
- Cut a plank into pieces one metre or half a metre long, and 60mm or 90mm wide
- Fix nails 2.5 or 5cm long, along the top edge of each board
- Fix the nails at intervals equal to the width of each letter card
- Cut pieces of paper into cards 60mm by 36mm
- Divide the length of each card into four parts. The top part should be 15 mm wide for punching purposes. The second part should be 12 mm wide. The third division should be 18mm wide and the fourth division should be 15mm wide
- Write letters of the alphabet on the second, third and fourth divisions for each card
- Make the holes in the cards wider than the heads of the nails
- Paint the boards black or blue to create a background for the letter cards

## The reading clock

A reading clock is a chart that has the shape of a clock. Words are indicated by means of a pointer that resembles the hand of a clock. The pointer is moved either clockwise or anticlockwise pointing to words for learners to read. The reading clock is also known as a reading wheel.



READING CLOCKS



Reading clocks

- **Materials**
- chart paper or cardboard
- pencils, crayons or pens
- reed or bamboo
- pair of scissors, knives or razor blades
- thread or strings
- glue or porridge

## Method

- Draw two circles, one 8cm radius and another one outside the first, 30cm radius
- Join the two circles with straight lines in such a way that you can write words

between the lines

- Make a pointer like the hand of a clock by tying one end of a piece of reed or bamboo with the thread or string
- Make a hole through the centre of the inner circle
- Insert the thread or string into the hole and tie a knot on the back of the reading clock so that the pointer can move freely around without being detached from the surface of the reading clock
- Paste the reading clock to a piece of cardboard to support it
- Tie a string for hanging on the wall

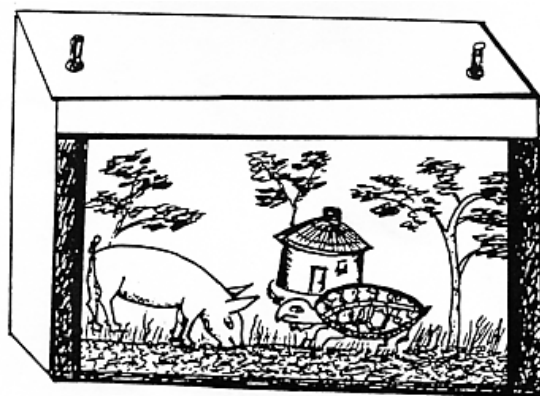
### **A reading text or passage**

This is a chart with a passage for reading or poems copied from other textbooks to create supplementary and complementary readers. Not all the language learners ought to know can come from a single book. Some passages and poems can be composed by the teacher as well as pupils and bound into booklets. To compose a poem, write sentences on strips of paper each based on the theme you have selected for the poem. Arrange the strips into a logical sequence to form a coherent set of ideas.

Normally, it is expected that the passages contain vocabulary that suits the level of the learners. There is need to simplify the vocabulary especially if the passages are adopted from other texts. In other words, difficult passages should be adapted to the level of the class.

### **A cinema box/television**

A cinema box is a carton which consists of a long strip of paper with a series of pictures or words rolled inside the carton or box and fitted with sticks for moving the pictures backwards and forward. The long strip of paper is the film. The sticks are used as rollers. The cinema box is also known as a diorama, a television set or a concertina.



A cinema box

#### **Materials**

- carton
- pencils, crayons or pens
- pins, nails, thorns

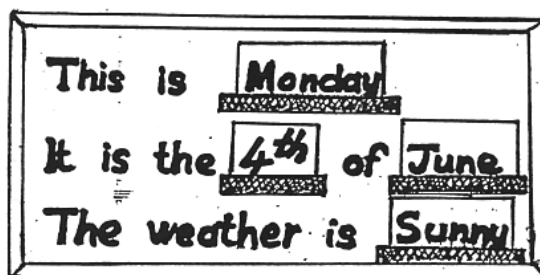
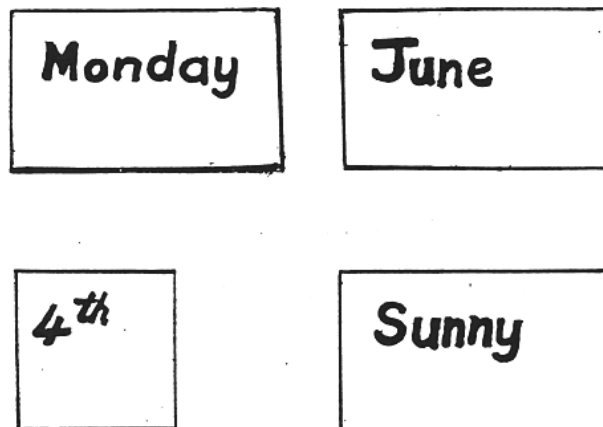
- porridge
- sticks
- pairs of scissors, knives or razor blades

### Method

- Make a screen by means of a carton or use planks to make a wooden box with nails
- Draw pictures on paper strips in the order of the scenes of the story. The pictures may be coloured to make them more attractive
- Join the strips of paper with porridge to make a continuous piece. This is the film.
- Fit a stick at either end of the film by pasting the ends of the film to the sticks. Thumbtacks or pins may be used to hold the ends of the film to the sticks. Sometimes the ends may simply be tied to the sticks with a string.
- Make four holes in the box, two at the roof of the box, two at the bottom.
- Roll the long strip of paper (film) in place and fit the top ends of the sticks into the two holes at the roof of the box and the lower ends of the sticks into the bottom holes.
- Roll the film backwards and forwards to check how it works
- Make several films for use with the same screen

### A calendar and weather chart

A calendar and weather chart is for reading dates and weather conditions for each day. It also provides a meaningful context for discussing events in relation to the dates or weather conditions as well as writing about them.



## Materials

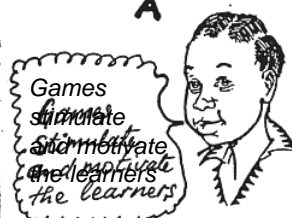
- sheets of paper or cardboard
- pencils, crayons or pens
- glue or maize porridge
- pairs of scissors, knives or razor blades
- Cut a piece of cardboard into a 30cm square
- Cut the sheet of paper into cards each measuring 5cm square or a little bigger than this
- Write numbers 1 to 31 for dates
- Write names of the days of the week
- Write names of the months of the year
- Write the year in which the cards will be used
- Write words describing weather conditions such as sunny, windy, cold, hot and cloudy
- Make pockets on the front surface of the cardboard
- Make an envelope or pocket and paste it on the back of the cardboard for keeping cards
- Make illustrations to match with the words which describe the weather, if need be

## Bingo

9	15	12	15	56	45	17	32	96
56	25	96	75	55	81	20	81	55
20	32	45	96	32	20	75	56	
A			A			A		

12	55	27	9	15	12	12	55	27
45	56	32	56	25	96	45	56	32
36	25	20	20	32	45	36	25	20
15	56	45	17	55				
75	55	81	20	81	32			
96	32	20	75	96	56			

Bingo B. Master



Bingo can be based on vocabulary or word building exercises. It is the teacher who determines what form the game should take. For example, the players' cards may contain words whose definitions are on the master card. In other words, the play-



ers have cards with words, whereas the teacher has definitions for the words on the players' cards as well as the words themselves. The teacher reads out a definition, the players should cover the word that corresponds to the definition. The game may also take the form of changing words from singular to plural, present to past tense, verbs to nouns, nouns to adjectives, and so on.

### **Materials**

- cardboard, chart paper, or old calendars
- pencils, crayons, or pens
- scissors, knives or razor blades
- envelopes
- maize porridge

### **Method**

- Make player cards 30cm square
- Write the words to be recognized by the learners on ten cards
- Write individual letters on cards or bottle tops, if the game is on **word formation or spelling practice**
- Prepare cover cards, the same size as the boxes or squares in which words or letters are written.
- Prepare a **master card** that contains all the words on the players' cards and some distractors
- Mark the players' cards **A** and the Master card **B**

# UNIT 8

## TALULAR TECHNIQUES AND AIDS FOR CHALKBOARD WORK

### Introduction

The chalkboard is the most commonly used teaching and learning resource available to teachers. Talular techniques and aids are essential in enriching the teacher's expertise in chalkboard work. Effective use of the chalkboard can contribute to attracting learners' attention in the classroom. This unit discusses how TALULAR can help in using the chalkboard effectively.

### Objectives

By the end of this unit, you will be able to:  
make chalkboard talular  
list down chalkboard talular

### Making chalkboard TALULAR

#### Activity 1

List down as many chalkboard talular as you can.

Chalkboard TALULAR are materials that can be used when working on the chalkboard. The following are some of the chalkboard TALULAR that can be made:

#### Chalk

Cassava can be used in the absence of conventional chalk. The outer cover should be removed. The cassava can be shaped to size and dried for use.

#### Chalkboard duster

In the absence of the conventional duster, pieces of cloth can be. Make a small bag with a piece of cloth or blanket by it sewing with a needle and thread. Fill the bag with cotton wool, or small pieces of cloth or blanket or an old sweater and complete the sewing.

#### Strings

Strings can be made from sisal or other plant fibres. Straight lines and geometrical shapes can be drawn on the chalkboard using the strings.

#### Stencils

Stencils can be made from cardboard or a thin sheet of metal. Letters of the alphabet, numbers or geometrical shapes such as squares, circles,

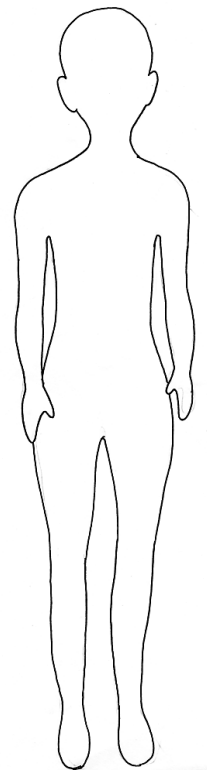
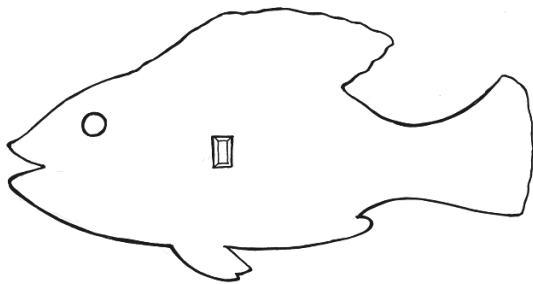
triangles and rectangles can be drawn using the stencils. Cut out the letters, numbers or geometrical shapes with a knife or razor blade to make stencils.

### **Chalkboard ruler**

A piece of plank with a straight edge or a broken window frame can make a ruler.

### **Templates**

Templates can be made from cardboard, plywood or a plank. A map, a human figure, or animal figure or a geometrical outline can be drawn to make a template by cutting out the drawing along the outline. You can use the templates to quickly draw various respective diagrams on the chalkboard. You can also make a template by perforating outlines of various pictures or diagrams.



Examples of templates

### **Pointer**

A stick can be used as a pointer. Other talular pointers include rolled pieces of paper pasted together with porridge to make a long piece, an iron rod from an old umbrella, a piece of wire, a piece of bamboo, reed and an old radio aerial.

# Unit 9

## BASIC TALULAR DISPLAY AND STORAGE TECHNIQUES

### Introduction

Proper storage of teaching and learning resources is important in order to sustain the use of the resources. This unit will discuss basic TALULAR display and storage techniques.

### Objectives

By the end of this unit, you will be able to:  
make various talular displays  
display talular resources in the classroom  
store talular appropriately

### Talular display techniques

By displaying teaching and learning resources, learners are given the opportunity to see, feel, taste and satisfy their learning styles and curiosity.

### Activity 1

Identify various talular display techniques.

Collect some of your resources you made in one of the earlier units and demonstrate how to display them appropriately.

The following are some of the basic talular display techniques.

### Table display

- sticks, grass, reeds, or bamboos
- a string or rope
- make a table-like structure by building the grass, stick, reeds or bamboos together with the string or rope

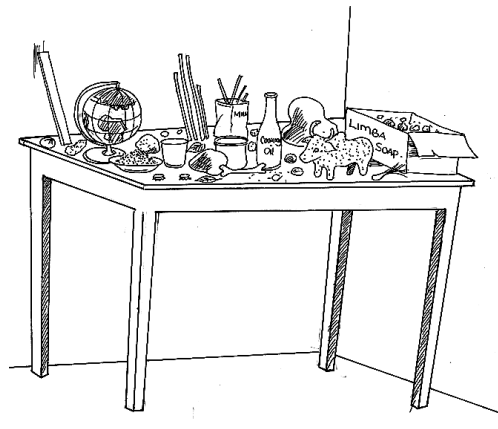
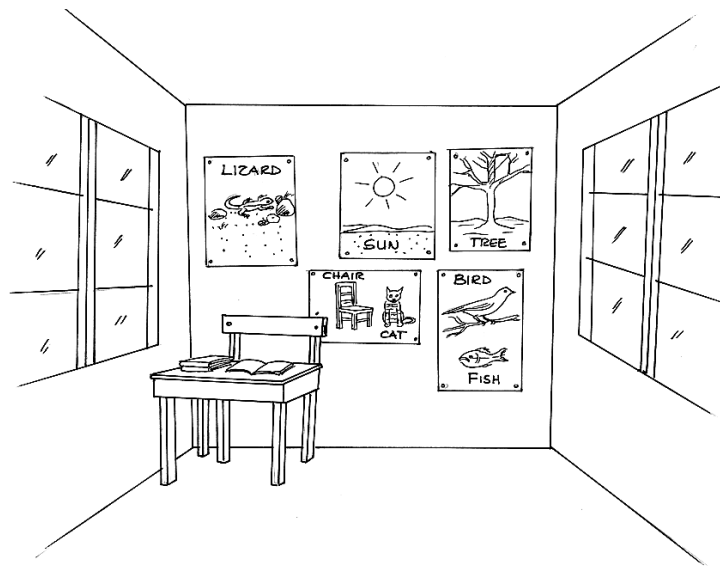


Table display



Wall display

### Wall display

- demarcate the walls of the classroom
- fix nails for hanging charts and other talular resources
- make frames around charts and tie strings for hanging
- use pins if the walls of the classroom have a soft board on the surface
- a wall like structure may be constructed with grass, reeds, ticks or bamboos for displaying illustrations outside the classroom

### Mat display

- find a reed mat or palm leaves mat
- fit tails on the back of pictures with pieces of paper and porridge
- use pins, needles, or thorns to display on the mat
- post the tails into the spaces of the reed mat to display the pictures

### Ground display

- demarcate the ground or floor
- spread sacks, cloth, cardboard or newspapers

### Plastic sheet display

- find a sheet of plastic, preferably black in colour
- support the sheet of plastic with a piece of cardboard by sewing or tying the sheet of plastic onto the surface
- use selo tape or gum to display illustrations on the plastic sheet

### Bulletin board display

- find a piece of cardboard
- make a frame along the edge of the cardboard with a reed or bamboo and a string
- use porridge to paste newspaper or magazine cuttings onto the cardboard
- write a caption or title for the bulletin board, for example, "What's up?" or "What's new?"
- collect learners' stories, and your own descriptions or instructions for the bulletin board

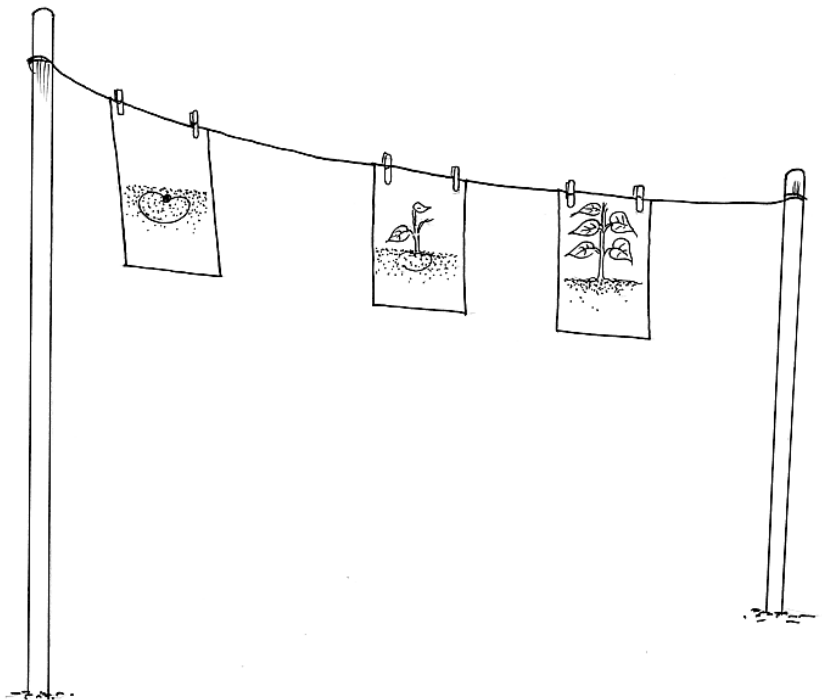


**Flannel board display**

Flannel is a piece of cloth that is hairy on the surface. In the absence of flannel material, use a sack or piece of blanket.

- a piece of cardboard, a sack or piece of blanket
- cover the cardboard with the sack or piece of blanket
- make a frame with pieces of a reed or bamboo along the edge of the cardboard by binding the pieces of reed together with a string
- paste cottonwool on the back of every illustration to be displayed on the flannel board, the flannel board works on the principles of "rough sticks to rough"
- keep illustrations in clearly marked envelopes

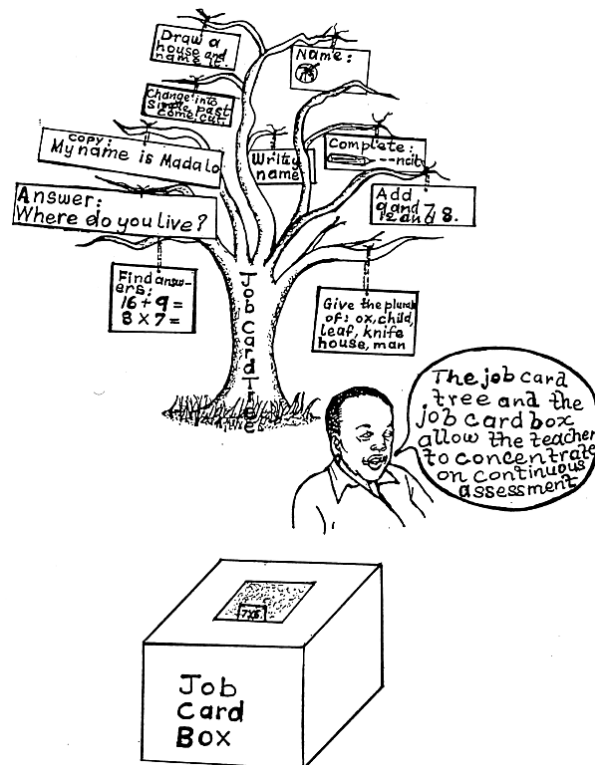
### **Washing line display**



A string or wire is used to display word cards, pictures or other illustrations especially for lessons held in open air.

- find a string or wire and two poles
- dig two holes, put one pole in each
- tie one end of the string to one pole and the other end to the other pole
- find pegs, safety pins or paper clips and use them to hold the illustrations on the line or string
- find two nails and fix them apart on the wall of the classroom; tie the string to the nails

## Tree display



Tree display is done on the branch of a tree.

- find a branch, a tin and stones
- put the lower end of the main stem into a tin and support it with the stones; the tin forms the base of the branch
- make word cards, number cards, cutout pictures and information from newspapers
- find paper clips, safety pins, thread and use them to hang the illustrations on the branch

## Mobiles

Pieces of wood and string are used to create a display in which the items displayed balance when suspended on one of the beam of the roof or a hook on the ceiling.

- find pieces of wood and string or thread
- tie the illustrations to the sticks in such a way that you create a network that balances
- fix a nail on one of the classroom roof or fix a hook on the ceiling

- hang the mobile made on the nail or hook

## Causes of damage to resources

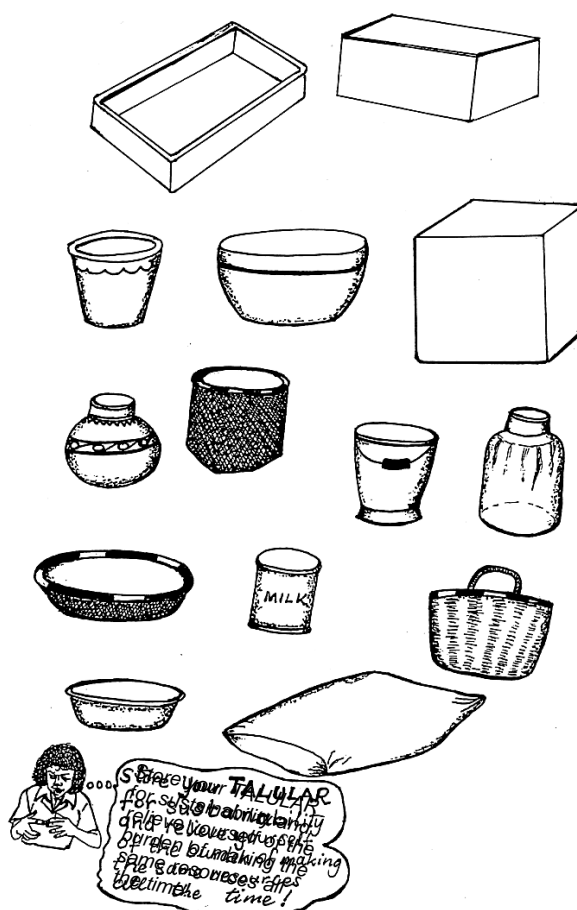
### Activity 2

- 1 Describe agents which might destroy teaching and learning resources
- 2 Give examples of what you can use for storage to avoid making them every now and then.

The following might destroy talular resources:

- termites
- borers
- moisture which encourages the growth of fungi
- wind
- rain
- dust
- mishandling
- vermin such as rats or mice

## Storage facilities



The following may be used to store talular:

- cartons
- hangers
- wooden boxes
- old suitcases
- sacks
- carrier bags (plastic or cloth)



- tins
- baskets
- buckets
- trays
- plates
- lids
- shoe polish cans
- match boxes
- envelopes
- folders
- shelves made with sticks, reeds, bamboos, wood or bricks
- cupboards made with bamboo, nails and cardboard
- sleeves of old shirts tied or sewn at one end to make pockets
- trousers cut and tied or sewn at one end to make pockets

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**DO YOU KNOW THAT  
HIV/AIDS CAN BE  
AVOIDED?**