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# Teaching Aids

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- a clearing house for information and advice on education and training
- a production unit, producing prototype materials, manuals and reference booklets
- an ideas bank for the use of all cooperative educators and trainers



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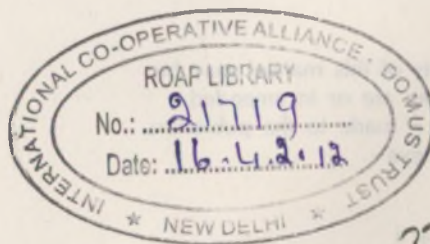
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Objective

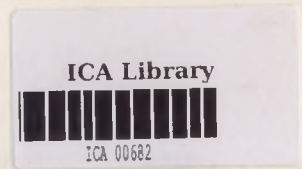
# Teaching Aids

by Daman Prakash



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# Objective

The objective of this manual is to enable the reader

- understand the communication process and its media, their possibilities and their limitations
- plan, produce and apply different teaching aids so as to make communion effective



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# Foreword

This handbook is part of a series of publications being produced by ICA-CEMAS, as reference and resource material related to the CEMAS Field Education Development Programme. The programme is concerned with the instruction and guidance of co-operative field workers on how to approach their work in a systematic and logical way; how to apply a step-by-step, problem oriented work process in which problems affecting the performance of co-operatives are identified and diagnosed, and solutions are implemented effectively.

The series is intended to supplement the package of instructional material on the techniques of problem identification, problem analysis and problem solution provided in this programme.

The author of "Teaching Aids", Mr. Daman Prakash, former Education Officer at ICA Regional Office and Education Centre, New Dehli, India, originally wrote it while he was seconded to the ICA-SCC Co-operative Teachers Training Project in Sri Lanka, 1978-1981. Since then he has also been seconded to the ILO-UNDP Co-operative Training Project in Indonesia. In both cases he was Technical Advisor (Training Aids and Material Production). During these two assignments the material in this handbook was extensively used for the training of trainers in the techniques and methods that could be applied to gain improved efficiency in co-operative education and training. As a result of comments gathered from those who participated in training events within these projects and from others, the material has been improved upon.

We really hope co-operative field workers and others engaged in the promotion of co-operative ideas and activities will find this handbook of great use, that it will facilitate their communication efforts and ultimately benefit co-operative members.



# I. The Communication Process and Communication Media

## Introduction

Researchers in communication technology combined with the experience of trainers and educators have shown that audio-visual techniques can significantly improve and reinforce learning. Visual aids must be carefully designed to support a lesson and suit a particular audience and situation. The planning and preparation of such aids require time, thought, organisation and imagination in:

- selecting the points to be visualised,
- translating ideas into suitable visual forms;
- choosing the most appropriate medium;
- designing the most effective layout and colours;
- designing (or producing) the training aid;
- evaluating the effectiveness and revising the aid for future use (evaluation and improvement).

Not single device is the best answer to each and every situation in which visual aids are used. The following factors help in choosing the best aid for a particular presentation:

**CIRCUMSTANCES:** Size of the audience, time to be used, location of use, availability of equipment, transportation and electricity supply;

**SUBJECT MATTER:** Effects required in presentation, e.g. surprise, shock, dramatisation. Building up of the subject matter gradually; selection of the ideal one for the subject, e.g. OHP (Overhead projector), flannelgraph, etc.;

**COST:** Availability of sufficient funds, material, time for procurement; and

**AVAILABILITY:** Using an aid which is easily and readily available.

Always keep in mind the famous proverb 'One Picture is Worth 1000 Words'. An appropriate picture gives you so many interpretations, feelings, thoughts and motivation.

In a learning situation, our aim should be to reinforce our verbal message with visual messages to achieve a lasting effect. If we reduce our verbal messages, so much the better for the learner, but obviously not at the cost of effectiveness. In modern educational technology the emphasis is on the use of audio-visual aids, and the simpler they are, the better.

Audio-visual aids or visual sensory aids help our senses of hearing and seeing and enable us to learn effectively and efficiently. They help in the process of communication. Audio-visual aids are today being employed increasingly in all processes of teaching, transferring information, and establishing effective dialogue between people.

# Audience and Communication

Who are our audience? We are the teachers (field educators, extension workers and co-operative trainers). We communicate with many different people. They have their own feelings, likings, appreciation, ways of life, language and personalities. We cannot communicate with all people in the same fashion. Similarly our approach would be different for individuals, for groups, and also for mass education (figures I and II). We also have to bear in mind that groups are communicating within themselves. Our methods and techniques vary according to our audience – their grouping, their levels of understanding and so on.

FIGURE I

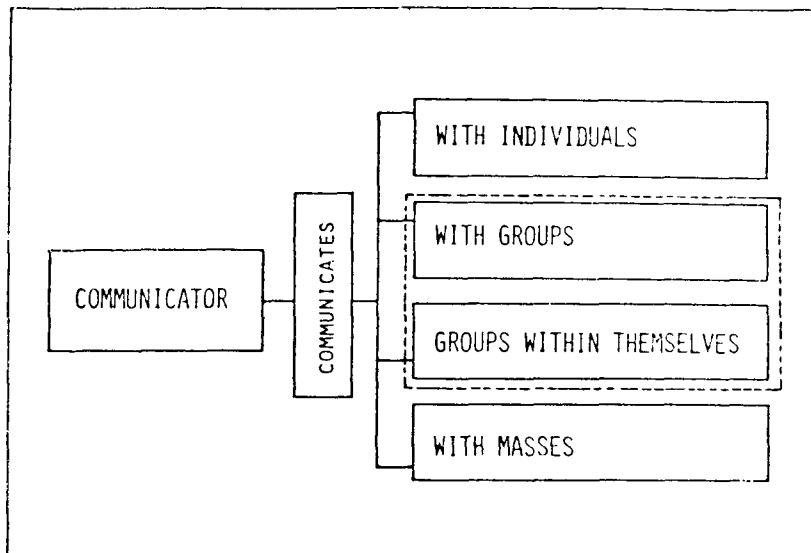
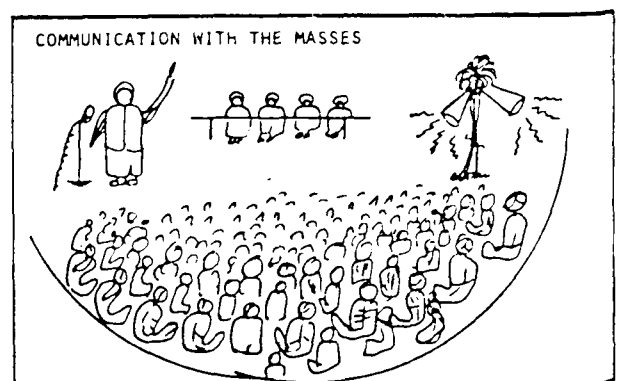
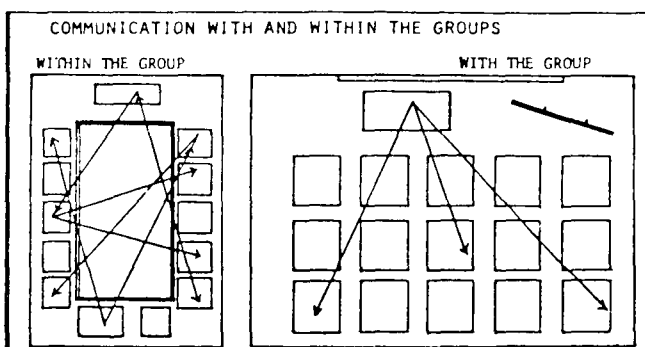
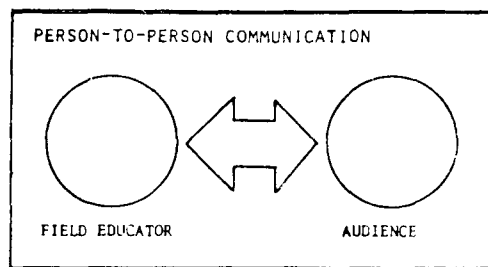


FIGURE II



As is clear from the above, the audience may consist of a single individual or it may consist of a large number of people. The audience may be literate and may be able to communicate effectively with the communicator – the teacher. The communicator may communicate directly with the audience in their own language or through an interpreter. Besides using verbals, the teacher has to make use of various teaching aids such as audiovisual aids, gestures and cues, in order to establish an effective rapport with the audience.

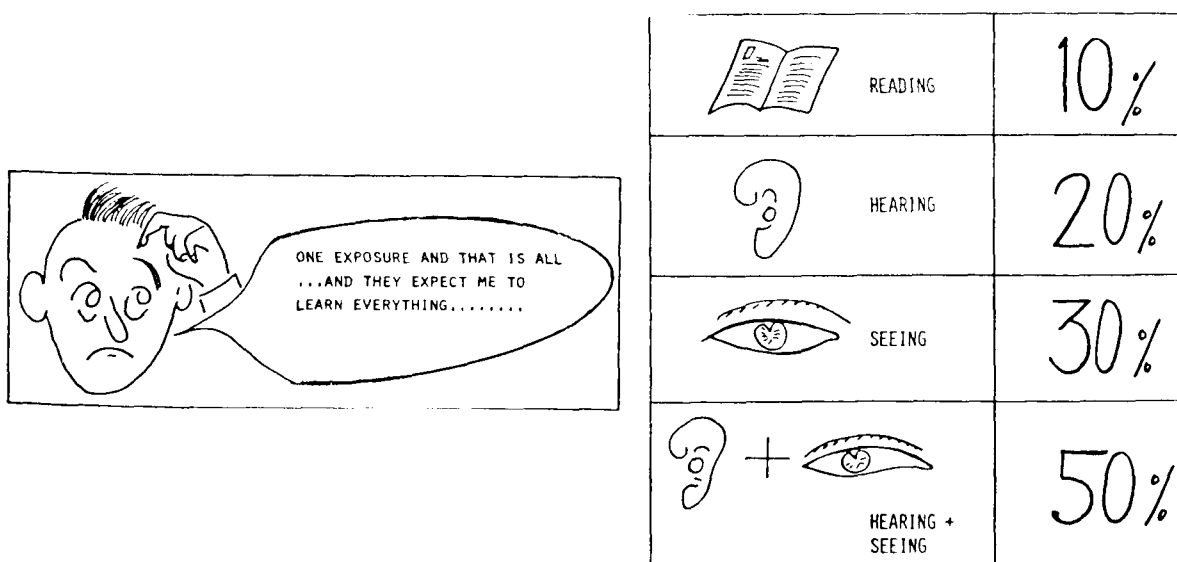
The communicator makes a judicious combination of words with illustrations, pictures, photographs, chalkboard, projections, dramatisation, signs and gestures. The physical appearance of the teacher is also of great significance. His voice should be audible, pleasant and persuasive. His poise should not be aggressive, nor his manner arrogant.

The speech and audio visual aids can be explained in the following manner. We speak, but at the same time we make use of other parts of our body. We make use of eyes, hands, face, postures and other expressions or cues. We make use of verbal, visual and body cues. When we dislike or like a something, we express our dissatisfaction or satisfaction through our postures or appearance. Our expressions change. We then see differently and look a bit different. These are expressions: they can also be used in communicating with people.

## Senses and Communication

Of the five senses we possess, sight, hearing, smell, taste and touch (figures III), only sight, hearing and touch are generally used in teaching/learning. In communication, smell and taste are rarely used. A proper combination of the other three is essential, but for the purpose of this manual we shall be dealing with Audio (i.e. hearing), and Visual (i.e. seeing) aids. It is these two which are referred to as **audio-visual aids**. They stimulate the senses, and can be profitably employed in the process of teaching.

FIGURE III





# The Purpose and Use of Audio-visual Media

Training aids actively help students to realise their learning objectives and make the task of the teachers a little easier. On some occasions, however, so-called “aids” can actually become a hindrance to learning, as they can get between a student and his learning objectives. This is a problem of planning and organisation, of course, but the real issue is that training aids should only be employed when effective use can be made of their distinctive properties.

Some of the features of audio-visual aids and materials are listed and discussed here. A useful rule of thumb to apply when decisions have to be made is to ask the question: “How will this aid be used so as to capitalise on its distinctive attributes?” Generally, audio-visual materials have the following five features:

1. The ability to promote perception
2. The ability to promote understanding
3. The ability to promote transfer of training
4. The ability to provide reinforcement of knowledge
5. The ability to help retention.

Not all media, of course, possess these qualities to the same extent. Nevertheless, these are the attributes that a teacher must capitalise upon, otherwise the materials will lose their *raison d'être* in the learning process.

## Audio-visual Aids

Audio-visual aids help our senses of hearing and seeing, enable us to learn effectively and efficiently whilst speeding up the learning process and helping in communication. These aids are not a new concept, as one can see from the great, ancient paintings in caves, temples and churches, where they were used to achieve effective communication. Today they are being used not only in education and training, but also in commerce and the dissemination of propaganda.

## Why Audio-visual Aids?

A majority of traditional teachers still look upon audio-visual aids with some contempt. Whilst they feel their personality or wisdom is threatened or questioned, this is actually not the case. In reality aids enhance their capabilities and improve their image as good teachers. They are necessary and useful because they:

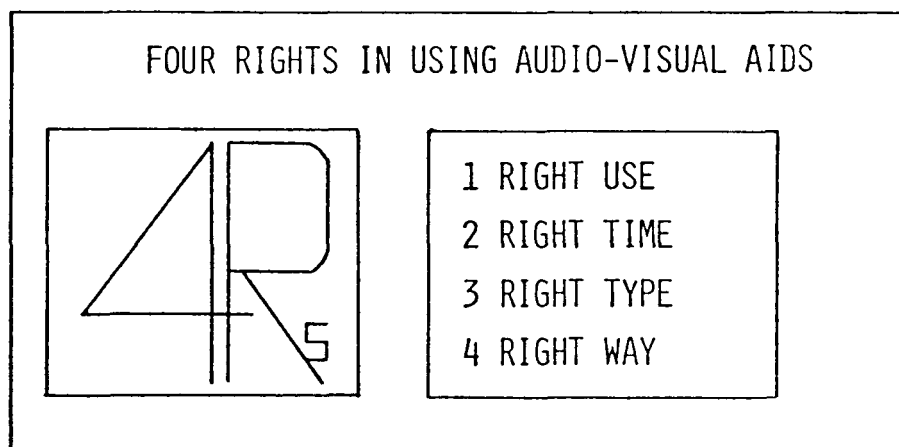
- make communication easier and more realistic;
- accelerate and vitalise the process of communication;
- stimulate interest and motivate persons for further communication;
- hold attention;
- cover more subject matter in a shorter time:

- save time in communication;
- enrich communication;
- can be used at all levels;
- overcome barriers in communication, such as distance, time, size, shape, slow and fast motions, and hidden things;
- motivate persons to follow-up activities and action.

## Integration of Audio-visuals with Teaching Methods

It should be clearly understood that teaching methods do need to be supported by teaching aids, such as chalkboards, flannelgraphs, projectors, to name a few. A mere group discussion technique would not be enough if the discussions were not supported or underlined with some form of visual aid. During role-play the teacher could also use flip charts and flannelgraphs to lay emphasis on certain points. Both these – the method and aids – have to be linked together and used in conjunction with each other. If used in isolation neither will be effective. Even for teaching ‘Use of Accounting Forms in a Cooperative Society’, for instance, some illustrated material would go a long way to making the forms better understood. This could be done by making use of actual forms or their specimens, or by making use of flannelgraphs and charts.

FIGURE IV



Taking case studies, for instance, as a method of teaching, it would be desirable if OHP transparencies or flipcharts and the chalkboard could be used to explain organisational structures, financial outlays, profits, membership, etc. Merely handling out written case studies would make participation dull and uninteresting. Similarly when undertaking training of sales staff, managers or storekeepers, slides and photographs would be desirable and could be effectively used.

# Aspects of Learning

The more a trainer can apply the following teaching principles, the more effective will learning become.

- providing for the learner's active participation;
- providing the trainee with information about his progress;
- promoting good integration of learning experiences that the trainee can transfer from training to the job;
- providing for practice and repetition when needed;
- motivating the trainee to improve his own performance;
- assisting the trainee in his willingness to change.

Learning is a life-long activity; we are never too old to learn; but we are frequently resistant to change. People often talk about problems as if they safeguarded their position, e.g., 'There are so many problems I cannot change'. What they mean is 'Do not remove the problems or I might have to change'.

Learning is change.



# II. The Chalk Board

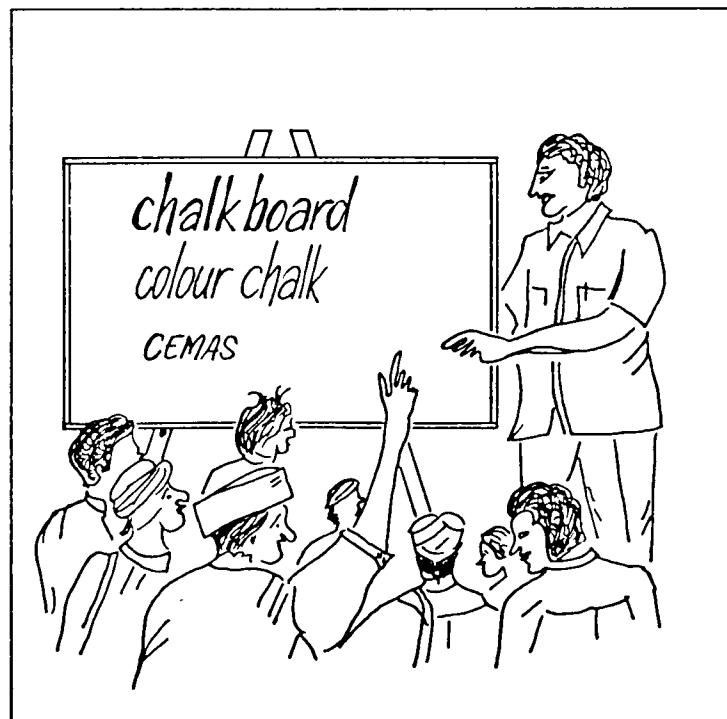
## Introduction

No classroom or teaching situation seems complete without a chalk board (or blackboard). Teachers have always used some medium to communicate their views to the audience and this, in a majority of instances, has been the chalk board.

## What is a Chalk Board?

A chalk board is a piece of commercial ply about 2 cm thick of a desired length and width (Figure V). Its surface is painted with chalk board surfacer. First the playboard is given a thorough rub with fine sandpaper so that it becomes smooth. The board is then covered with at least four coats – two vertical and two horizontal – of surfacer, usually black, grey or green. The board, placed facing the audience, may be either mounted firmly on the wall, or placed on a sturdy easel. Various coloured chalks, which are soft (dustless chalks are also available) and don't scratch when coming into contact with the surface, are used for writing or drawing.

FIGURE V



# Advantages of Using a Chalk Board

Users of this medium have found out its various advantages. These could be summarised as under:

- Generally available and inexpensive;
- Durable;
- Gives a large area to the user;
- Large enough to be seen by a classroom audience;
- Does not require much advance preparations.

# Limitations in Using a Chalk Board

Users of this aid have also noticed some of the drawbacks while using it:

- Requires the teacher to turn away from the audience from time to time
- Dusty and messy to hands, clothes and to nearby equipment
- Dramatic and unusual effects not easily possible.

# Advice on Using a Chalk Board

Some of the limitations mentioned above can, however, be overcome:

- Write for the audience and not for yourself;
- Use colour chalks for emphasis;
- Use dustless chalks when possible;
- Do not stand in front of the board when the audience is taking down notes;
- Do not overcrowd the board;
- Do not write long sentences, but use only catch words;
- Do not talk to the board;
- Clean the board before leaving the classroom.

The lettering on the board should be about 5 - 7 cm. high to make the writing visible to those sitting at the rear of the classroom.

The chalk board should always be maintained in good condition and whenever its surface becomes worn out or glossy, fresh paint should be applied to give it a uniform dark background. In several places it has been found that the chalk board has been used so much that the dark surface has disappeared and it has become just an ordinary plain board. In many rural areas, blackboard surface may not be easily available. Special trips to town have to be made to look for paint. In such cases chalk board paint can be made locally.



# Local Chalk Board Paint

The ingredients for such 'home-made' chalk board paint are:

- (i) non-greasy soot and ashes left from a woodfire;
- (ii) linseed oil.

To make the paint take 200 cc of fine ash powder, acquired by finely sieving the ashes; mix thoroughly with 5 teaspoonsfuls of soot and 500 cc of linseed oil. The board should first be rubbed thoroughly with fine sandpaper and cleaned with a cloth. Four coats of paint are applied and the board left to dry preferably in the sun for 2 - 3 weeks to allow it to absorb the oil and to dry. This process can take up to 2 - 3 months if there is no sun, as linseed oil takes a long time to dry.

## Practical Tools for Use with the Chalk Board

In order to make the best possible use of the chalk board, the teacher should keep some equipment ready for use:

- (i) A pair of compasses for drawing circles. Generally these are quite large and made of wood. If they are not available, take a small length of string; tie a piece of chalk to one end, and placing the other under your thumb, pull the string taut and trace a circle with the chalk.
- (ii) A ruler for drawing straight lines. It must be straight and should stick well on the chalkboard surface;
- (iii) A T-Square provides a convenient tool for drawing parallel lines.
- (iv) Patterns of maps, diagrams, and figures can be prepared in advance of class assembly to save time during the class. One could actually draw the figures on the board.

## Drawing on the Chalk Board

### (i) **Grid Method**

With the grid technique, the enlarging of original drawings made on ordinary sized paper can be obtained on the chalk board. Some squares are drawn on the original drawings. The chalk board is blocked off in larger squares. The original drawings can thus be transferred to the board by drawing one square at a time.

### (ii) **Pattern Method**

This method is suitable for drawing complicated maps of villages, states, countries, etc. Drawings are made on a piece of paper for each illustration which has to be put on the chalk board. Then with a punch or a perforating machine, the illustrations are perforated in outline at 2 cm. intervals. When the complete drawing has been punched out, the pattern is held against the board and a chalky duster is rubbed firmly across the perforated section on the outline. Thus an outline of chalk dots appears on the board, which can be connected freehand with a chalk.

### (iii) **Template Method**

A template can be made on any thin, stiff and lightweight material such as cardboard or sheet metal.

The design when drawn and cut out is ready to be held against the board and the outline traced with a chalk.

## Other Types of Chalk Board

We have been discussing two types of chalk board. i.e. the permanent type, which is mounted firmly and permanently on to the wall in front of the audience and the one placed on a sturdy easel. You can however also find chalk boards which are portable, or roll-up ones. There are revolving boards, which means, that the board can rotate if mounted on special type of stand. Thick rexine sheets could be coated with surfacer and could be rolled up for easy transportation. Even thick good-quality paper could be given a coating of a good surfacer and that too could serve as a chalk board. There are glass boards too.



# III. The Flannelgraph

## Introduction

The flannelgraph (or the flannelboard) is one of the most adaptable and flexible teaching aids. The user is able to present training material to his audience at the right moment and is thus able to build up a composite picture step-by-step. Drawings, titles, illustrations, and headings may be added at will, and associations clearly demonstrated. Material can be re-arranged, developed and simplified at will. The principle is so closely allied to the learning process that its effectiveness depends solely on the careful choice of material, and the care and skill of the user.

Pictures, illustrations, captions and other symbols are prepared on light cards or stiff paper, backed with a light fluffy material. When these items are placed on a board covered with a similar material, the fibres of the two interlock on contact, and a light temporary adhesion takes place. If the flannelgraph (the board) is lightly brushed before use, this adhesion is improved.

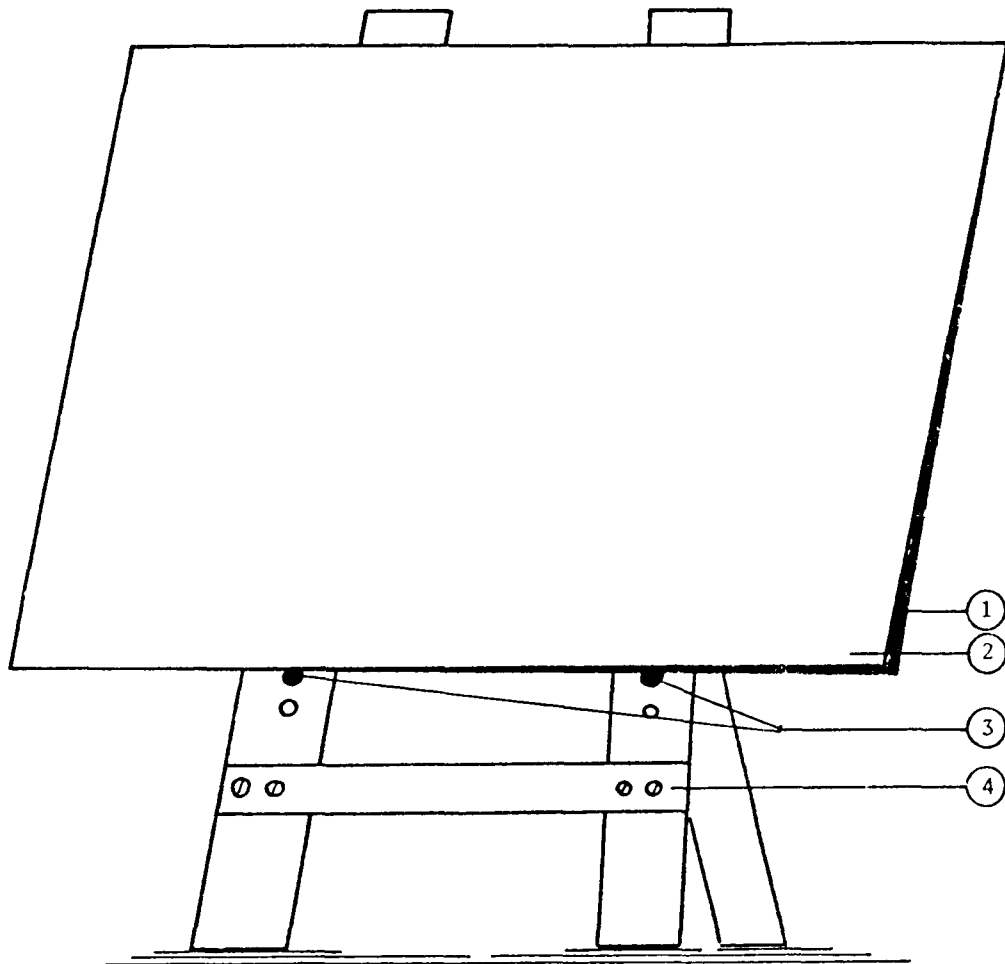
This aid has also some other names e.g. khadigraph (when khadi cloth – hand-spun cotton cloth – is used as a backing material on the board) and plastigraph (when a plastic sheet is used both to back the board and make cutouts). Whatever the name, the principle remains the same. It is a very simple and effective aid for the teacher to use.

## Advantages of the Flannelgraph

The users of this teaching aid have noticed the following principal advantages:

- It describes facts and operations in a progressive way;
- It centres the presentation on main aspects of the theme;
- It is adaptable to any type of learner;
- It is economical to construct;
- It can be prepared beforehand and can be used over and over again;
- It attracts and holds attention due to its characteristics and colours;
- It allows for easy alteration and replacement of illustrations;
- It is hardwearing.

FIGURE VI



1. *Supporting Board.* A plain, even-surfaced piece of wood. A good plyboard would be ideal for this purpose. Size generally is 60 x 65 cm. or 75 x 120 cm. The thickness is about 2 cm.
2. *Front surface of the flannelboard.* The supporting board is covered with flannel on one surface. The cloth is either pasted on with strong adhesive glue or held in position by the use of nails. The cloth should be about 5 - 7.5 cm. larger than the size of the board. The additional cloth is bent over the back of the supporting board and then nailed properly. The cloth should be a good quality flannel. It could also be felt, khadi cloth, rough towelling, or even a piece of coarse blanket. The colour of the cloth should be dark, e.g. deep green, deep red, deep orange, black or dark grey. Deep colours are used mainly to provide contrast for the cut-outs.
3. These two pegs will hold the supporting board in position. These pegs can be lowered depending upon the height of the teacher using the board.
4. A sturdy, three-legged stand. The stand is needed because the supporting board has to be kept at a slant to put the flannelboard to its best use. The stand is also used so that the board can be moved from one room to another. *If the slant or the tilt is not provided, the board might fall and also the cut-outs might not stay in position.*

# Some Limitations on the Use of the Flannelgraph

In spite of its good points, there are some limitations; e.g.

- It is difficult to use outside the classroom in windy conditions;
- It cannot be used as a chalkboard for writing;
- Visuals have to be prepared in advance.

## How to Use the Flannelgraph

When using the flannelgraph you have to:

- decide on the story to be presented;
- prepare cut-outs (or appliques); and
- present the material.

## Symbols and Lettering

These can be drawn directly on the flannel-pieces and used as cut-outs, or they can be drawn on thick card and then backed with sandpaper. Sandpaper sticks better on the flannel.

The illustration of the flannelgraph (Fig. VI) and the description given in connection with the figure will enable you to understand the composition and construction of a flannelgraph and if you are able to gather together the resources and materials you can easily construct one for your own use. Some more detailed and ornamental versions are also available on the market, but they are, of course, expensive.

## Decide on the Story to be Presented

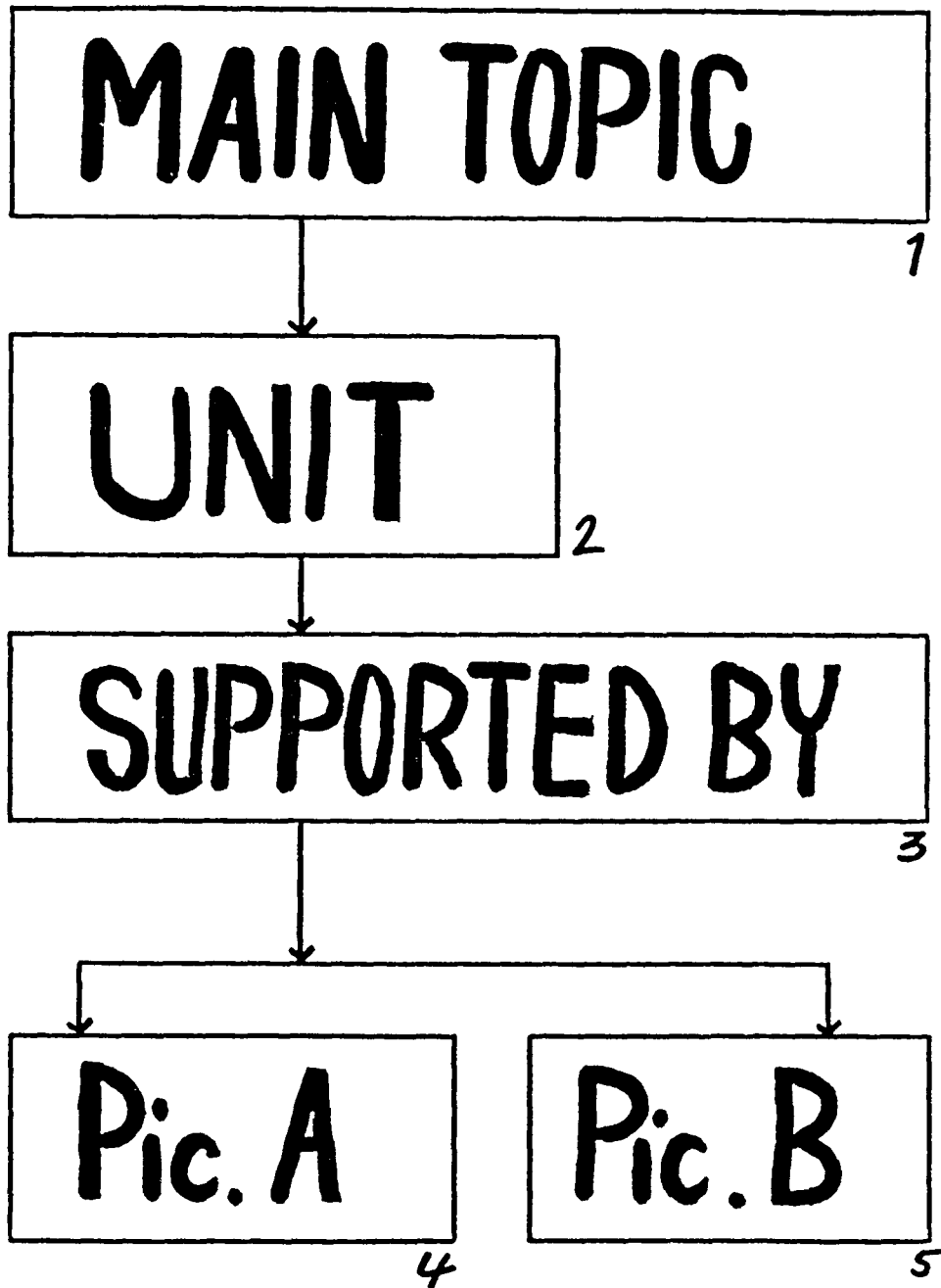
It is always good to discuss the subject in stages. You have, therefore, to break the subject down into small sections and take them one at a time for discussion. If you try to discuss several points together, you may not be effective and also the participants may get confused and unable to follow you. In order to break the subject into smaller steps, you should note down the sequence of your subject. Do not write all the details, only the salient points which, of course, will be elaborated on at the time of presentation.

At the same time, you should make a plan for your presentation (Fig. VII). When will cut-out No. 1 appear, and what points will you then make? Plot out on a piece of paper how your cut-outs will appear on the flannelboard, giving them serial numbers. This piece of paper will be your guide or plan for the layout and will stay in front of you during the presentation of the lesson to keep you on course.



FIGURE VII

A ROUGH LAYOUT OF A FLANNELGRAPH



This layout should remain in front of the teacher. Alongside should lie the cut-outs, face down, so that he can look at the serial number and take them in order to the flannelboard for presentation. This scheme will help the teacher to remain within the framework of his presentation of the subject matter.

# Preparing and Presenting Cut-outs

As mentioned earlier, you have to write out the theme of the story. The theme has to be supported by some visuals – these visuals are called cut-outs (Figure VIII). These are made from cardboard, and backed by good sandpaper (normally No. 4) or flocked paper, and then given a serial number according to their sequence in the story/theme. These cut-outs can be either textual or pictorial, with simple illustrations made by the teacher himself. The illustrations or the text should be large enough so that they can be seen and read from a distance. Cut-outs pertaining to a lesson should be kept in one large envelope together with the theme of the story, and the sequence in which they are to be shown written on a sheet of paper. This will help the teacher to place the cut-outs in the correct order at the right time.

When you are ready to start do not rush the presentation of the cut-outs as soon as you commence your talk or discussion. You can build up your lesson gradually and when it needs emphasis only then should you bring in the cut-outs. Do not present them merely for the sake of demonstration but use them to emphasise a main topic. Only when this has been discussed fully should you bring out the next cut-out. Do not be in a hurry! Presentation of the lesson demands a lot of tact and seriousness. You should be steady and firm in your approach to the subject. Do not get confused with the cut-outs and never play with them.

The most appropriate manner of presentation is to place on your table the theme-sheet on one side and on the other, the cut-outs, face down. The highest number on the cut-outs should be at the bottom while the first serial number should be at the top of the pile. Remember the back of each cut-out must have a serial number corresponding to the serial number appearing on your sequence sheet or plan.

It has been mentioned earlier that the lettering on the cut-outs should be bold and clear. Letters should be at least 5 cm. high, making them clear and readable from a distance.

Illustrations should be bold and clear and relevant to the topic for discussion. Unnecessary ornamental work on illustrations should be avoided as they do not serve any useful purpose.

Arrows or pointers are also needed and these could be prepared as cut-outs (Figure X). Arrows could be of one colour or of different colours depending upon the points that are to be discussed.

When using a flannelgraph in a classroom keep your speech short. You can then develop the topic by making use of sub-titles or catchwords and by involving the participants in the discussion.

## Principles to Bear in Mind When Using the Aid

In order to make your flannelgraph effective you should devote great attention to its construction. The aim of using the flannelgraph as a teaching aid is to try to achieve:

**Graphic Unity:** Express the idea in short clear and telling phrases;

**Simplicity:** Avoid unnecessary letters, images or illustrations that are too cramped and crowded;

**Visibility:** Use adequate illustrations that are visible to the whole audience;

**Proportions:** Keep in mind the principles of proportion and perspective to be discussed later;

**Adequate use of Colours:** Combine agreeable and harmonious elements. Try to achieve contrast as much as possible;

**Balance and Harmony:** Plan the display so that the presentation is pleasing and well balanced round a central point.

FIGURE VIII

CUT-OUTS/APPLIQUES

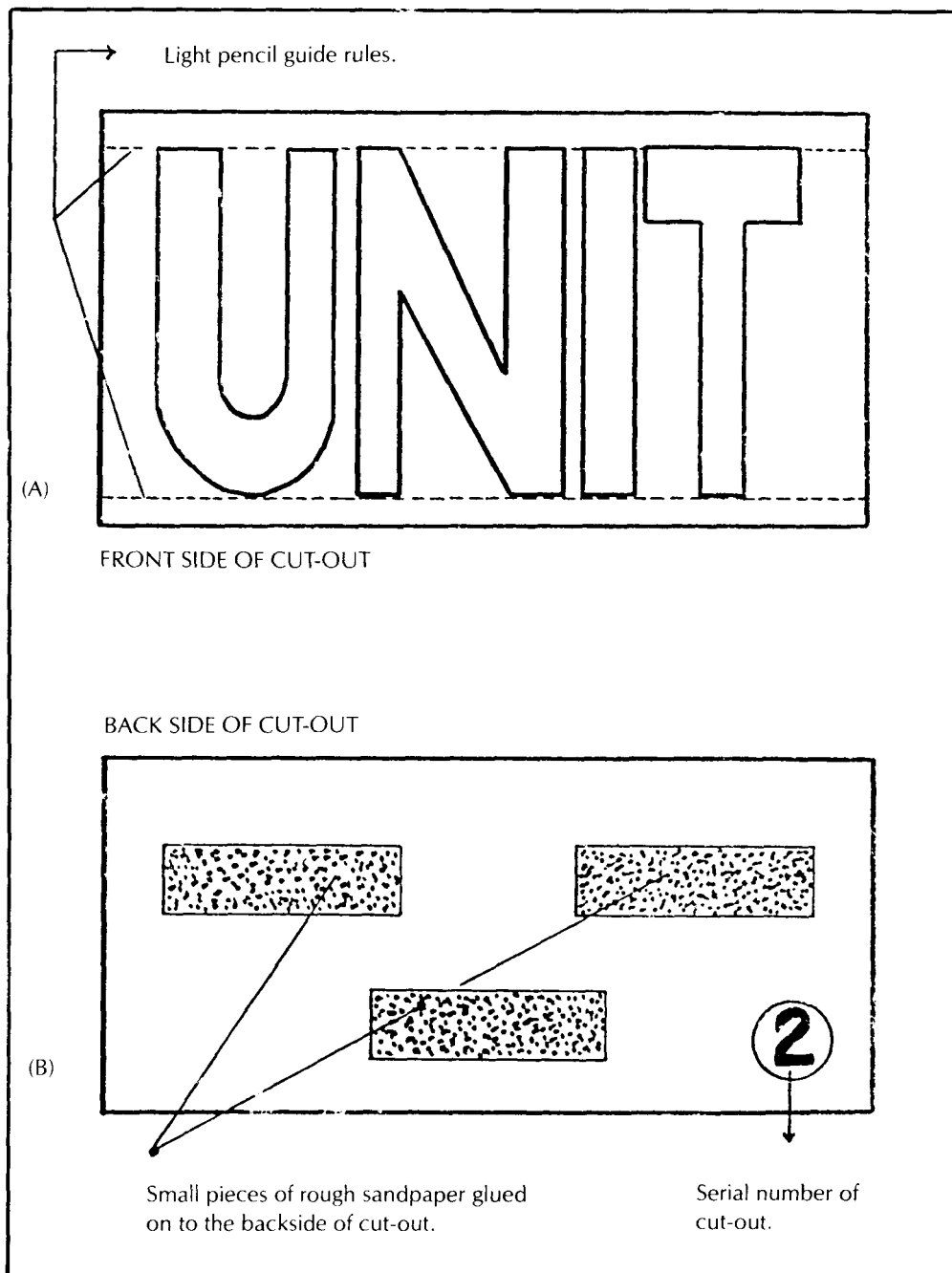
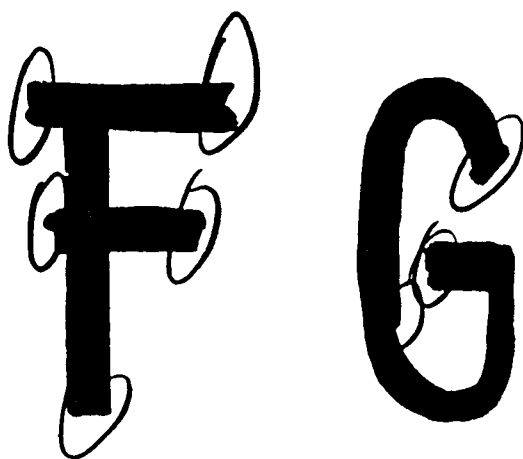
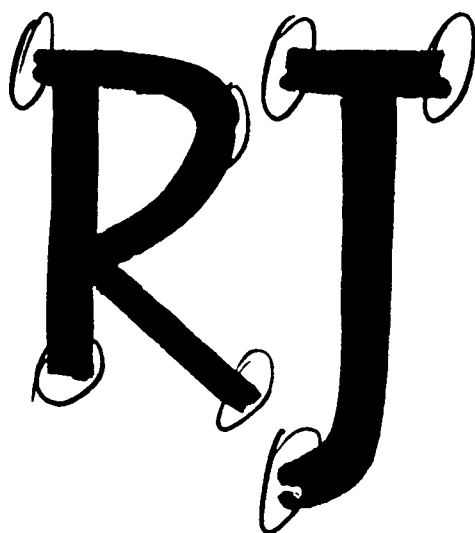


FIGURE IX



While writing on the cut-outs, the edges and curves do not get a sharp finish (see the encircled areas).



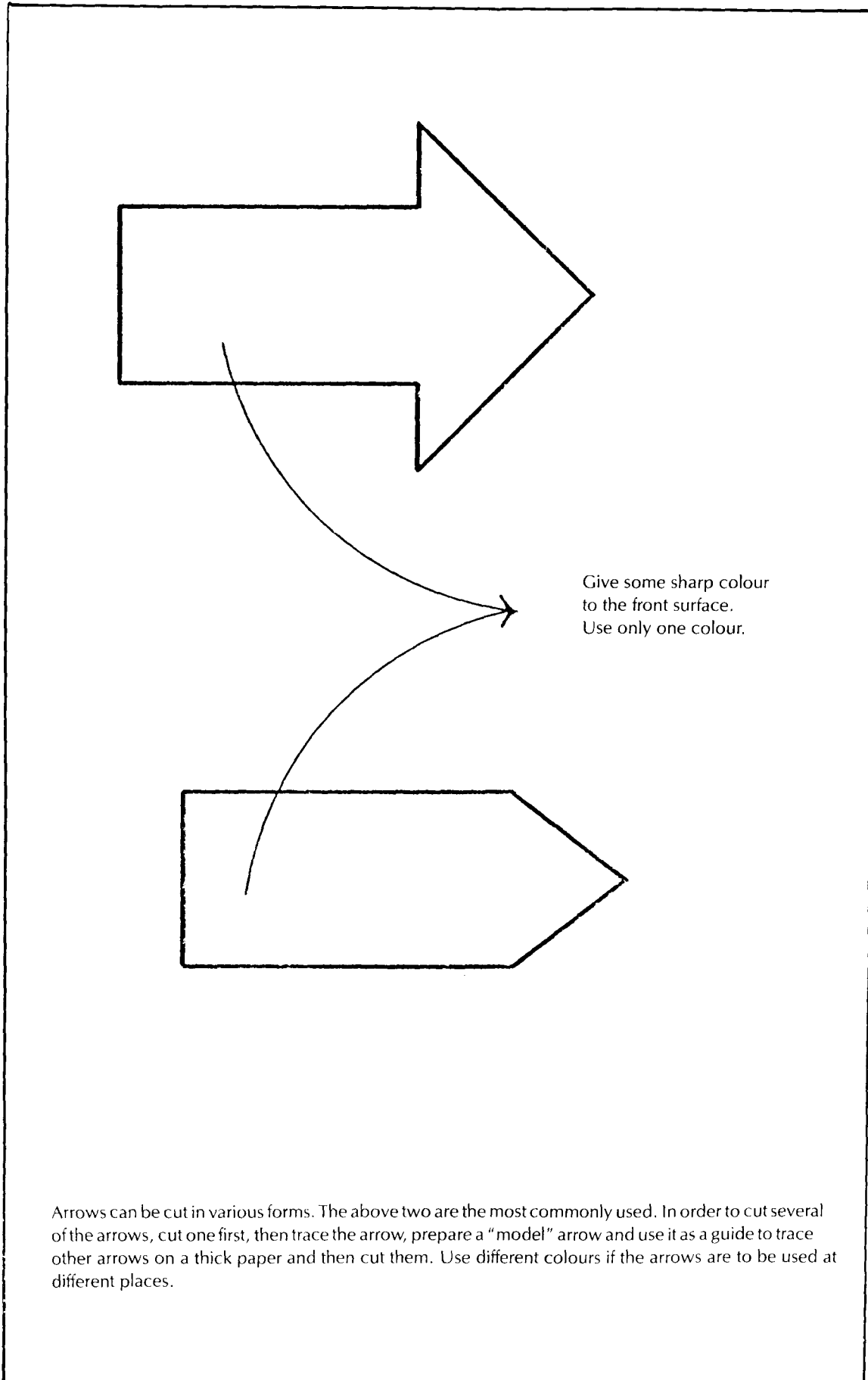
Such letters, obviously, do not present a good picture. They appear to be shabby and unprofessional.



A properly made and neatly presented training aid attracts the attention of the audience.

By giving a lining with a thick pencil or with a dark ink, you can smoothen the letters and bind them. Letters get a smarter appearance.

FIGURE X



# Rules to be Observed

The following rules should be observed by users:

- Number the visuals (cut-outs) carefully
- Rehearse before use
- Keep the visuals and the theme in one envelope
- Keep the flannelcloth clean and brushed up for better hold of illustrations; using flock or sandpaper
- Use small pieces of sandpaper on cut-outs rather than a large one. Several small pieces hold the cut-out better.

## Evaluation

When finished with the presentation and use of the flannelgraph as an aid, you should ask YOURSELF whether the material used and presented:

- has been attractive;
- maintained audience's interest
- was adequate and relevant to the subject for the group, etc.

It would be still more gainful if you associated your audience also in the task of evaluating the usefulness of the flannelgraph as an effective teaching aid. To obtain useful reactions, comments and suggestions of your audience, you could devise some kind of evaluation sheet.

## Check List

Before making use of the flannelgraph in your own and your audience's interest, it would be useful to go through the following check list.

- Is the board slanted and positioned for placing of cut-outs?
- Is the stand stable?
- Does the flannel surface need to be brushed up?
- Have you planned the arrangement of your cut-outs?
- Are the cut-outs arranged in the order of their presentation?
- Do you have your theme-sheet ready?
- Do all the pieces stick on?
- Are letters and figures clearly readable?



# IV. The Flip Board

## Introduction

You may have been using the chalkboard and flannelgraph in your teaching assignments. You might have also used other display aids, e.g. bulletin boards, etc. There is yet another teaching aid which you could also use to advantage, and this is the **Flip Board** or **Flip Charts**.

A flip board refers to the complete aid – i.e. the board and the charts. You have large blank pieces of paper, or prepared charts clipped to the top of a board. So in general terms it can be used as a large sized sketch book for the classroom (see figure XI).

## Composition of a Flip Board

The flip board consists of the following:

- a supporting board;
- several large-size plain paper sheets;
- a few fly-screws;
- a strip of wood;
- a stand for holding the supporting board;
- a few markers, magic ink tubes or colour chalks;
- a pointer;
- a few “R” clips.

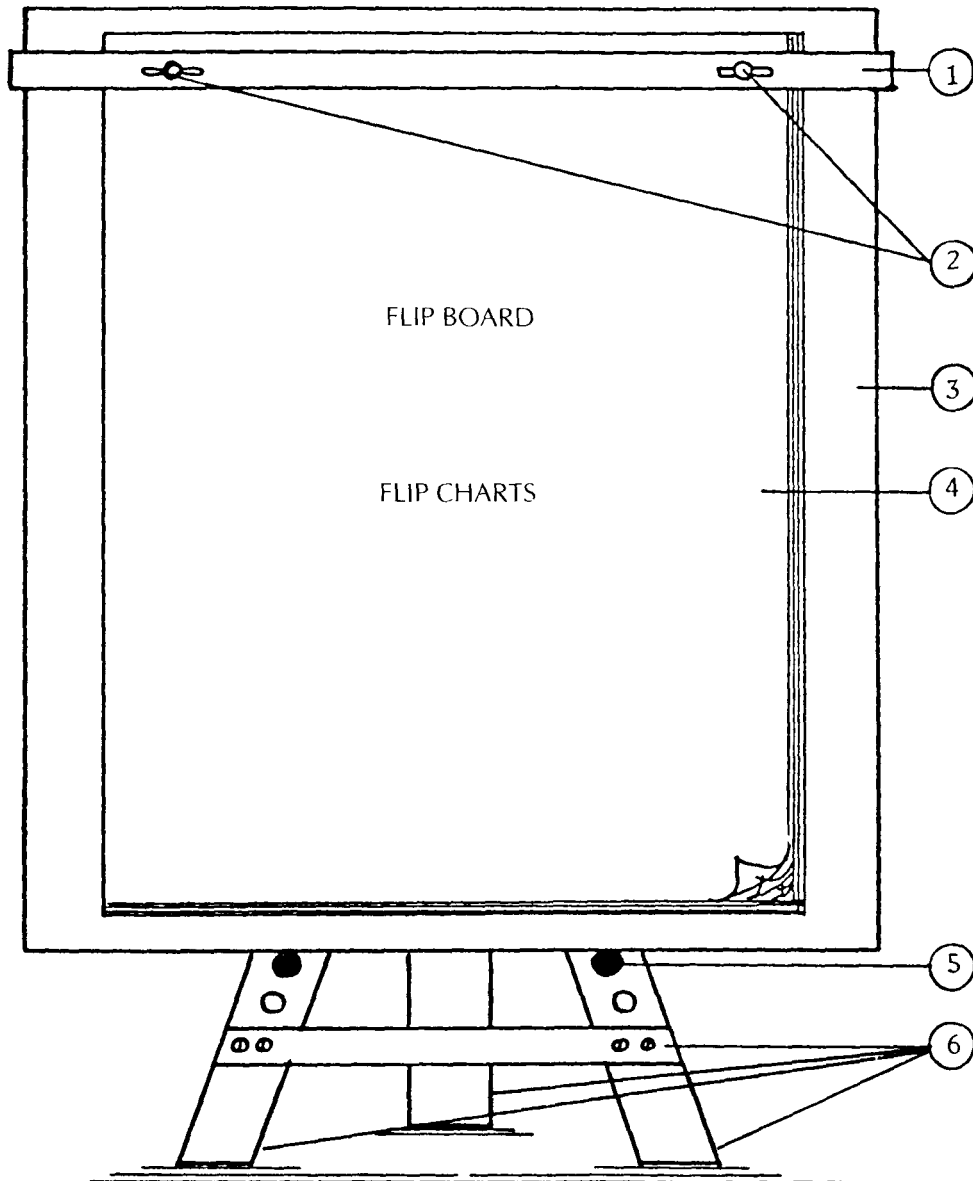
## Making Flip Charts

It is essential, first of all, to get hold of several sheets of paper of uniform size. A few good markers – preferably with water-based inks, a pencil, a ruler and an eraser should be handy. The teacher then should make a rough plan of what he is going to teach in the class. That material should be reduced to small, catchy words and phrases. It should then be transferred to the sheets. The lettering should be bold, clear and smart. Sentences should be avoided, only phrases and catch words should be used. The lines should be straight and there should be enough space between the lines and words. Illustrations, if any, should be simple, bold and, if possible, colourful. Details should be avoided.



After finishing the written work, all sheets should be numbered serially and clipped together at the top for presentation. A blank sheet should be put on top of the front page. Before the presentation of this aid, it is advisable to go through the written work once again and carefully correct any spelling mistakes, or any mis-statements or figures. It is better to do this work before the assignment rather than in the classroom itself.

FIGURE XI



## Description (refers to Figure XI)

1. A strip of wood about 6 cm broad, 2 cm thick, with its length slightly longer than the width of the **supporting board** (3). The strip should be properly polished.
2. There should be corresponding **holes** in the strip, the paper and the board, with a distance between them of 35 cm - 40 cm. Two **fly-screws**, about 8 cm long are put through the strip which is on top, next the paper and finally the board. Brass screws should preferably be used as they don't rust.
3. **Supporting board.** Preferably use a properly polished plyboard – about 3 cm thick and measuring about 30 cm - 40 cm. One side may be painted with black on grey surfacer so it can be used as a chalkboard, while the other may be painted white or grey. The board should have two holes at the top to hold the paper and the strip (see 2).
4. About 20 sheets of paper can be used at one time. Paper can be of any type – mechanical newsprint, white printing paper, light brown packing paper, etc. Do not use very thin paper as the writing ink may go through to the paper underneath. Water-based inks are good for this purpose; avoid using spirit-based inks.
5. Two holding pegs will keep the board in position, and can be moved up or down according to the height of the user.
6. A three-legged stand is needed to hold the flipboard in a slightly backward slanting position. The stand should be sufficiently sturdy with the third leg joined by a chain to a bar between the 2 front legs.

Turnover sheets or flip charts are a good means of maintaining interest during the course of a training period. The knowledge that more material is yet to be presented:

- acts as a stimulus to thought;
- helps to retain attention;
- encourages the viewers to anticipate the next step, thus stimulating and encouraging audience participation.

It should be remembered that aids which create audience participation help people find their own answers and contribute to the best possible teaching technique.

## Advantages of Using Flip Charts

- attracts audience interest;
- sets up a sequence for the topic;
- helps the teacher to present his subject in an orderly manner;
- images help students retain an idea;
- allows for quick synopsis of the topic;
- easily constructed – students can also help;
- easily operated;
- economical;
- does not need electricity or darkening of the room;

- good for explaining a story which needs only simple outlines;
- useful for one-time briefing which does not need any elaborate preparations;
- it is quick, avoids dust, mess and time in erasing;
- sheets can be turned back, for revision and summarisation;
- it is portable.

## Some Limitations

- although the sheets are large, the writing space tends to be limited;
- dramatic effect is limited;
- storing is difficult as curling takes place due to rolling.

## Types of Flip Charts

Flip charts can be held together in various ways. The above description is the simplest and the easiest. Charts can be rearranged, if necessary.

Charts can be bound together with a spiral wire (Figure XIII). In this case, the charts cannot be rearranged without damaging them. 'R' chips can also be used (Figure XIV). There are some portable flip boards. The size of portable charts is generally small. Some examples are given in Figure XV.

## Using Flip Charts

Each chart is to be flipped over after use. One chart discusses one point, and after each point has been discussed you turn over to the next chart.

How will you turn the chart over? If you are not sufficiently tall use a pointer or a ruler. Take care; the sheet of paper can be damaged if you turn it over with a sharp pointer.

Once you start using the flip chart, do not try to hurry the lesson. You are discussing the topic and not demonstrating what you have written or drawn on the flip sheets.

**FIGURE XII**

**MAKING FLIP CHARTS**

To give your aid uniformity and thereby a professional look, you should preferably use paper of the same, size thickness and colour.

Charts should be prepared in the sequence they will be used. The first on the top and the last summarising the topic discussed, at the bottom.

To give charts a neat appearance use dark water-based inks. The illustrations and lettering should be bold, using 2-3 colours. Don't forget to leave some space at the top for the wooden strip.

Make use of a drawing board and instruments for straight lines and circles. When all the sheets are prepared put a blank sheet at the top and staple them together or bind them with string. Number the sheets, and before presentation make sure they are all correct.

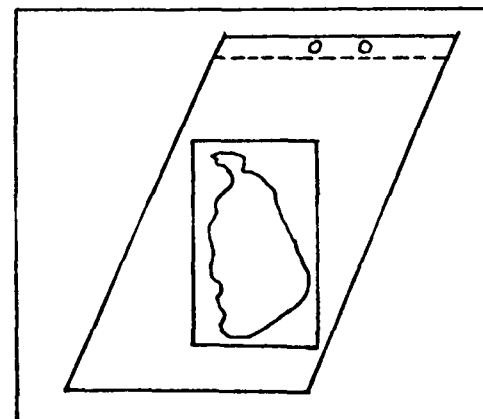
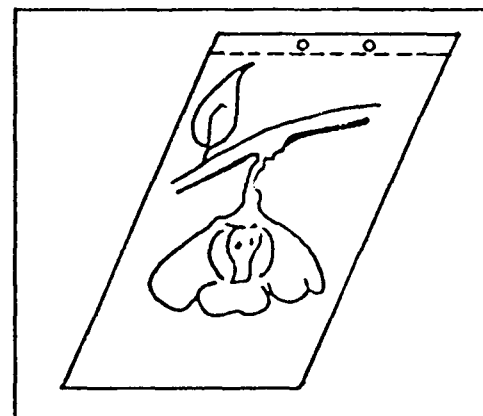
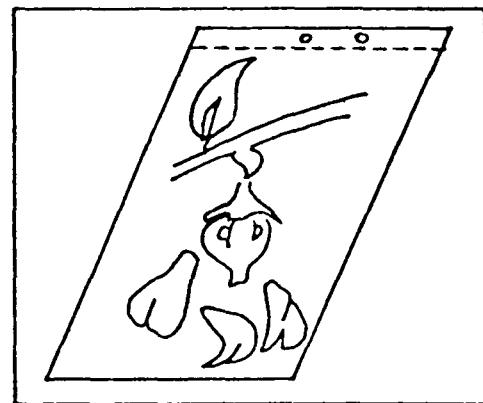
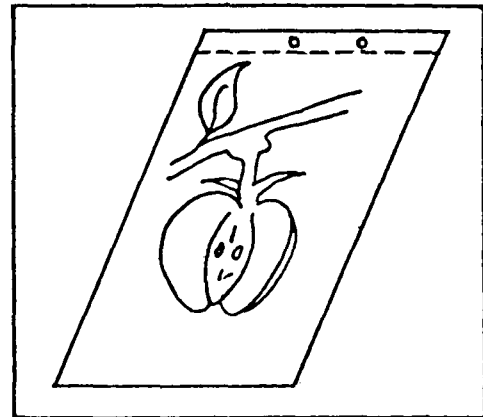
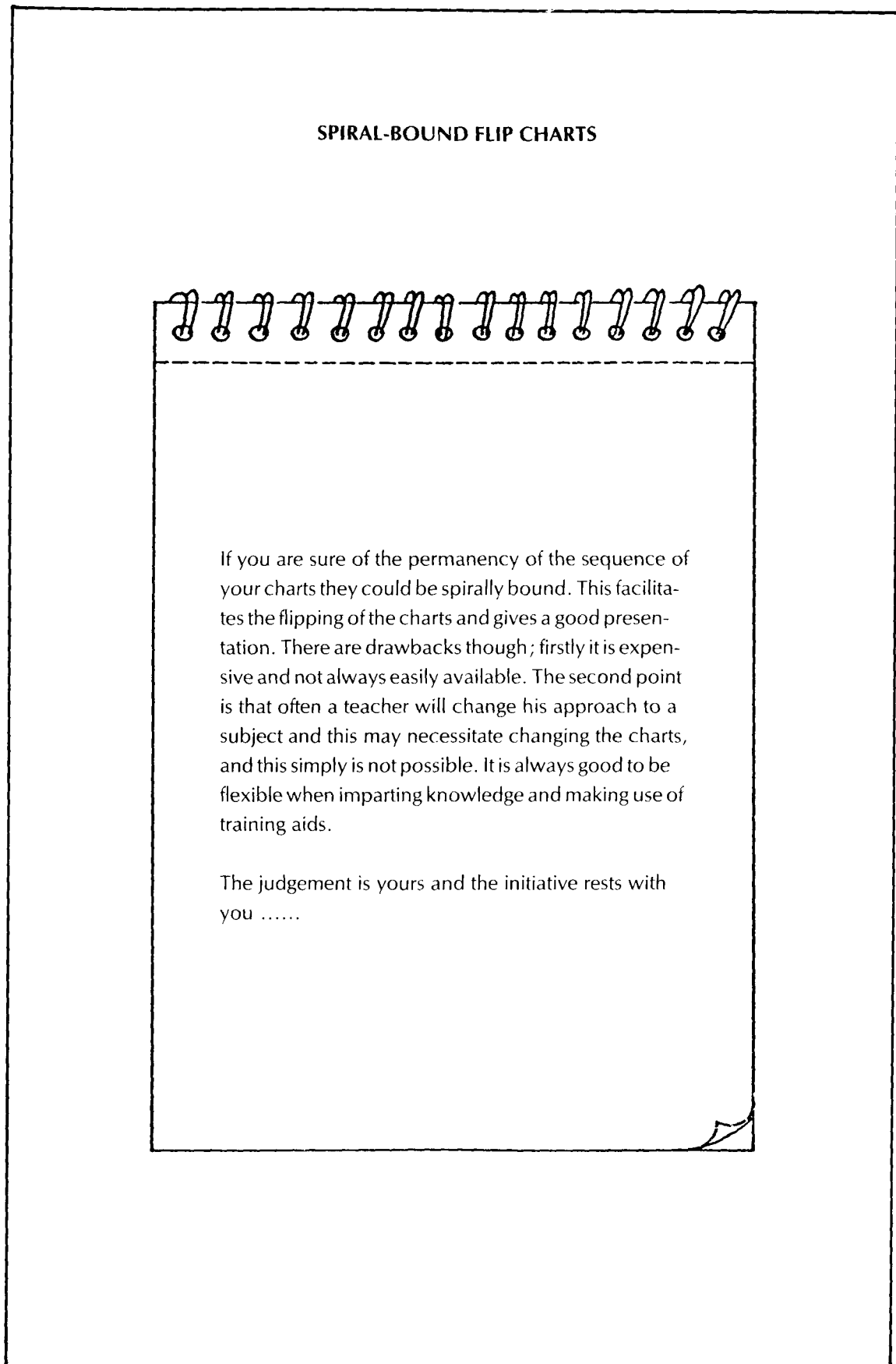


FIGURE XIII



**FIGURE XIV**

**MAKING USE OF "R" CLIPS**

If it is not possible to have holes drilled in the strip of board, and you are not able to get fly screws, you could use 'R' clips or clip bends which are easily available at stationery or hardware stores. Choose the largest size, preferably made of stainless steel (iron clips rust and tend to spoil your flip charts).

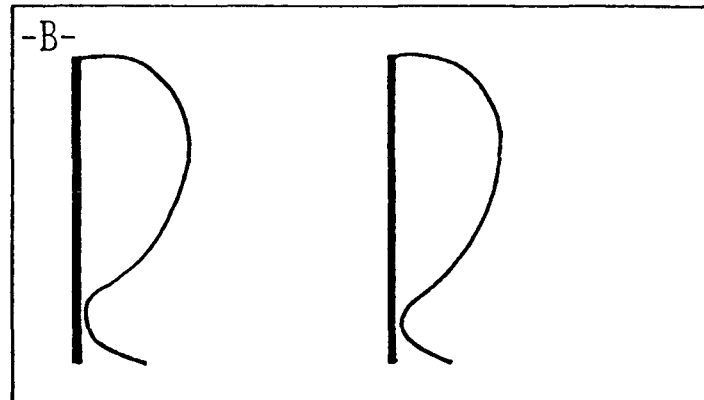
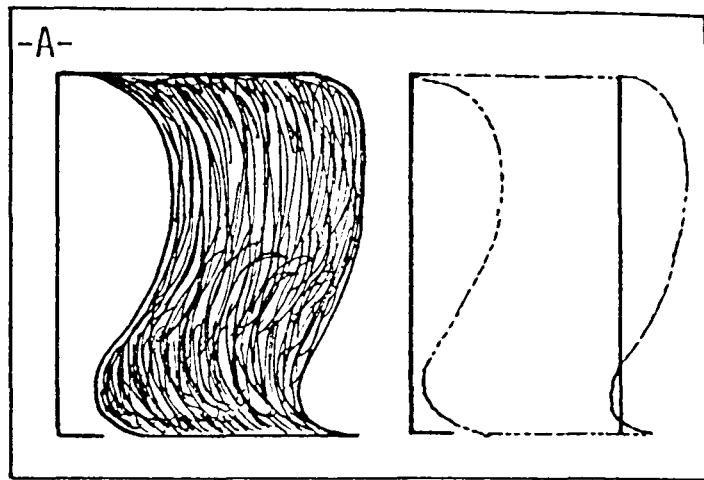


Figure "A" gives you an idea of the front view of the clip, and "B" the side view.

Figure "C" shows you how the clip can be used to hold 12-15 sheets together with the thickness of the board. 2 clips are preferable and you may find 3 necessary to hold the paper firm. They are not expensive.

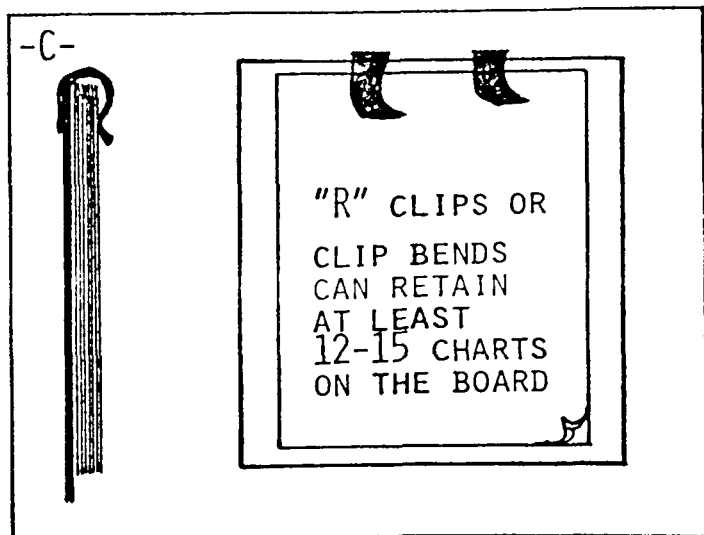
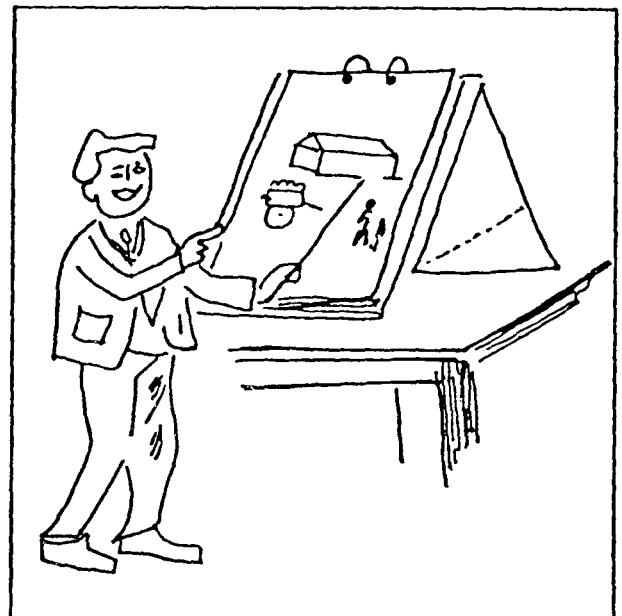
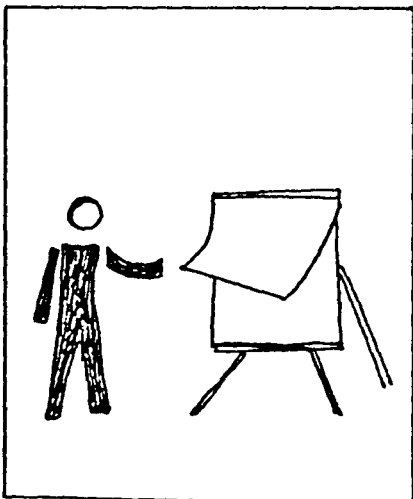
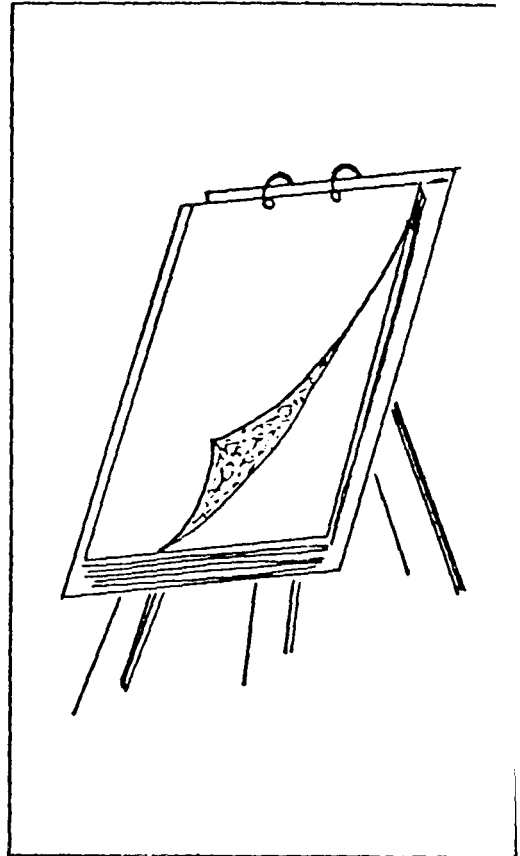
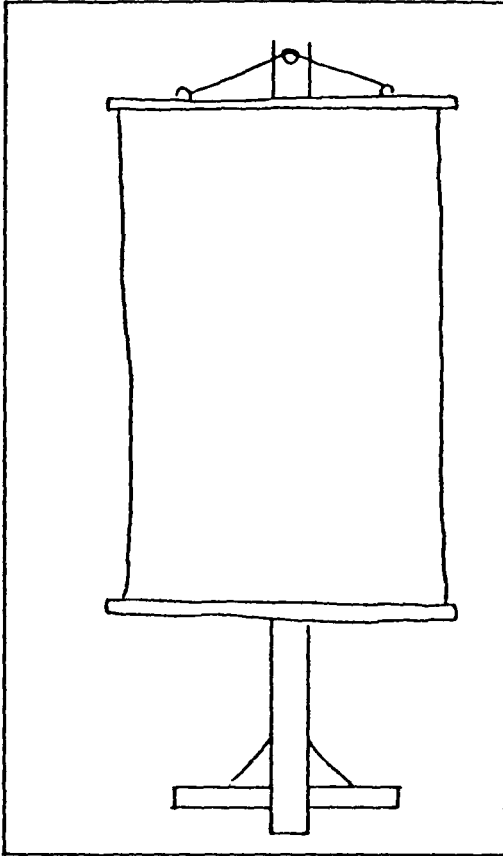


FIGURE XV

SOME PORTABLE FLIP BOARDS



# Useful Points

- Conceal the top of the chart with a blank sheet until ready for use;
- Turn the sheet over carefully otherwise it might get damaged and cause disturbance in the class; class;
- Stand to one side of the flipboard facing the audience;
- *When finished with the talk, roll up the pages 'top-side-outside' so that when you use them next, the bottom of the sheets will not curl towards the audience;*
- Don't read from the flip chart. Use the catch words for discussion and elaboration;
- Always keep some felt pens ready. Check before using as they tend to dry up quickly.
- Keep the markers with their tops on;
- Draw illustrations in light yellow pencil in advance if these are to be presented in the class – this - this will save time and also you can demonstrate a little extra confidence to your audience!







# V. Lettering Techniques

## Introduction

LETTERS and WORDS play an important role in audiovisual materials. They make the visuals lively, bold and effective. Letters add to the beauty and grace of the visuals.

Letters should be clear and bold and written freehand in an attractive style (Figure XVI)

## Freehand Lettering

There are many good mechanical lettering methods which are both quick and efficient, but there are occasions when such instruments are not readily available. This alone is enough justification for spending time on the development of an individual technique so that work may be produced quickly at short notice.

The writing instruments available for freehand lettering may range from simple pens made from strips of bamboo cut to a wedge point, to round and broad tipped lettering pens and the felt pen variety.

All these pens are used in a similar manner. For the fastest, neatest work, use a felt pen with a wedge shaped tip, presenting the sharp edge to the paper, at an angle of 45 degrees to the guidelines.

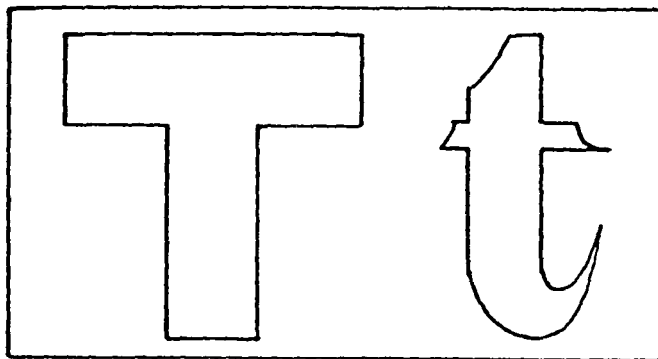
For all freehand lettering, draw faint horizontal and vertical pencil guidelines. Even if some letters do not touch the guidelines it does make it easier to keep the writing straight.

Wherever possible use down strokes – i.e. 4 downstrokes for the letter S. Holding your pen at an angle of 45 degrees to the guidelines gives your letters character. Keep the hand and fingers relaxed when using felt pens and writing large letters, or the lines will tend to be shaky. The movement of the hand should be natural and no effort should be made to keep the hand steady, although naturally you rest your hand on the table for support.

## Capital and Small Letters

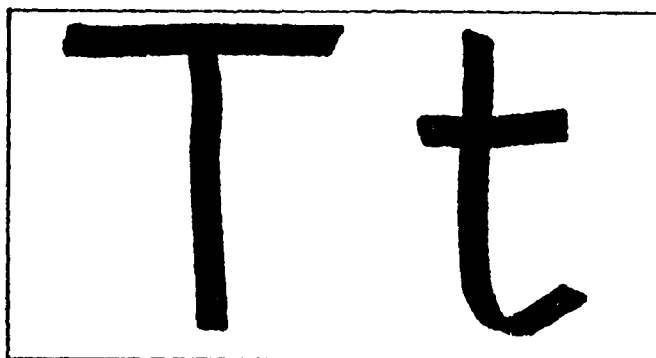
We tend to recognise words by their general shape as much as by the order of the individual letters, and it is for this reason that a row of capital letters is more difficult to read than words composed of small (lower case) letters, like those used in this paragraph. If extensive and continuous use is made of capital (upper case) letters, reading can be more appropriate to captions and main titles than to long phrases.

FIGURE XVI



FORMAL  
LETTERS

FIGURE XVII



FREEHAND  
LETTERS

The practice of lettering with a felt pen need not be expensive. A newspaper is ideal for this and if an old one is so placed that the columns of print are horizontal instead of vertical, the edges of the columns and lines of print may serve as horizontal and vertical guidelines. These may be supplemented by pencil lines to give a measure of control over the size of lettering. For the best results a little time spent practising is not only necessary but rewarding, both in terms of speed and neatness.

Flo-master felt tipped pens are admirably suited to this purpose and are available in both disposable and refillable forms in many parts of the world.

## Stencil Lettering

Brush stencils are the ones where a stencil is used to obtain the impression of the cut letter with the help of a brush which is daubed with ink or paint. The Econasign system is also used in lettering. A special guideline is used with the transparent stencils and a brush is charged with semi-dry water colour. A variety of sizes and styles of lettering is available. Whilst giving results of a very high standard, they are easy to use.

There are many pen stencil systems and one of the better known is the Uno system. Indian ink is used with a special pen that has a tubular tip, which is an exact fit for the pen guide. Again, a variety of sizes and styles is available. The corresponding pen and stencil each bear a number and must be used in co-ordination. Cleanliness of both the pen and stencil is important to maintain a high standard of work.

## Size, Layout and Spacing

Normal script on a chalkboard needs to be between 5 cm. and 6.5 cm. in height. No such rule is possible for stencil and freehand lettering, as clarity is dependent on style. The effectiveness of work of any particular size must be determined by the purpose of the material and the type of audience.

For the purpose of illustrating the techniques of spacing, two examples of lettering are given (Figure XVIII). The first is mechanical spacing, where an equal amount of space is allowed between each letter, but sometimes, the space appears to be larger than it actually is. The second example shows optical spacing, giving a much better appearance to the work. With only the minimum of training and careful observation over a short period, the eye can become a better guide to correct spacing than a whole collection of complex rules. It is quite easy to develop a critical faculty in this direction and once developed, it is equally easy to observe frequent errors of spacing which appear even on any commercial signs and notices.

## Caution

Lettering should be bold, neat and clear, with space between the letters uniform. Apply the method of mechanical distance and optical distance as you think suitable. Avoid extremes; this includes tall-thin or short-fat letters and any form of exaggerated or unfamiliar style which may be of occasional interest, but is certainly not easy to read. Vertical lettering is not easy for the eye to scan, and can lead to misreading and misinterpretation; it is tedious and best avoided.

## Lettering as an Integral Part of a Visual

Lettering forms the reading part of a visual aid. It should therefore be:

**Legible:** The lettering should be legible enough to allow even the back rows to read it clearly, without undergoing any optical strain;

**Bold:** Make it thick, bold, straight and vertical;

**Clear:** Avoid over-crowding and confusion.

Even if a beautiful and most effective illustration or photograph is used in the visual, it would get ruined if hotch-potch lettering were included in the visual aid. Lettering, if properly executed, will make the illustration/photograph talk and the message gets communicated effectively and quickly. Ornamental lettering does not go well with the serious type of visual aid, but could be used for 'lay' posters or announcements. For educational material, it is always best to use formal and bold lettering.

SPACING

FIGURE XVIII

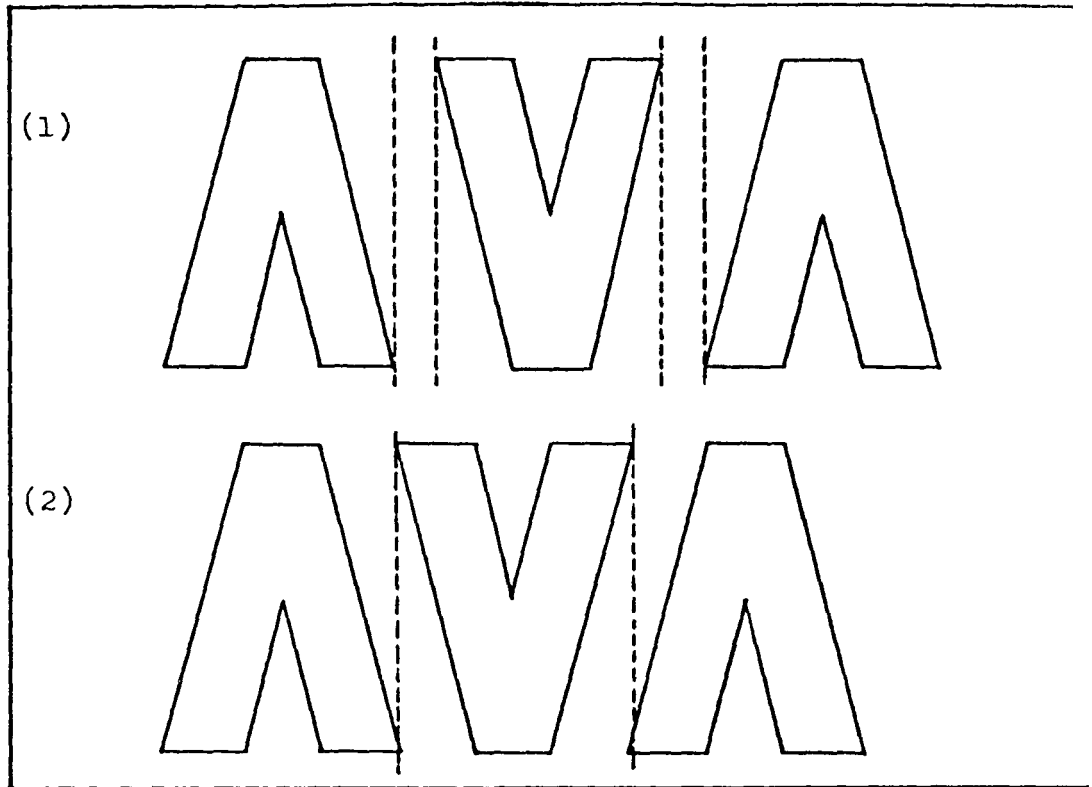
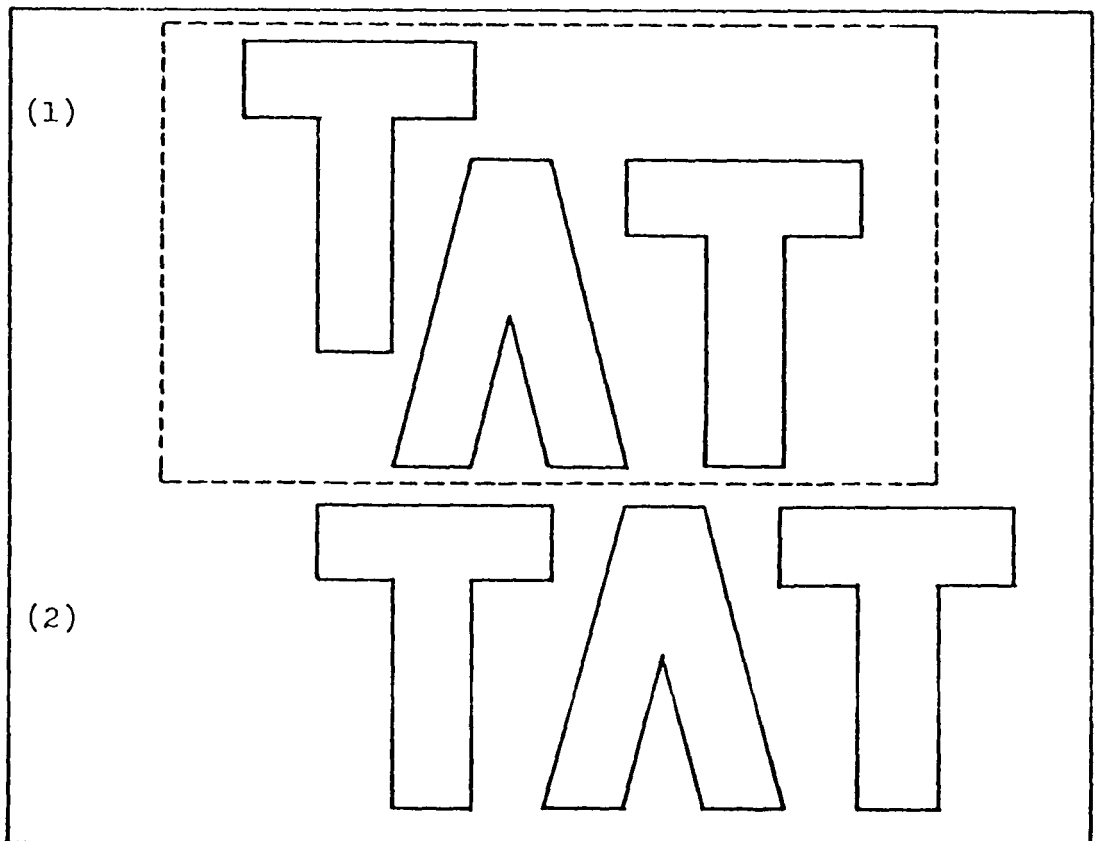


FIGURE XIX



In the first illustration (Figure XIX), letters are arranged unevenly and make reading an exercise, while the second illustration allows clear and quick reading; therefore, do not confuse your audience by using unevenly arranged letters.

Avoid fancy letters (Figure XX). If you wish to write 'A', make it an A and not an ornamental one.

Avoid serifs (Figure XXI). They consume space and time unnecessarily, and distract attention.

Make your letter as balanced as possible. Its arms and legs should be within a reasonable frame. In the three illustrations (Figure XXII), the first one is balanced, whilst in the second and third the leg and arms are longer.

FIGURE XX

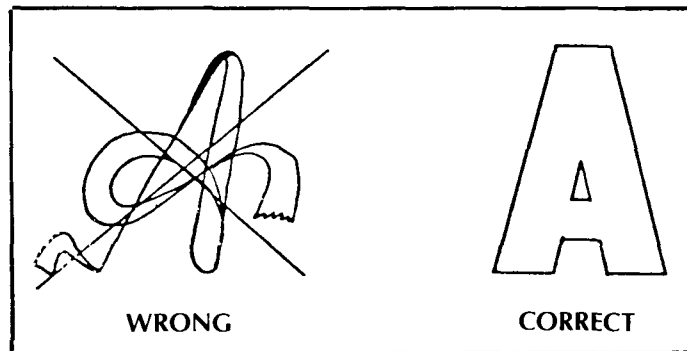


FIGURE XXI

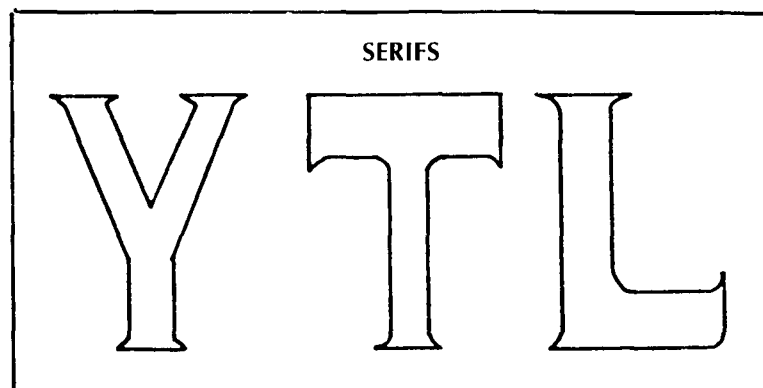
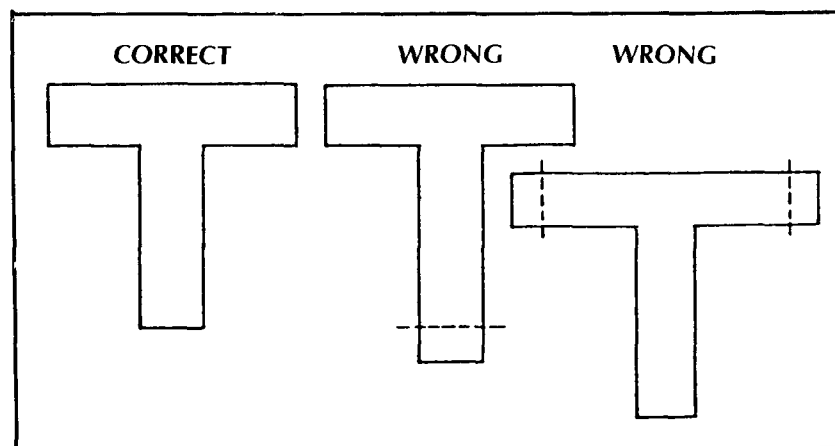


FIGURE XXII



Determine the height of the letters in a given space. If the letters are 7 cm. high, the balanced thickness should be about 1.5 cm. and the total width of certain letters such as B, D, G, R, etc. should be 5 cm. wide. Certain broad letters like M and W should be 6 cm. wide.

If you are actively involved in graphic work and trying to give your visual aids a professional look, it is desirable that you practise regularly. Study carefully the construction of letters and you will learn a great deal.

## How to Write Letters

The best tip would be to do as much freehand writing as possible, making use of used newspapers, ruled paper and good-handwriting exercise notebooks. Using various types of pens and pencils including felt-tipped pens, try writing capitals, small letters, slanting and straight letters. Write your own name, the name of your organisation and so on. Keep your arm relaxed: no tension of any kind, anywhere.

Freehand lettering is done without the help and use of any mechanical measurement. The materials are the following:

- ruler
- 2 set squares
- paint, poster colour
- ordinary pencil
- brush
- crayons
- felt-tipped pens
- ink tubes
- pencil eraser
- old newspapers
- ruled notebooks

Freehand lettering does not, however, mean that you are completely free to draw or write anything. As with most aids there are naturally some restrictions.

First, draw parallel lines with a pencil. Secondly, determine the placing of the letters with a soft pencil. Thirdly, hold your hand steady as you practice with a felt tipped pen. Fourthly, do not rotate your fingers. Move your arm only and then start with simple letters that have varying curves. It is then a question of writing them again and again. Practice makes perfect. Some examples are given in Figures XXIV to XXVIII.

## Mechanical Devices for Writing Letters

As mentioned earlier, some simple mechanical aids are available for writing letters. Planograph letters are cut out from stencil guides on plastic plates. Draw a horizontal pencil line on paper and set the stencil guide. Fill the scribe pen with regular Indian ink. Trace each letter, spacing the letters with the eye –

the optical distance method. Other lettering aids are Econasign, Uno stencils, card or metal cut-outs, Rapidograph, Letraset etc.

Lettering is PRINTING done by hand.

FIGURE XXIII

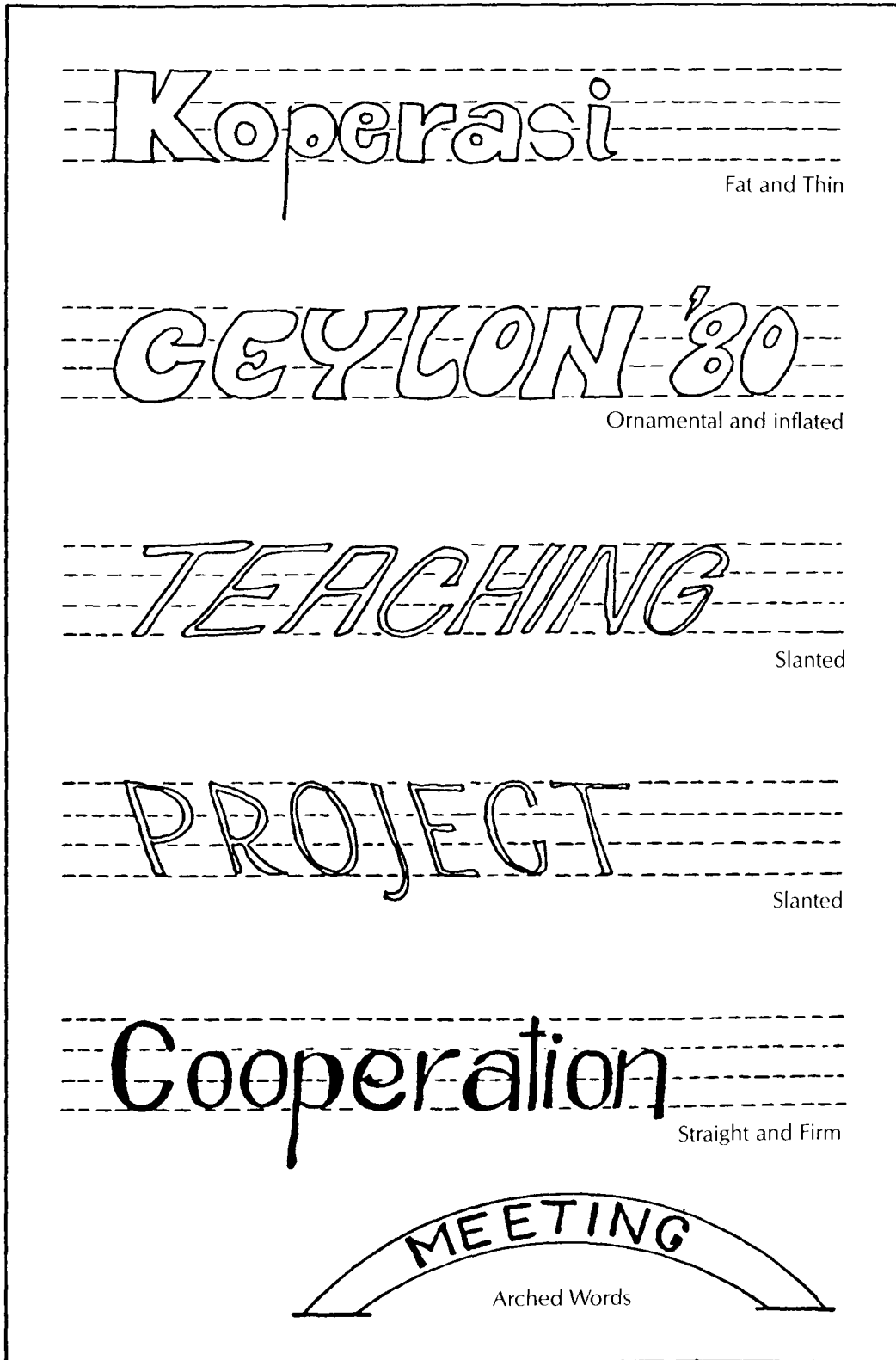
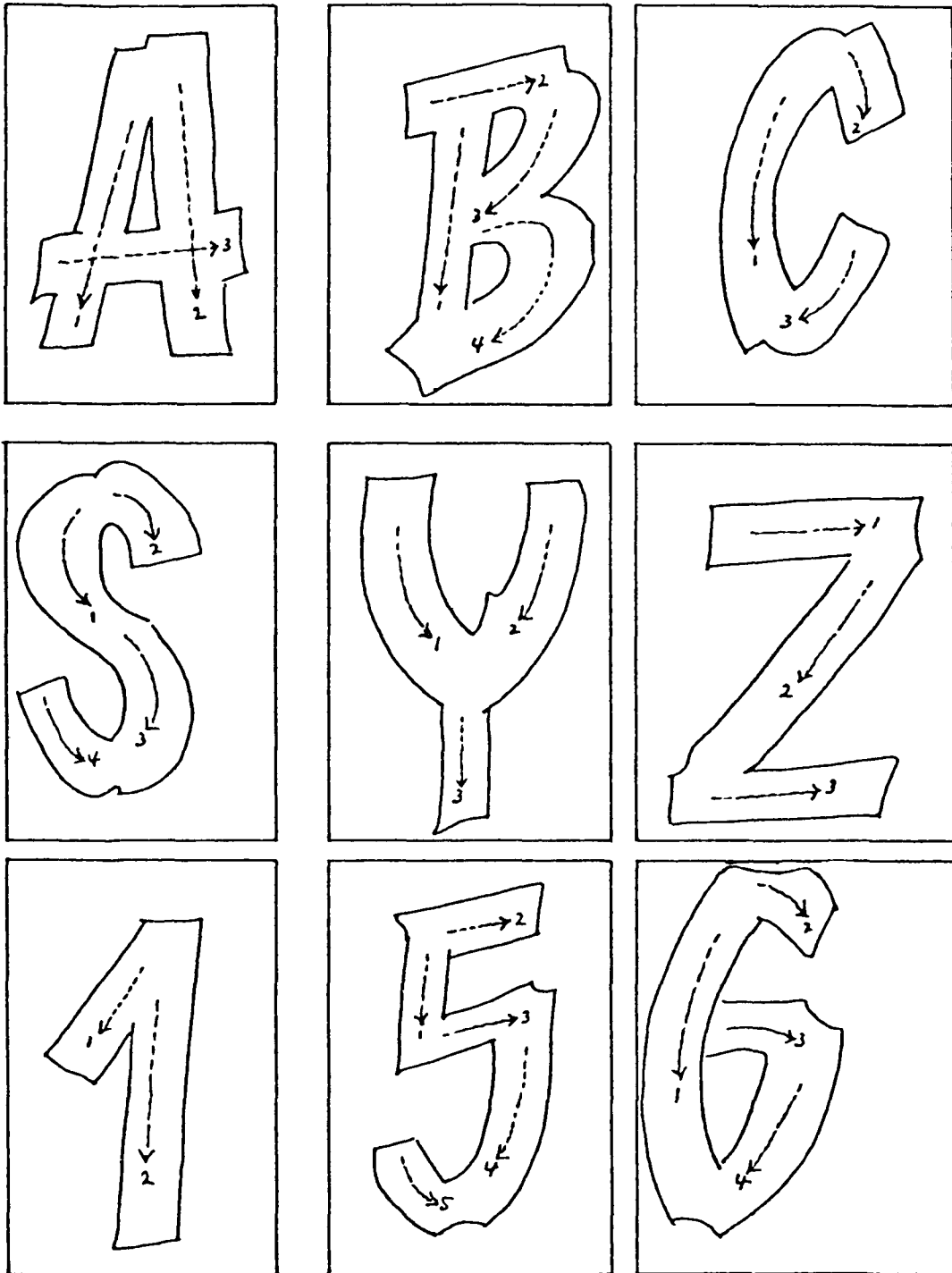


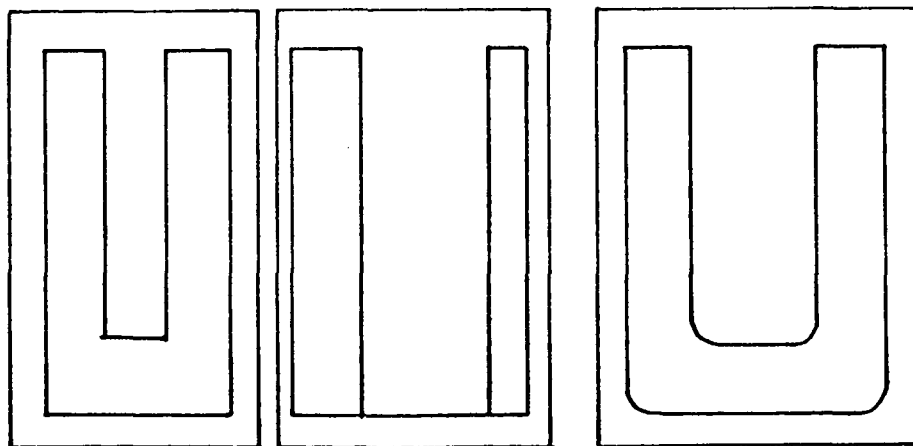
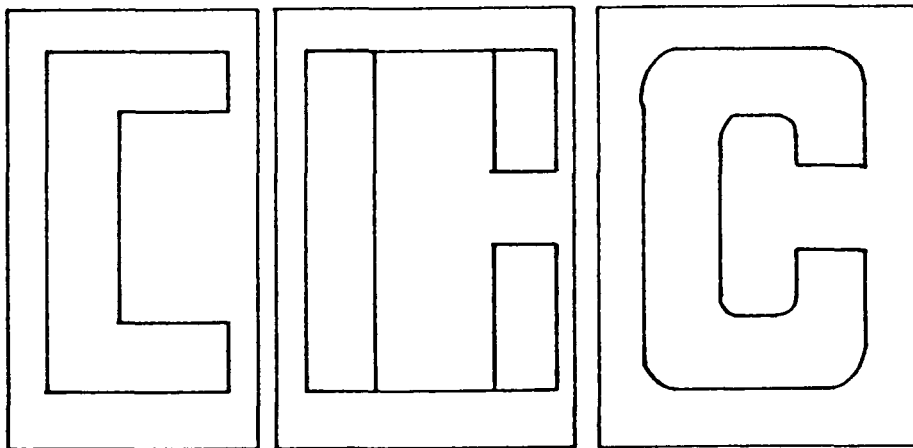
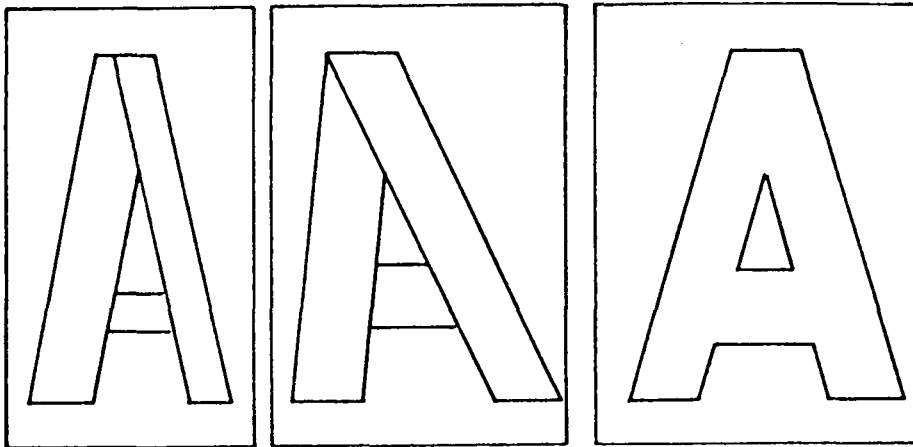


FIGURE XXIV



The arrows indicate the stroke of the feltpen and the figures represent the number of strokes

FIGURE XXV



# Points to Observe in Lettering

The following points must be kept in view by those who will be doing lettering for their visual aids:

- Do not measure an equal space for each letter. Not all letters are of equal width. The measuring method will leave too much space between some letters and not enough between others;
- Lettering can be made to fit almost any size of space, by extending, condensing or spreading it;
- Use script for variety or emphasis only;
- Do not run your lettering to the very edge of the paper. Space is very important – make your border wide enough;
- Leave space between lines of lettering, allow one-third of the height of a capital letter for the space. There should be enough space between words so that they are not crowded;
- Avoid monotony, vary sizes of letters, and the width of the lines;
- Lettering which is too uniform will not attract attention. Long phrases in capitals are difficult to read. Use capitals and lower case;
- Words can be slanted – but slant them UP and not DOWN. Words can be arched too;
- Ornate styles of type should be used for emphasis only; and
- Not more than three different styles of lettering should be used on posters or charts.

Letters written on charts, etc., displayed in front of you look easy to make. They are; but one needs to learn this skill rather carefully, and practice constantly. The first attempt will be hopeless, the second one will be an improvement over the first one and so on. You will have to devote a lot of time to practising. Practice makes perfect!



# VI. Drawing Simple Figures

## Introduction

For visual aids and graphic work you cannot obtain, ready-made, all the illustrations or photographs you need to support your text. Even if you are able to collect them, they may not be suitable. It is therefore essential that you, as communicator, are able to draw some simple figures which will enhance the message you are conveying to your audience. You need not be an artist to draw a picture; you should, however, be able to draw stick figures and simple pictures.

The simple drawing with stick figures to represent people is one of the simple means of illustrating ideas. There are three major factors to consider when drawing stick/simple figures:

### **Proportions**

Parts of the body should appear to be natural and logical, components of farm machines should appear to be realistic, dimensions of buildings should appear to be natural and real.

### **Distinguishing Features**

Everyone has features which are quite distinct from other people.

### **Body Movements**

Parts of the body move differently. Movement of legs and arms, and sitting postures are quite different and they need careful observation.

In order to combine these factors properly, it is important that some basic principles should be followed. Frequent practice is also necessary. The practice will involve observing people, things and operations carefully and copying some of the printed material.

Though you may not consider yourself an artist, you will find that with practice, you acquire an ability to communicate your ideas through this medium.

## Material Needed for Drawing People

To begin with you need the following materials:

- (i) a sheet of plain paper
- (ii) a coin (relative to the size of the person)
- (iii) a pencil (or a felt pen)

- (iv) a rubber/pencil eraser
- (v) a ruler.

Proportions in a figure – a human figure, – are very important. Follow the procedure explained below and you will gradually recognize the importance of proportions in a human figure. The body is divided proportionately and when drawing, these proportions have to be maintained (Figure XXXVI).

- a. With the help of a coin draw seven circles, one underneath the other.
- b. To the side, use the same coin to make a circle for the head. Draw the rest of the figure in line with the proportions given in the illustration.
- c. Now repeat the same process to make a female stick figure. Note that females have narrower shoulder and wider hips.
- d. Now try drawing a female figure next to the one you have completed, only this time not using the coin. Try to judge with your eyes the correct proportions of the body.
- e. Once you feel confident you can draw these figures in the correct proportions, work to pick up speed. You may want to eliminate the middle line extending from the head to the hips. You will also develop your own style for hands and feet. Make these as simple as possible. Try to keep the figure free from details.
- f. Now go and add the finishing touches to make your figures more realistic, such as:
  - hair, ears, head covering;
  - trousers and shirt (for a male)
  - dress or skirt and blouse (for a female).
  - erase centre lines and fill in with colours.

What do you have now? two properly proportioned human figures – one male and one female. Try to practise this example at least five times (Figure XXVII). You will notice that you will gradually be able to work without the use of circles. As you continue you will pick up speed as well as developing your own style.

Another exercise: this time you enlarge the figure to, say, twice the size adding some details to hands, feet, face, hair style, eyes, ears and so on. After several attempts you will be able to draw a complete figure without too much effort.

One point of caution, however. DO NOT keep your hand and fingers tense. Allow them to move freely. If you are stiff, the lines will be distorted and you are likely to smudge the paper. Do not be tense!

## Facial Expression in Simple Human Figures

Besides the proportions of body, there are proportions in each part of the human body. Are the eyes bigger than the nose, or the ears? Does the hair cover the entire head or only some part of it? Is the nose positioned above the eye-line? So, when we are trying to fill up the face of a simple human figure, we should note the location of the features and their proportions.

The expression you give your figures is extremely important, with regard to the message you wish to convey. Again it is a question of practice, if you want to avoid distorting the expression and thereby the message. Keep your figures simple – details are not essential – but convey the message as easily and effectively as possible.

FIGURE XXVI

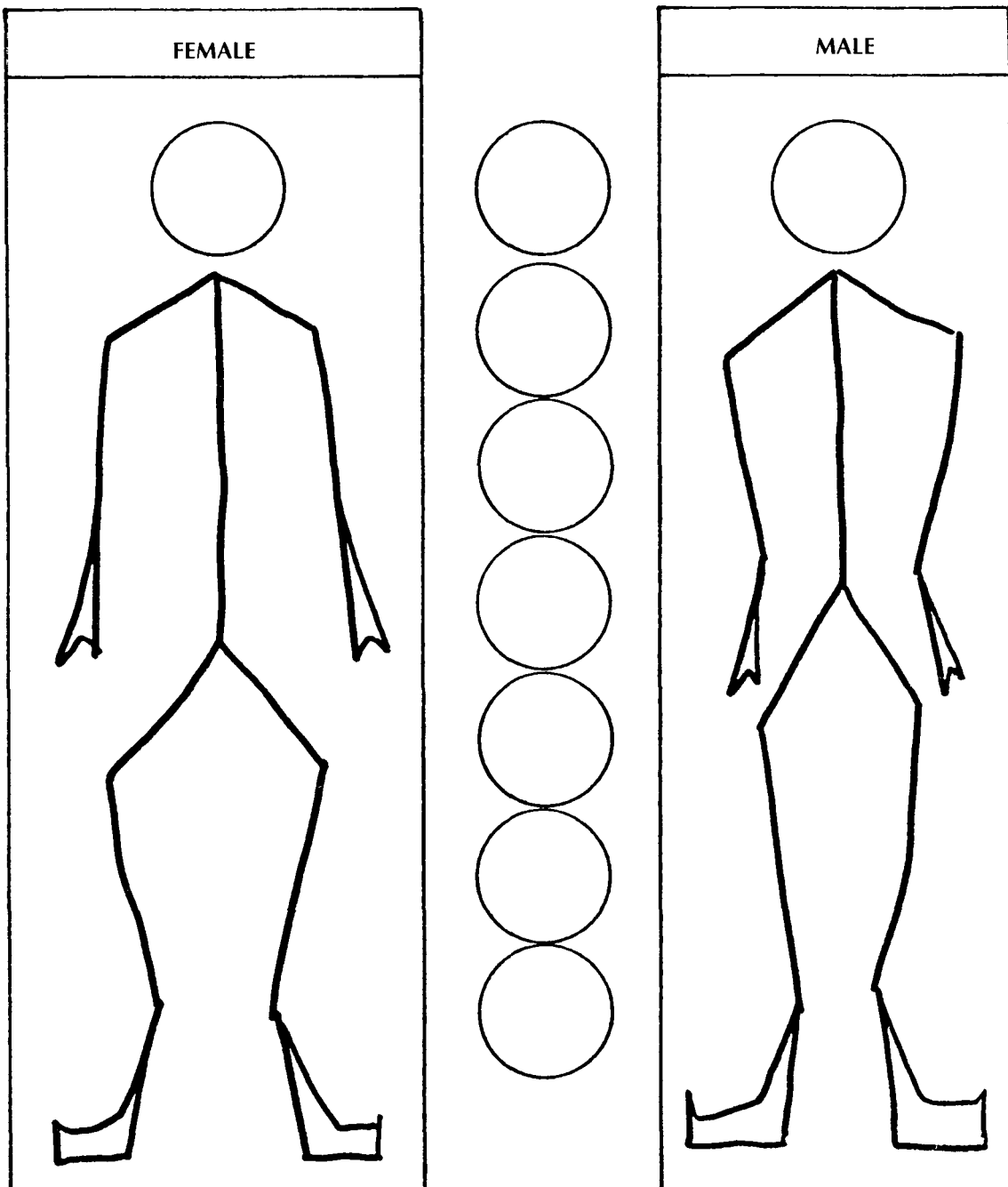
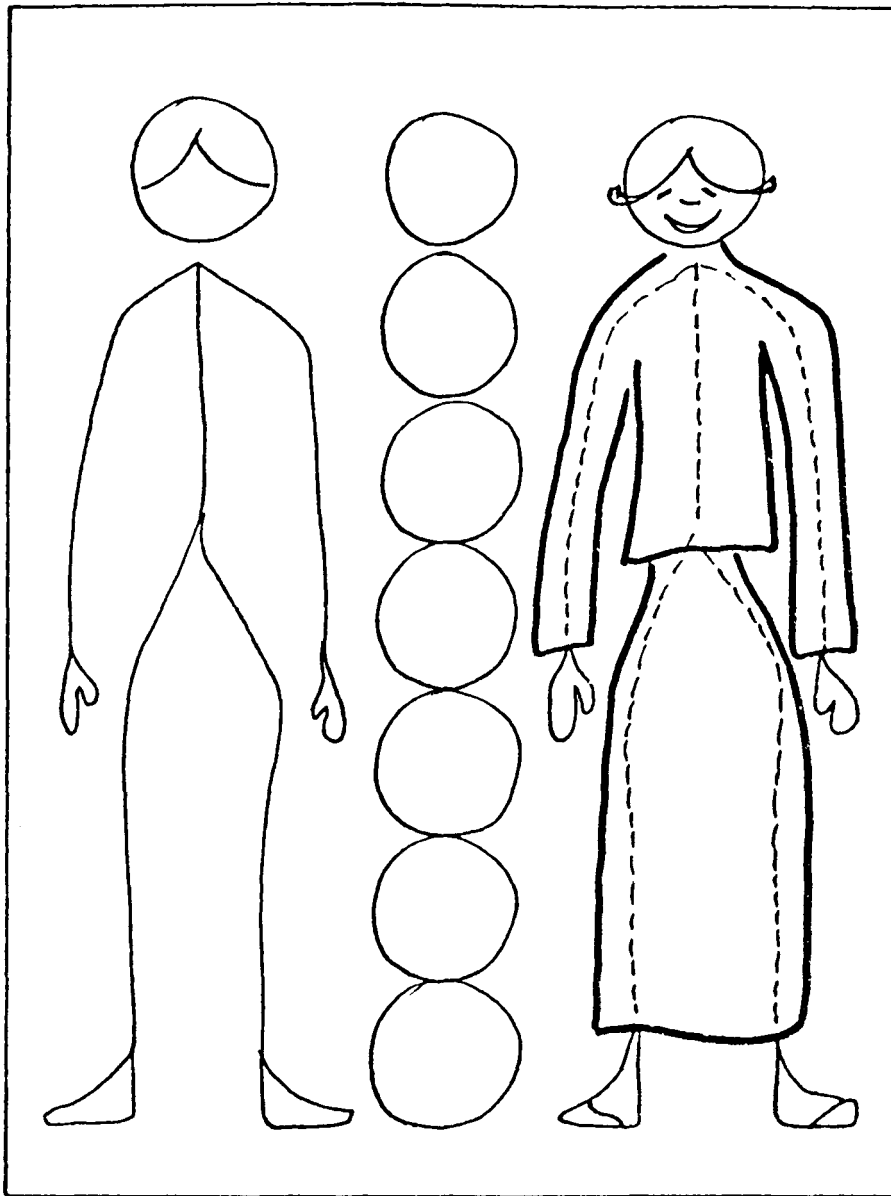


FIGURE XXVII

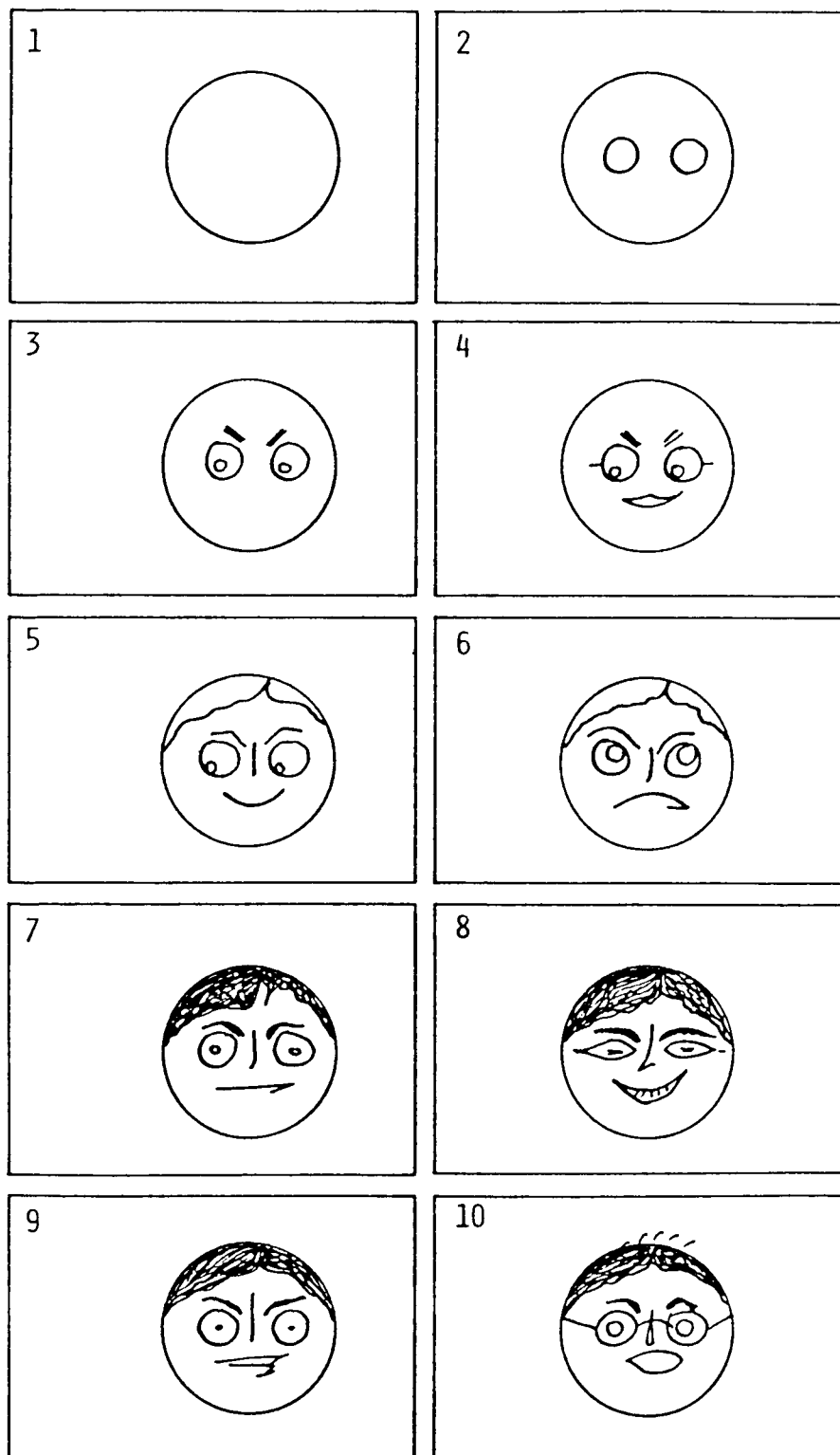


Now let us do some more practical work in order to understand and develop human facial expressions (Figure XXVIII).

- At the top of your paper quickly draw a series of about 10 freehand ovals or circles, making them sufficiently large and bold.
- The shape of the eyes and the positioning of the pupils change the expressions of the face. Draw eyes in the circle, then add the pupils in different positions. As you progress you can add the eyebrows. You will be surprised how many expressions you can achieve.

- The mouth is another facial feature which gives us an idea of a person's mood. Draw the mouth in different positions and try to change the expression. Trying to keep an association with the eyes, eyebrows and mouth, see for yourself how much these expressions communicate.

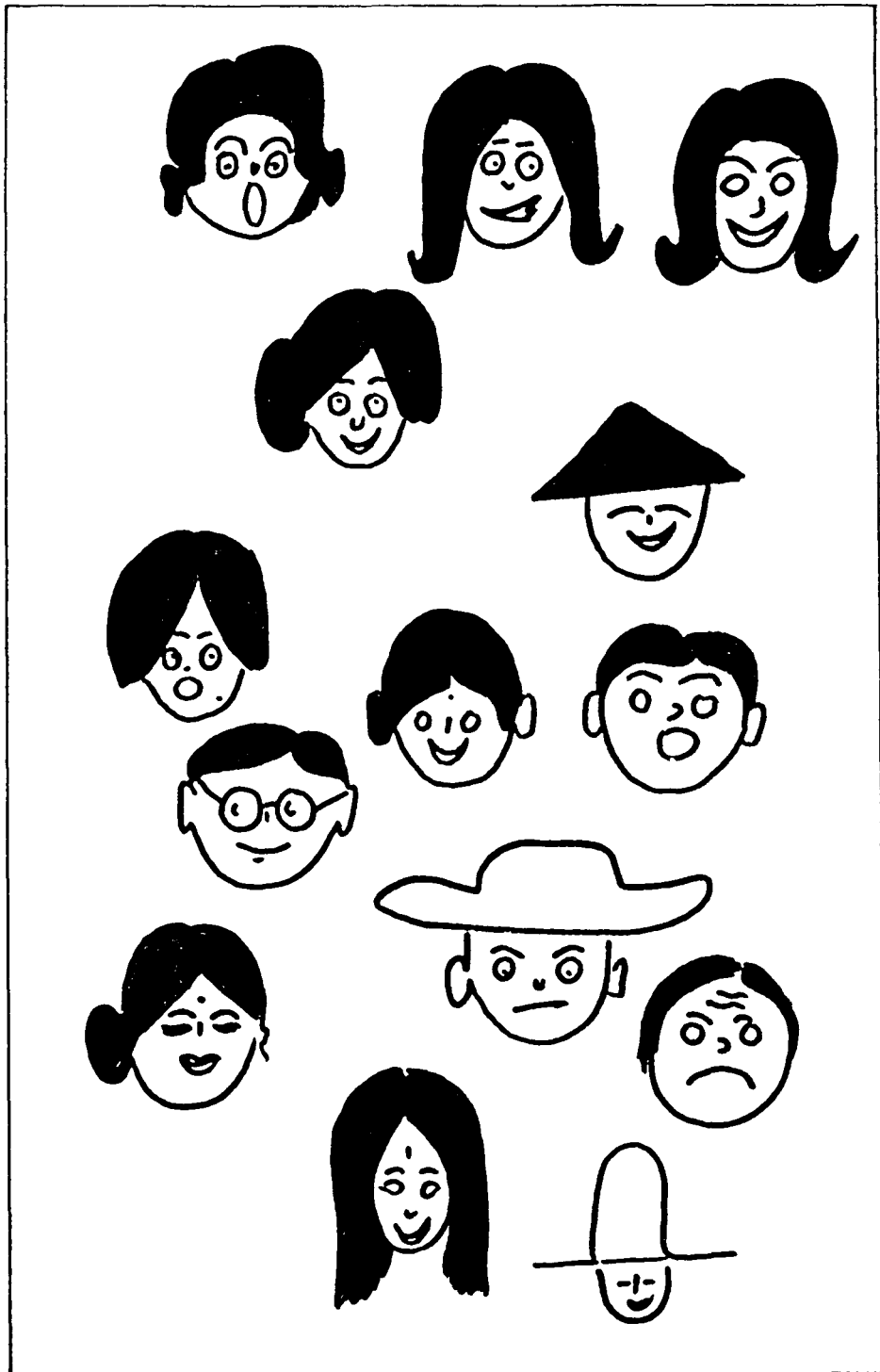
FIGURE XXVIII





Having mastered the basic steps in drawing simple facial expressions, try adding a few individual details, such as hats or hair, etc. These can depict different people that an audience can identify, e.g. curly or straight hair, a straw hat, a cowboy hat, etc. (Fig. XXIX). At this stage one could also bring in colour.

FIGURE XXIX



# Stick Figures

Stick figures – or matchstick figures – are very simple and communicate quite effectively, as they do not have very many details. Just place about 10 matchsticks in front of you and play with them (Figure XXX). You can bring movement in stick figures by placing the sticks in various positions, and if you can place them on the Overhead Projector glass plate, the results on the projection screen can be very fascinating.

# Other Figures

By observing people and by looking at some line drawings you can also produce illustrations to support your teaching work. A number of examples have been included in this chapter (Figure XLIV to LVI). It would be a good idea to copy them for purposes of practice.

# Background

It is necessary to learn a little bit about perspective, so as to fill in some of the background to your drawings with, for instance, a house, shop, road, a desk, etc.

Another point worth remembering, is that if you look down a long road the sides seem to come together as you scan towards the horizon. So, remember, parallel lines going away from you come together.

Now you are ready to try practising the examples given in figures XXXI and XLI.

Finally with regard to drawing objects, first look for the basic shape then add the details step by step. To draw a radio, first draw a box shape, then add small circles for the knobs. A car, for instance, will become much simpler if you think of it as one large box for the body, a smaller one for the bonnet and two circles for the wheels (you never see all four).

FIGURE XXX

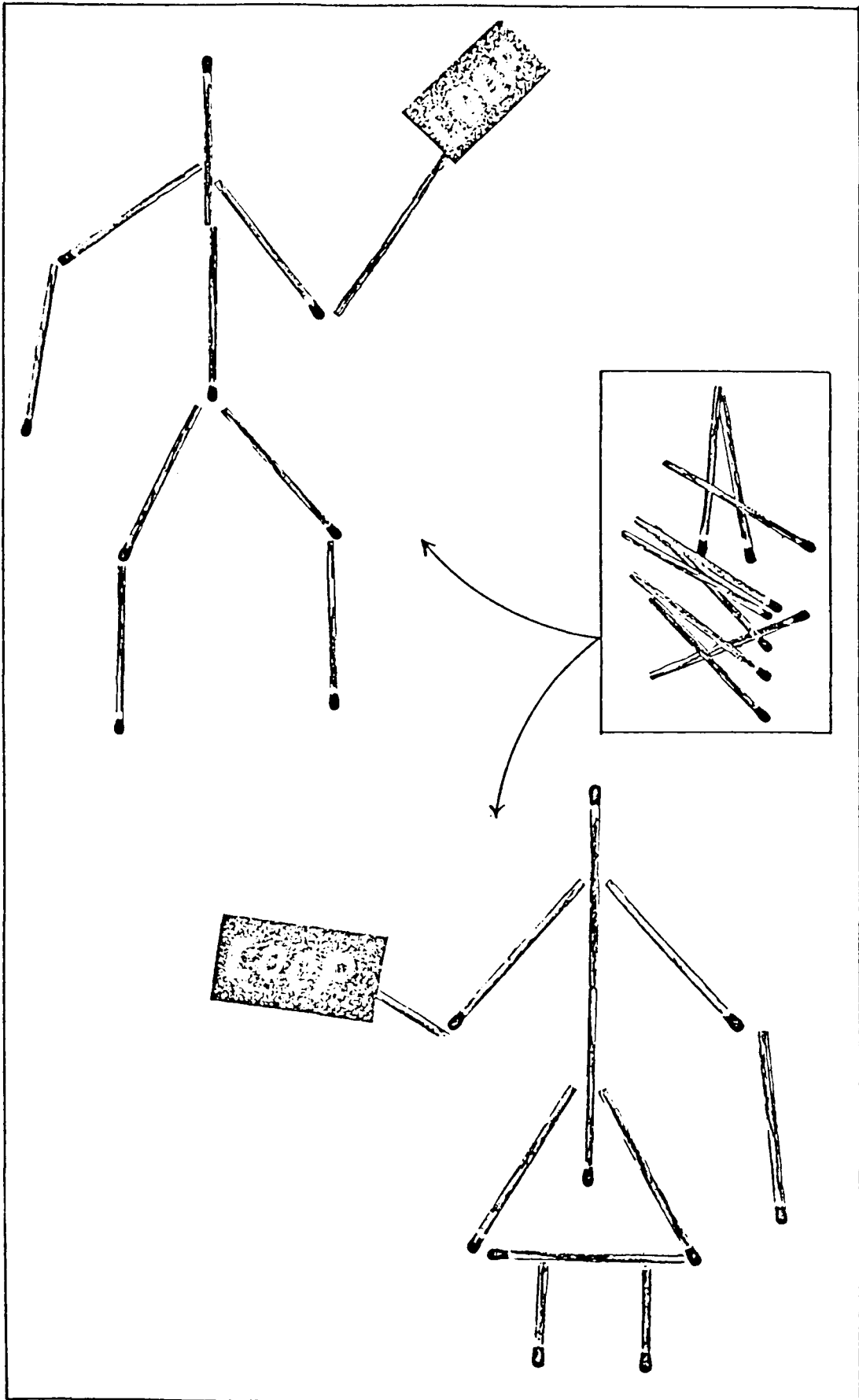


FIGURE XXXI

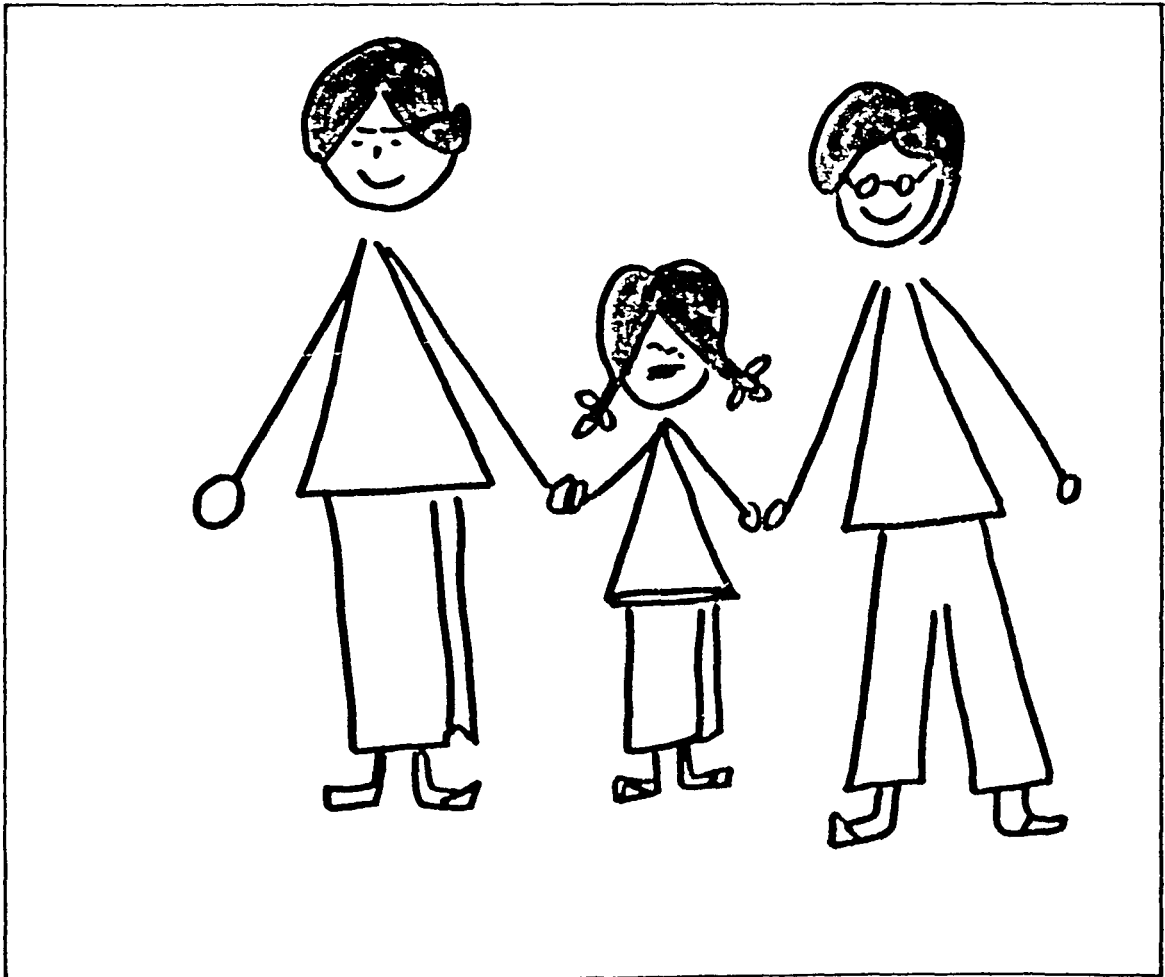
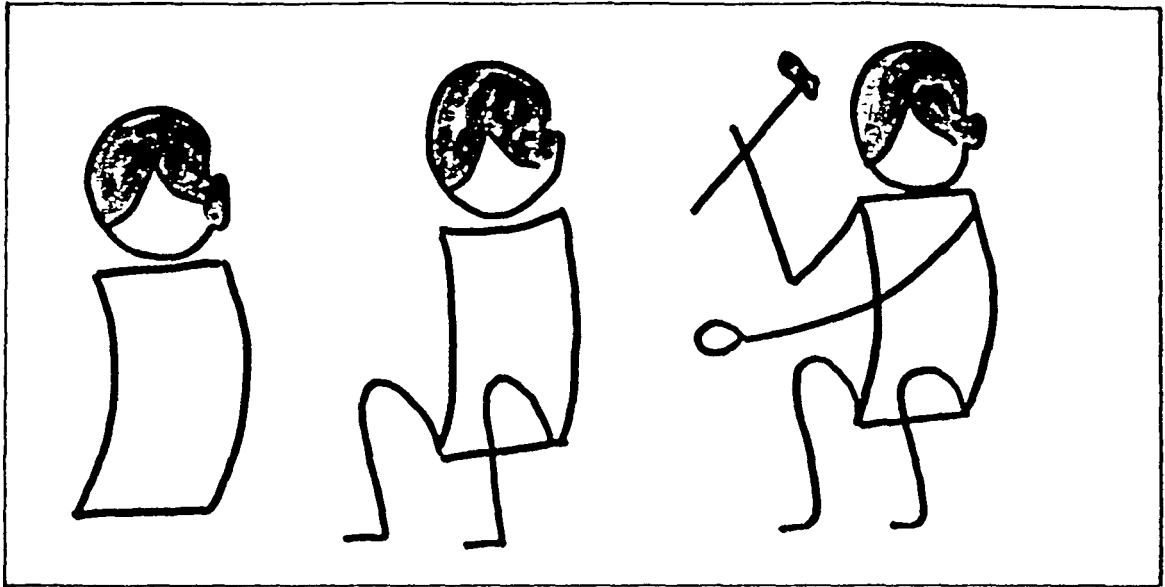


FIGURE XXXII

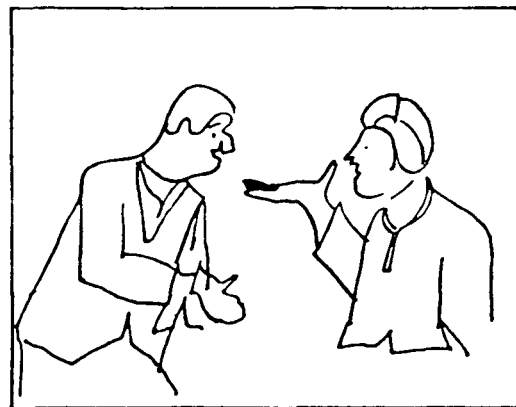
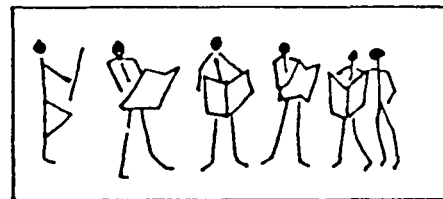
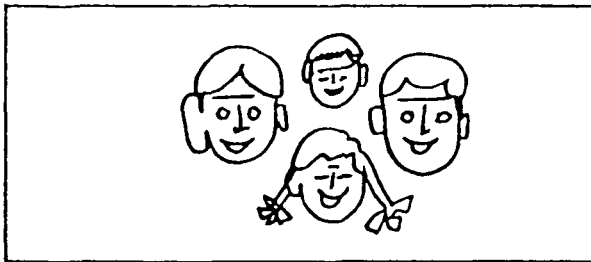
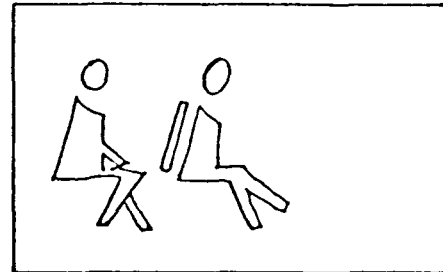
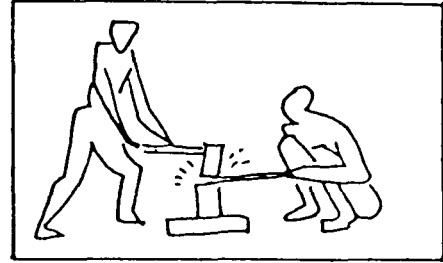
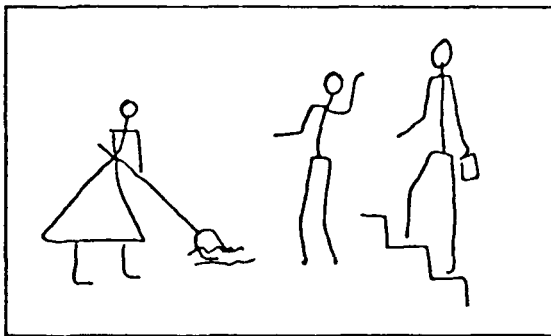
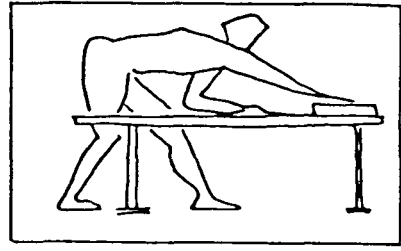
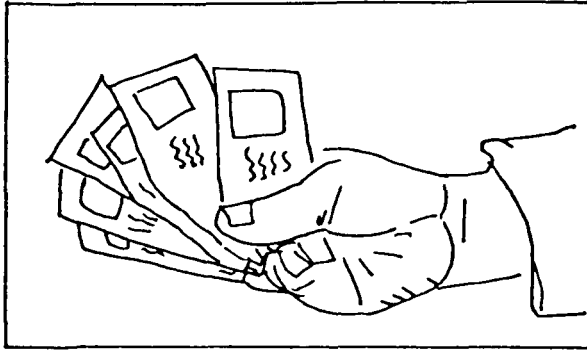


FIGURE XXXIII

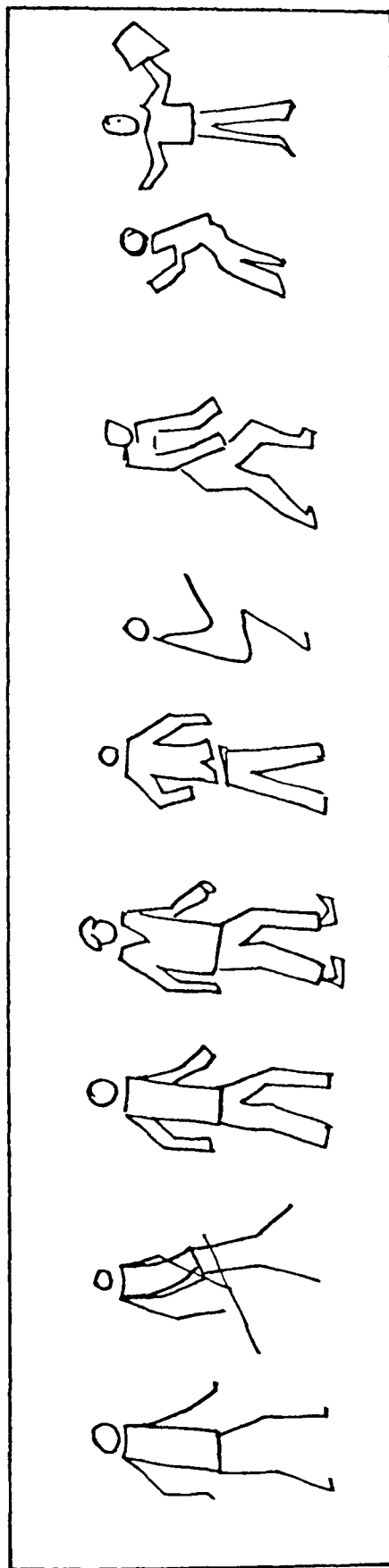
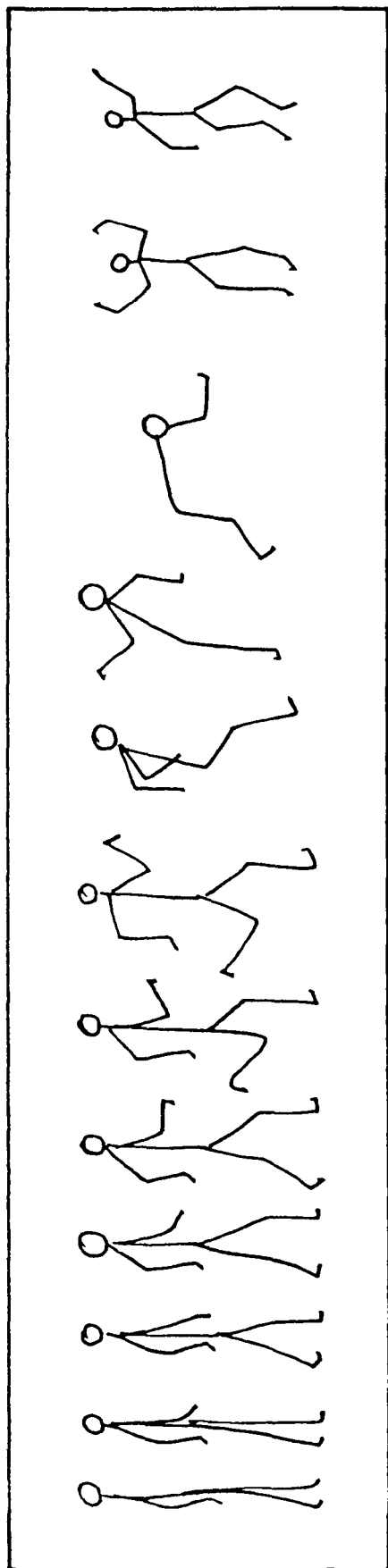


FIGURE XXXIV

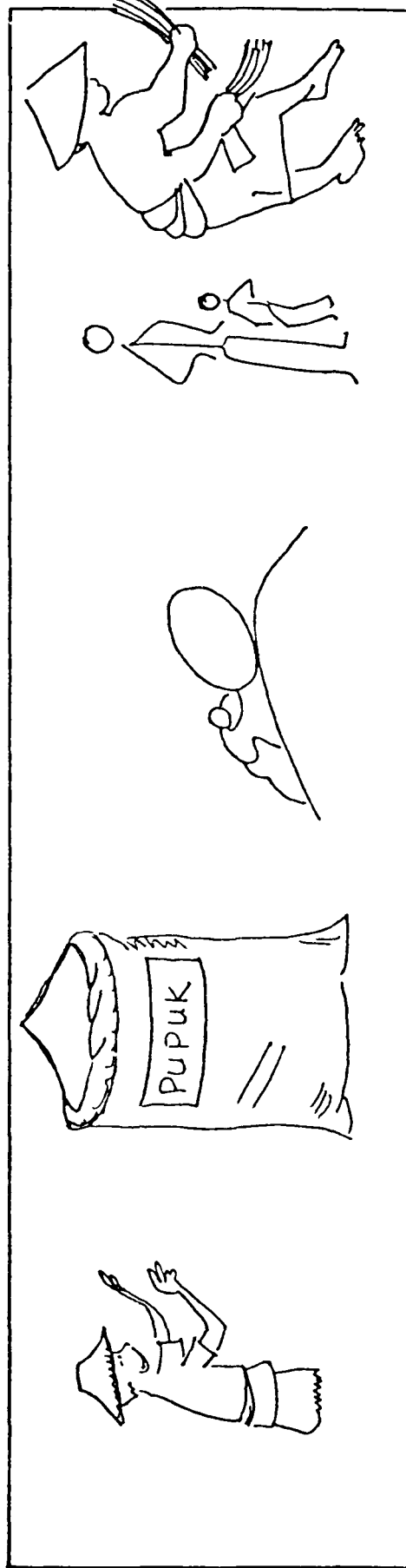
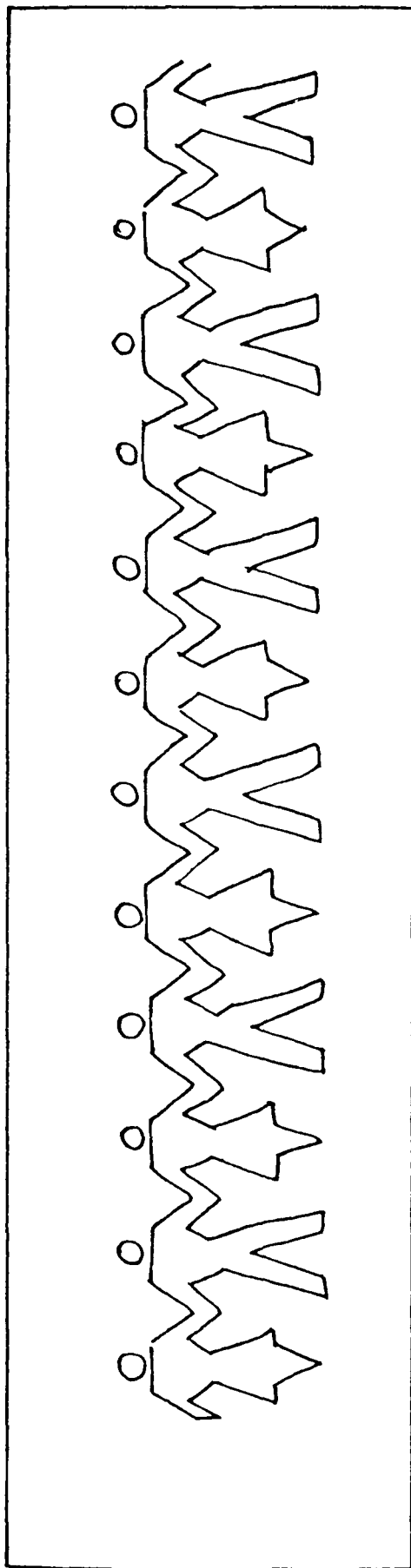


FIGURE XXXV

DRAWING A HUMAN FIGURE

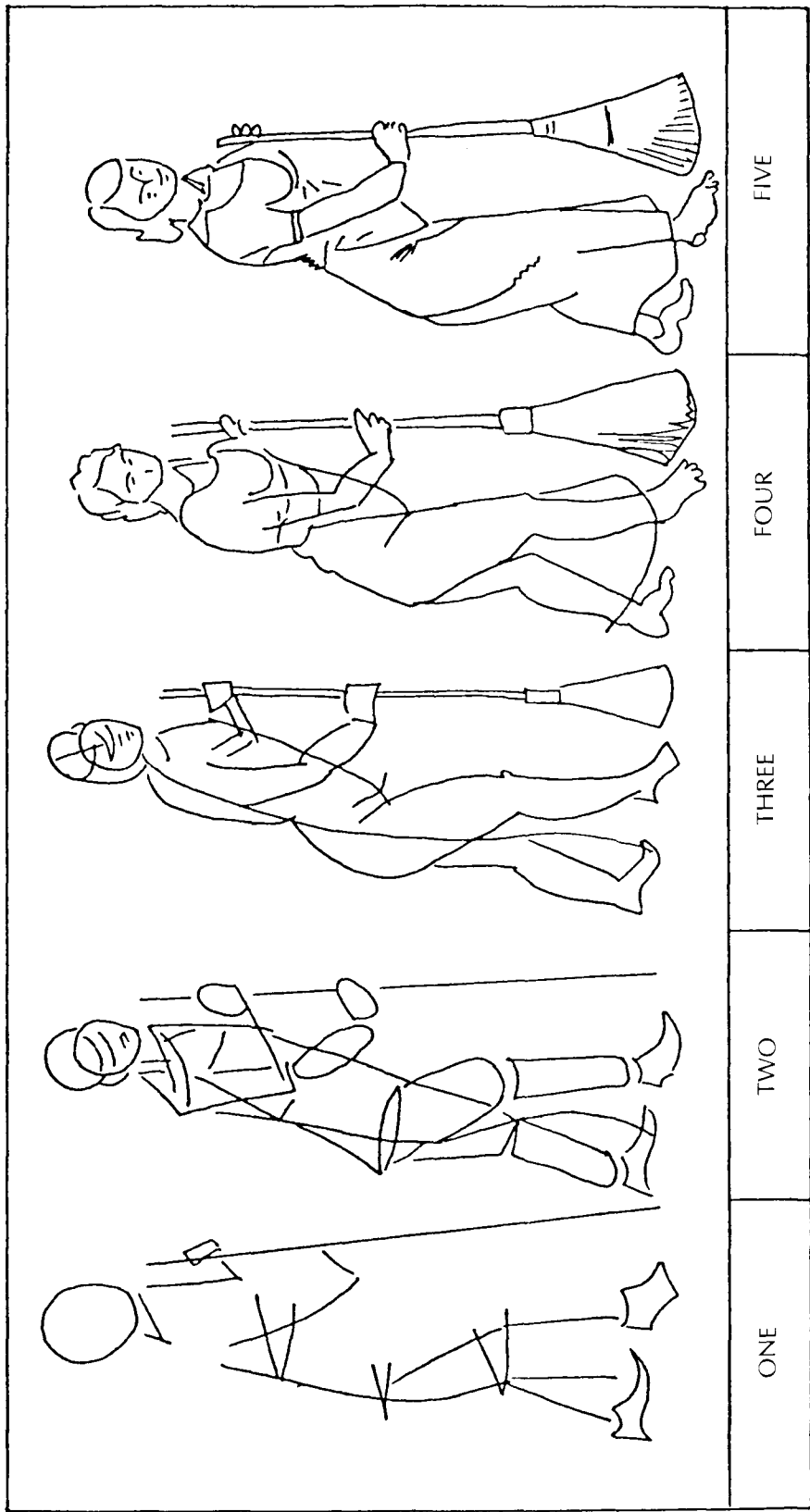




FIGURE XXXVI

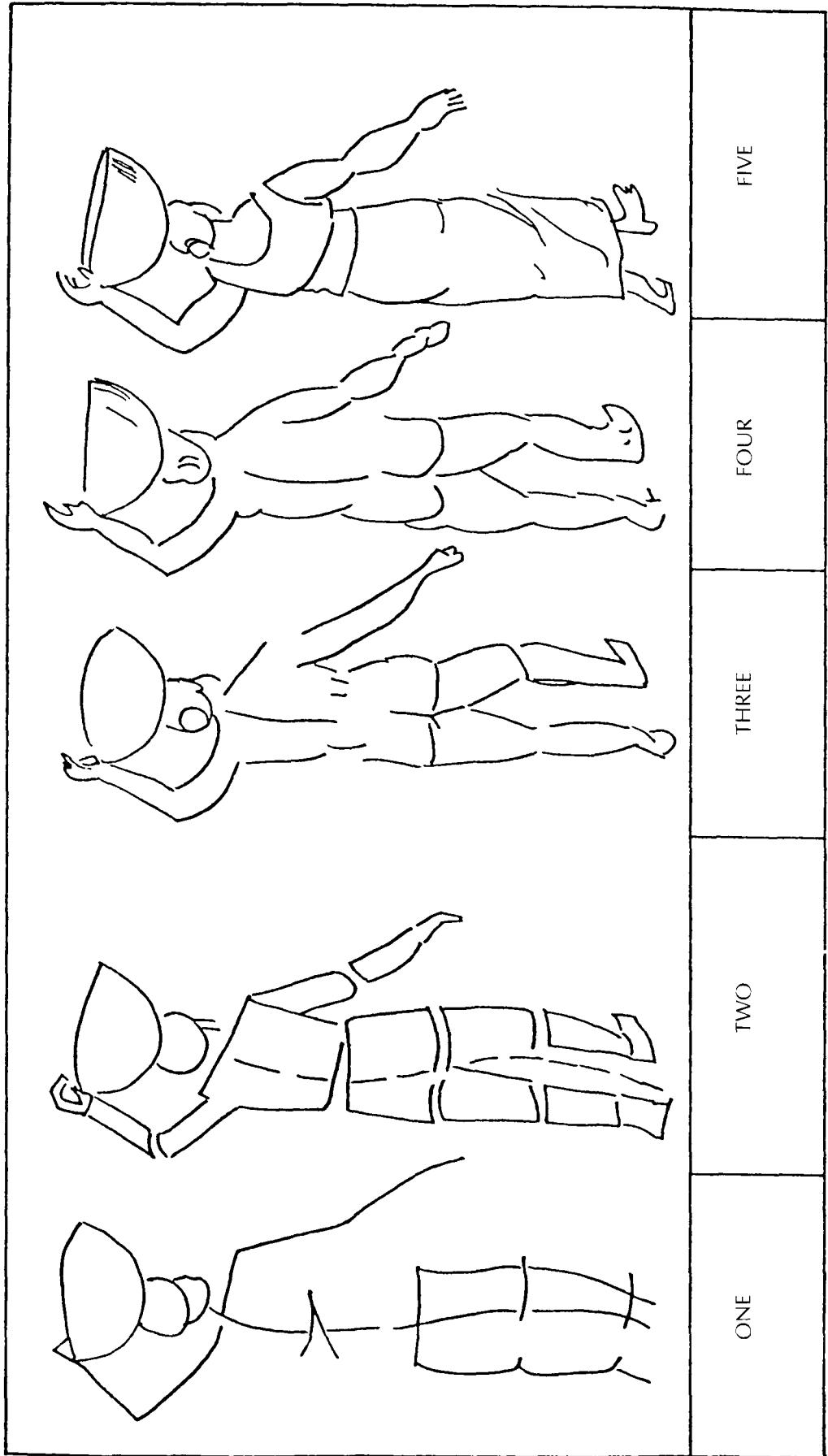
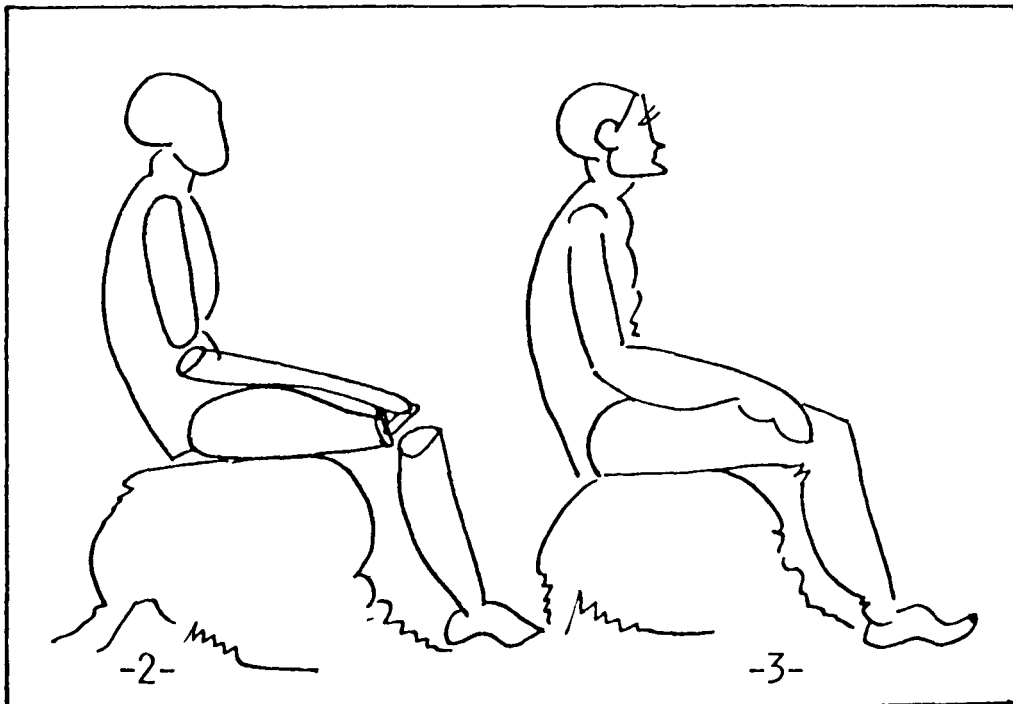
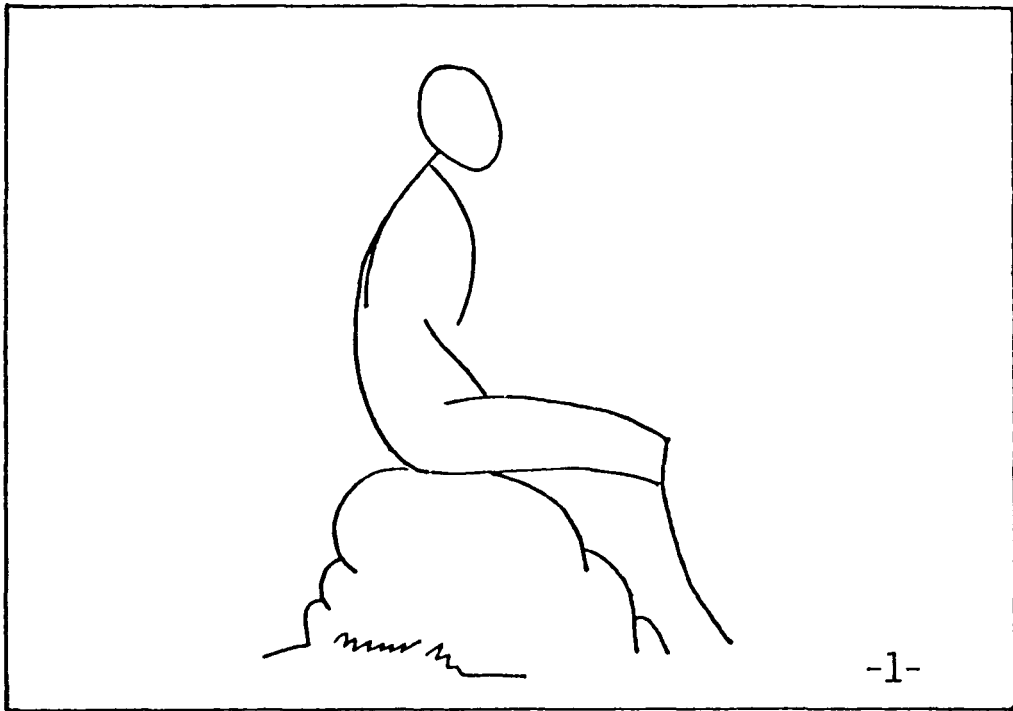
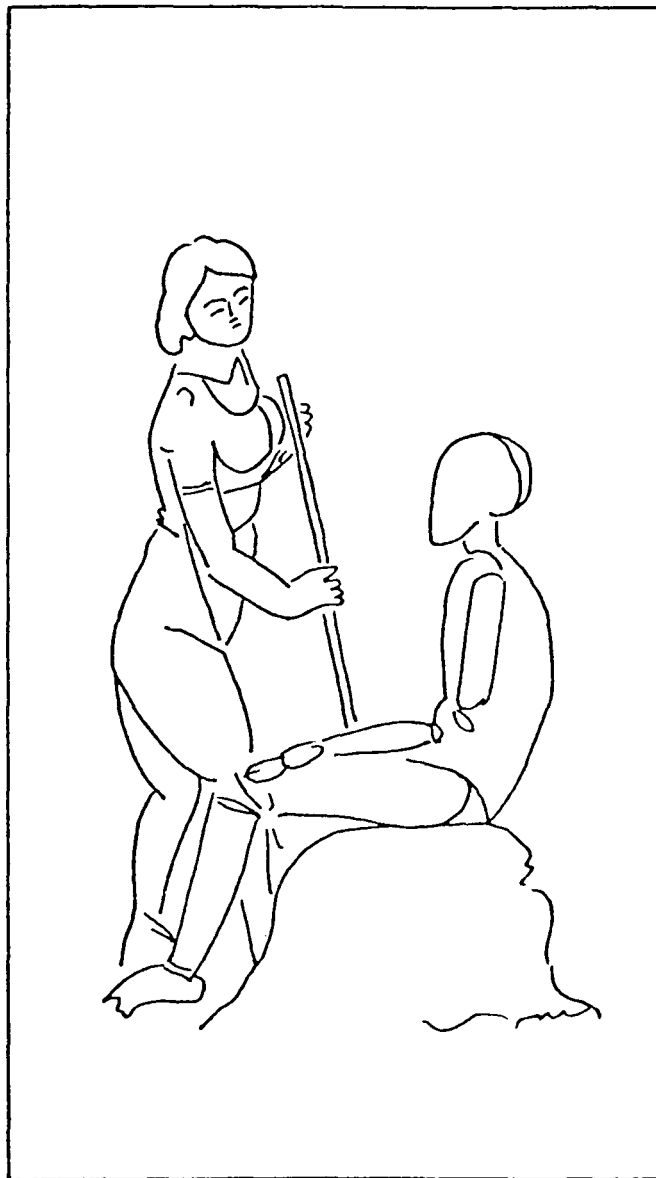


FIGURE XXXVII





Combining Technique of Simple Figures

These figures appear elsewhere in this manual. With the help of tracing paper or a light-table you can easily combine pictures to suit your requirements. It is only a question of imagination... The figure on the stone has been reversed while the one standing has been drawn very close to the one seated. It is fun mixing the pictures...

FIGURE XXXIX

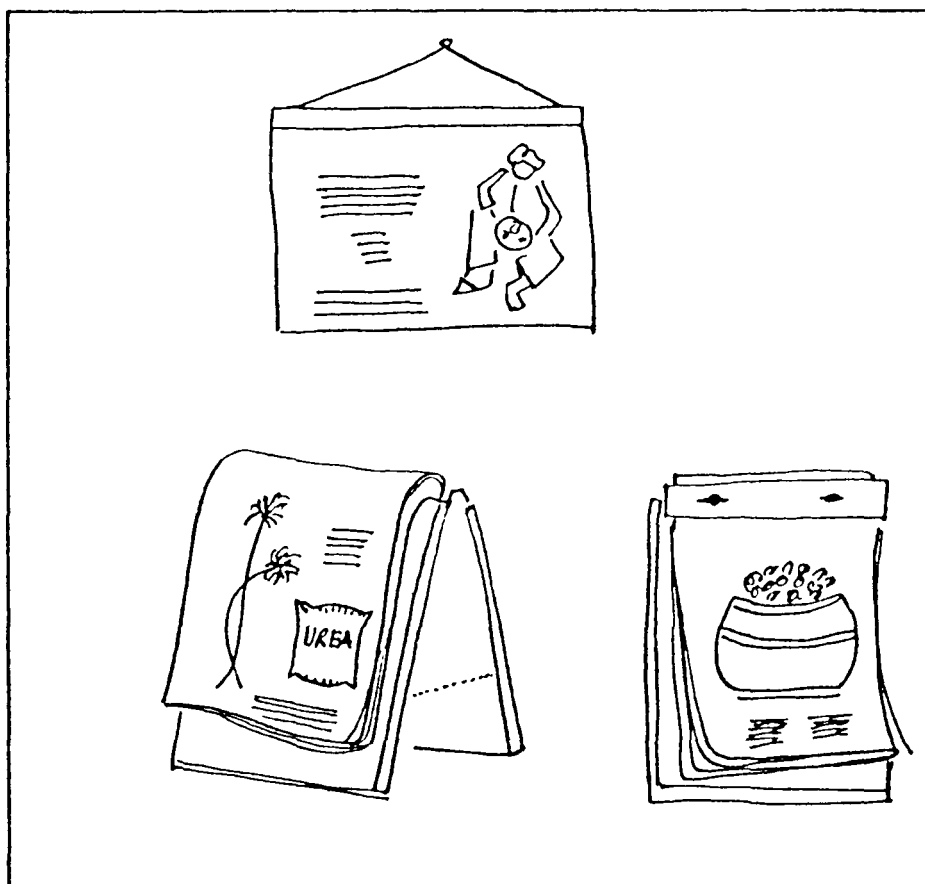


FIGURE XL

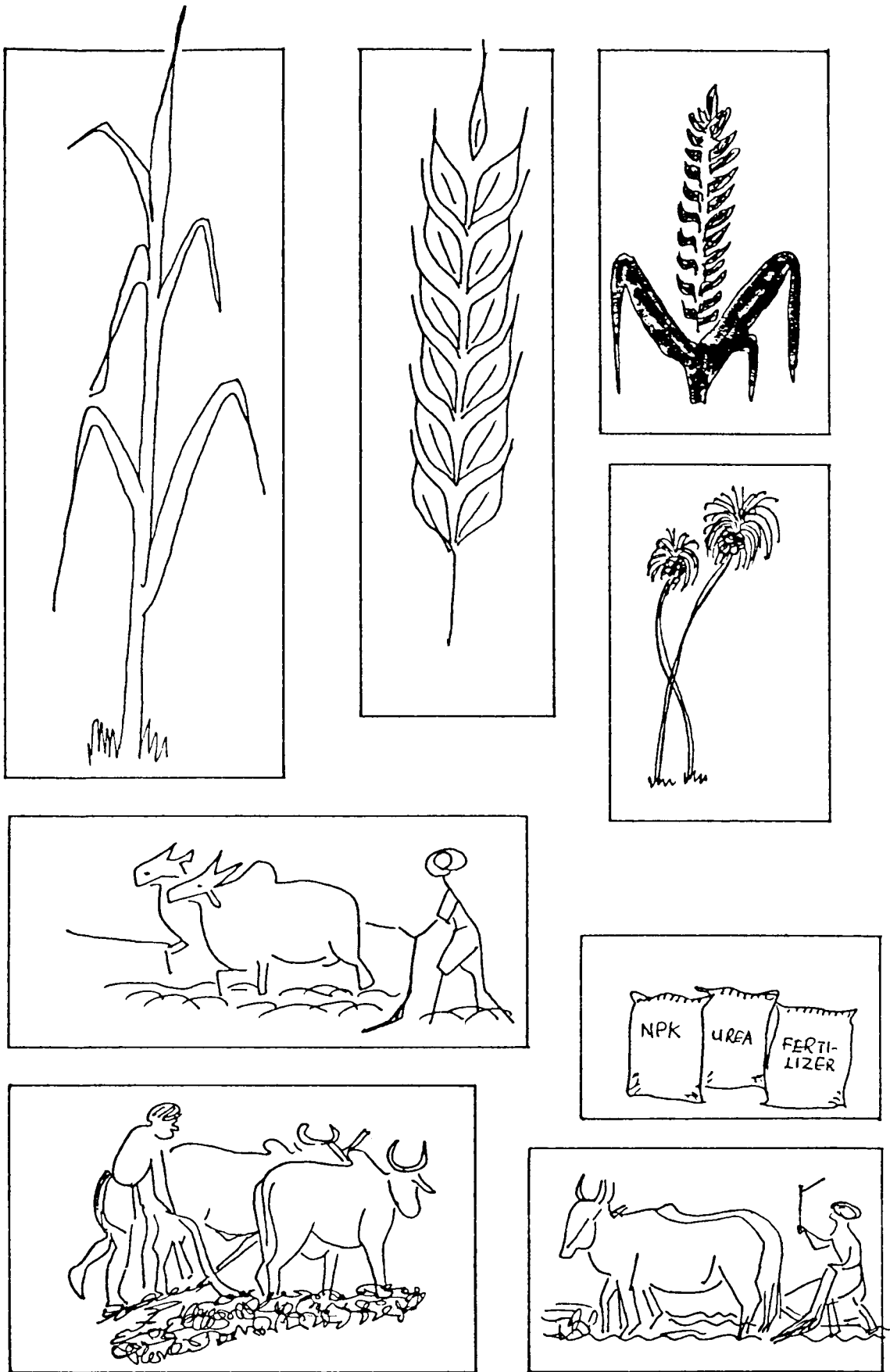
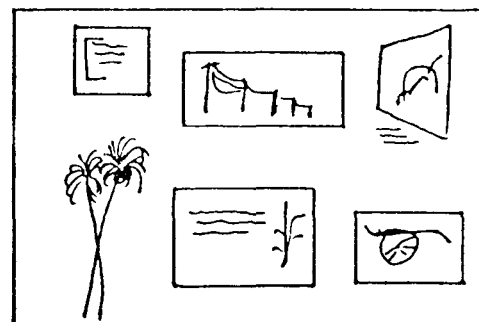
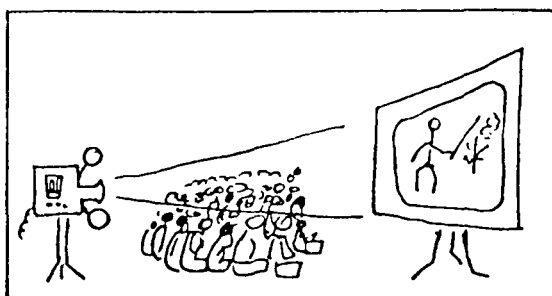
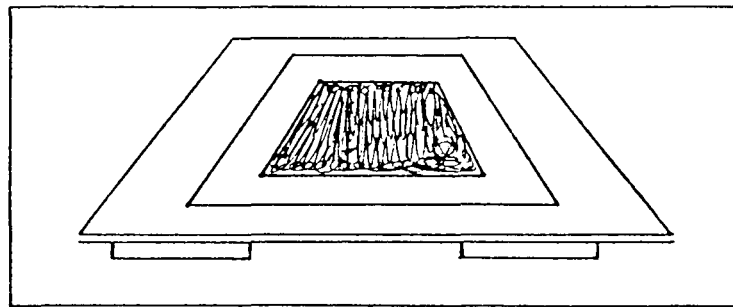
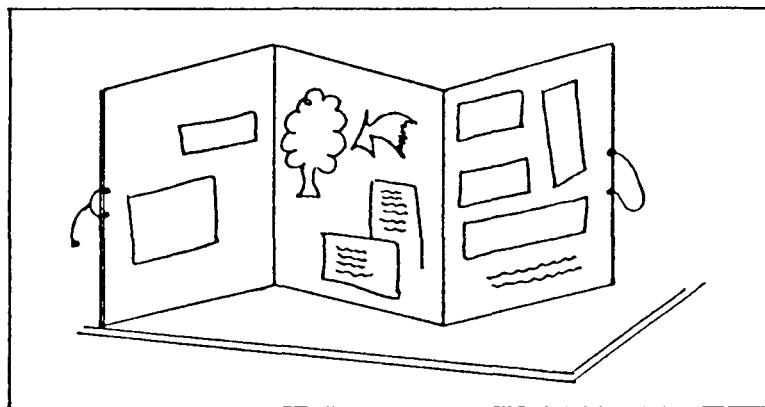
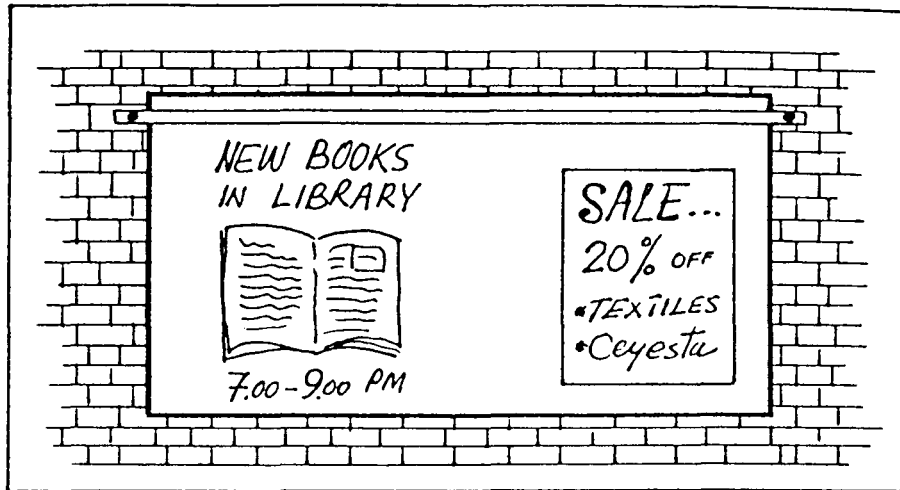


FIGURE XLI





# VII. Graphic Aids: Charts, Posters, Graphs and Layout of Material

## Introduction

In the discussion on audiovisual material, the role of graphics cannot be overemphasised. All visual aids have visuals – i.e. illustrations, pictures, sketches, and text – (captions, headings and statements). Graphics are instructional materials that visualise and simplify ideas and facts. They convey meaning mainly through relatively conventionalised symbols that are nearer to reality than verbal symbols. Graphics catch and hold our attention through symbolic representation to clarify ideas and to highlight the main points of a subject. They represent the subject matter in a condensed and understandable form. Graphics, in professional language, indicate materials which illustrate ideas, objects, concepts and processes boldly, clearly and vigorously through a synthesis of drawings, pictures and words.

Graphics develop a forceful shorthand language. Their basic functions are to attract attention, convey meaning clearly and to facilitate learning. They make an impact on the reader. They have universal appeal and their educational values are manifold.

Co-operative field educators and trainers depend to a great extent on simple graphic material which is produced by co-operative organisations and educational institutions. Since the resources available through co-operative organisations – particularly the promotional organisations – are rather limited (it is not not easy to produce films, slides and filmstrips or make use of other mechanical devices), we have to use simple graphic material, e.g. charts, posters, graphs and other display material, which can be effective.

## Charts for Teaching

A chart is an arrangement of key factors or ideas in graphic or pictorial form. It depicts logical visualisation of relationships by summarising, comparing or contrasting various aspects of the subject-matter.

Most co-operative educators working under adverse rural conditions will find that charts are one of the most useful forms of visual aids. They are light in weight, easy to present, and may be used when conditions do not permit use of more sophisticated training aids.



A teaching chart is essentially an aid to formal teaching, although it may also be used to create talking points and stimulate discussion in co-operative meetings and other similar gatherings.

## What Teaching Charts Can Do

We can expect the following from teaching charts:

- They save time spent on preparing elaborate and repetitive work;
- They make better use of colour and contrast than is possible with chalkboard;
- They aid accurate presentation of material;
- They permit use of mounted pictures cut from magazines or newspapers; and
- Can be used in conjunction with the chalkboard.

## Kinds of Charts

Charts are generally made on large-size paper. A layout has to be followed first and then the final work is done on the paper. There are various kinds of charts: organisational charts – showing the organisational structure of an institution or showing the process of some activity; flow charts – showing how the activity is performed or how a certain product is made in a factory; tree charts – showing the branches of some activity, and so on. Some examples of these are given on pages 65-68.

## Wallcharts

Wall charts have some special advantages but they are essentially for follow-up use in informal sessions, and can not be effectively used outside these limits.

In composition, a wallchart may be likened to a wall newspaper: it carries more information than a poster or a teacher chart. It may present more pictures on a much smaller scale and smaller text requiring a closer study.

### Features of Wallcharts

Some of the main features of wallcharts are:

#### **Attraction**

A wallchart must attract the eye, and draw the attention of the viewer towards it. This result may be obtained by:

- using a striking title;
- using a bold illustration.;
- careful use of a striking colour.

## Objective

A wallchart should have an aim and conclusion. If these are absent, it cannot teach anything.

## Types of Wallcharts

These can be grouped under the following broad headings:

- flow charts;
- storytelling charts;
- factual charts;
- comparative charts.

FIGURE XLII

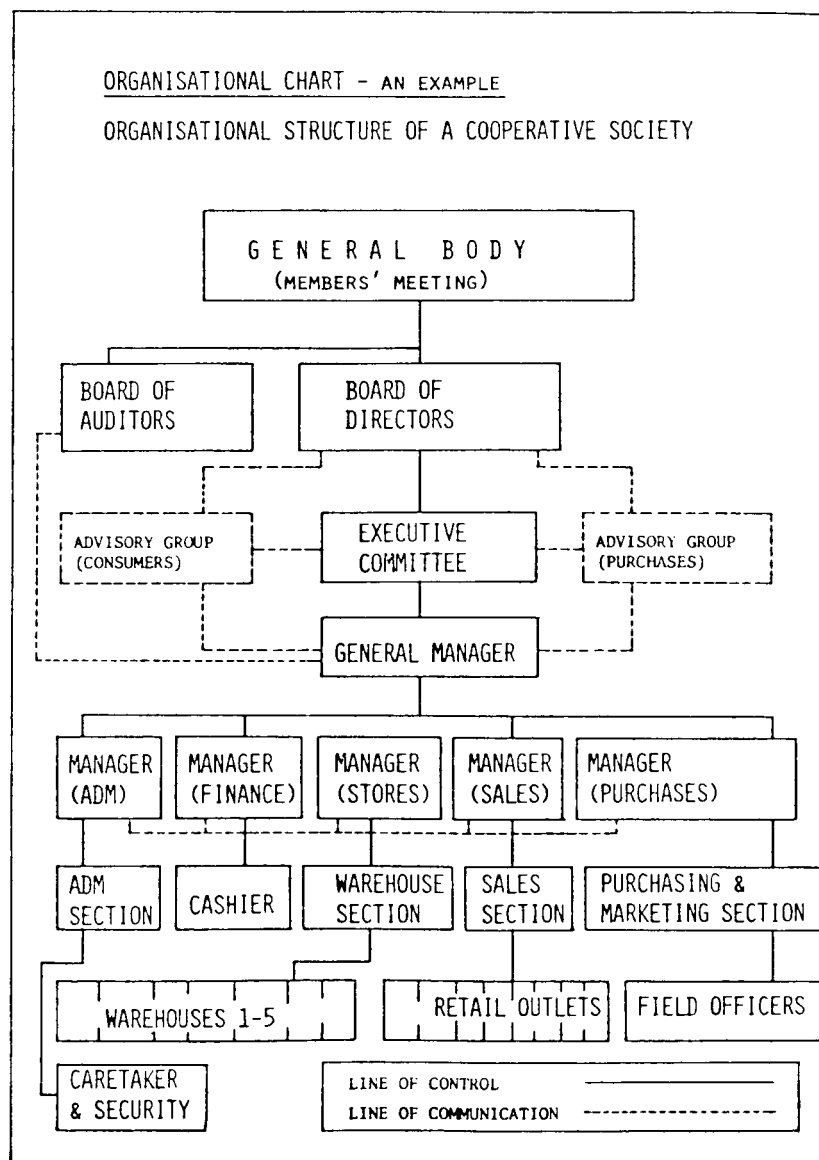


FIGURE XLIII

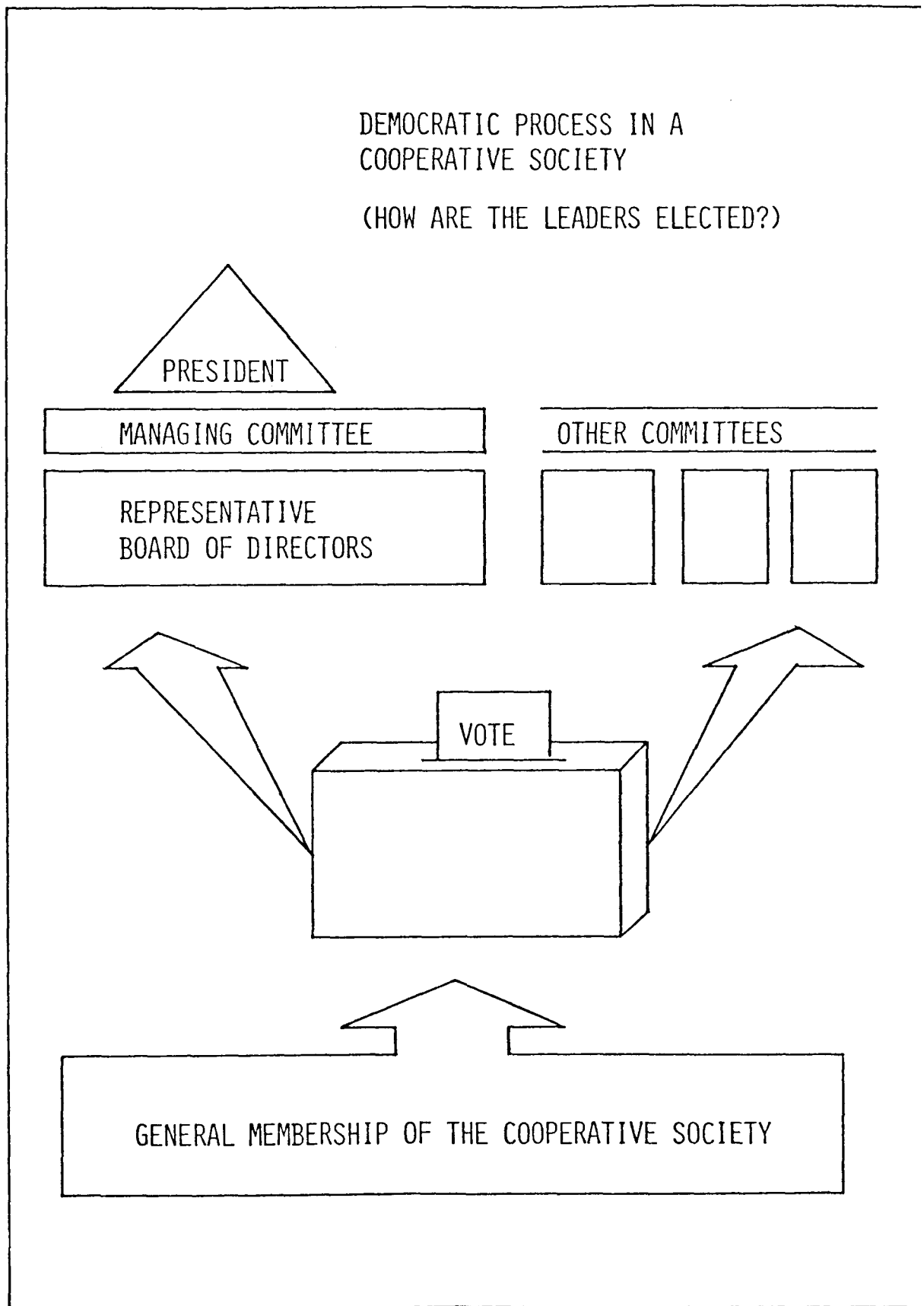
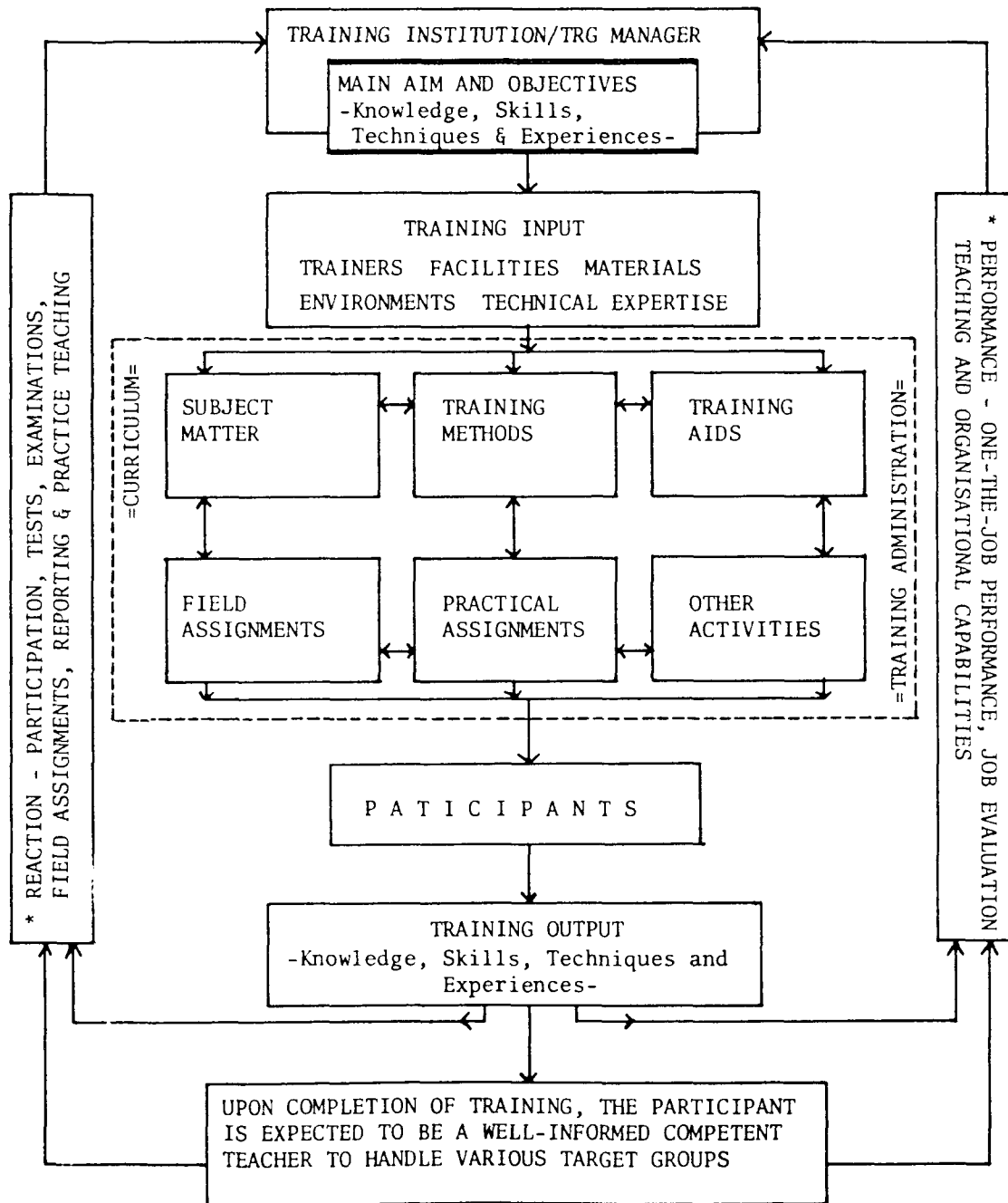


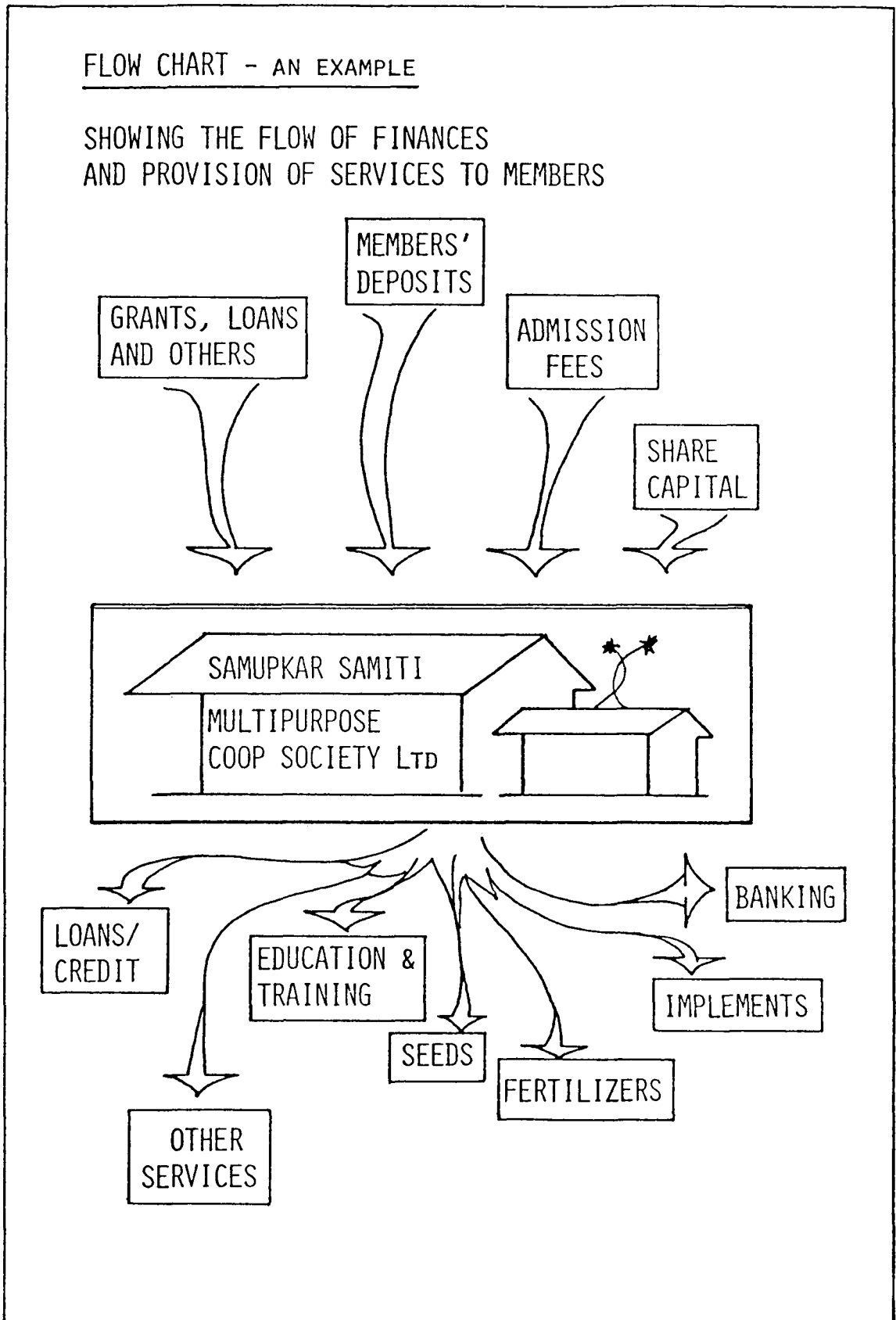
FIGURE XLIV

ORGANISATIONAL CHART - AN EXAMPLE  
 ORGANISATION OF A TRAINING PROGRAMME



\*Helps in future planning and further development of the participant and other training programmes for trainers.

FIGURE XLV



## **Presentation Techniques**

Wallcharts serve a specific purpose. They are not mere exhibition materials. The following points should, therefore, be kept in mind when using them:

- Do not leave wallcharts on display for too long a period. They quickly lose their effectiveness;
- Limit the amount of material on a chart and do not present too much at a time. A maximum of seven distinct items is a useful rule to follow;
- Eliminate unnecessary details. This medium is best when the effort involved in comprehension is least.

## **Assessment of Wallcharts**

Wallcharts should be striking, relevant to the situation, with their salient points easy to remember. The more information presented at one time, the less likely it is to be remembered. It is of value to pose some questions as an aid to the assessment of wallcharts. These could be:

- Does the wallchart attract attention?
- Is the message clear?
- Is the message presented in a persuasive and stimulating manner?
- Is the message within the comprehension of the viewers?
- Is the sequence of presentation logical?
- Is it visible from the maximum viewing distance?

# **Posters**

A poster is a large size piece of paper which contains a few bold words and some simple illustrations to support the message. It attracts attention and communicates just one fact, idea or image rapidly and clearly. A poster is a basic graphic interpretation with the greatest possible impact. Because of its dramatic and impressive presentation, it holds the eye, regardless of the message or pictorial content. In other words a poster is a simple means of communicating information which can be displayed in public places.

Posters have many features in common with charts, but also possess distinctive differences. A good poster can stand on its own and communicate its message effectively without assistance from any additional source.

It is for this reason that nearly all posters are designed to communicate ONE idea only. Advertisements placed by the roadside or near a railway station demonstrate this point. The traveller may only have a moment in which to observe a poster presented in competition with other distractions. If the poster is not attractive or if the message is neither memorable nor capable of quick assimilation, the point is lost.

Occasions may arise when it is advantageous to present a series of posters with a common theme. Posters presented in this way should also possess a common feature, a focal point instantly recognisable, to connect with material previously presented. This could take the form of a symbol or slogan representing the campaign, the initial letters of the campaign title, a consistent colour scheme or even a recurring cartoon type – character. In the field, posters may act as frequent reminders and persuaders.

In common with other forms of visual aids, posters should not be left on display for too long a period. An old poster is not the best way to communicate a new idea.

### **Important Points to Remember on Posters**

The following points should be kept in mind when producing posters:

- Posters must have a positive approach;
- The content of a poster must be limited. It must achieve a lot in a short time. One point only should be conveyed;
- The message may be stated in bold letters with an illustration to reinforce and make the idea memorable, especially for those who are illiterate or newly literate.
- A short catchy phrase may help. Use may be made of alliteration or rhyme;
- Message and illustration must be clear enough to be read at the required distance: style and size of both lettering and illustration are important.

### **Making Posters and Charts**

Individual preferences concerning equipment and methods can only be determined by practical experience and the availability of material. The following is the list which can serve as a guide to the selection of some basic equipment:

- (i) Drawing board and T square, if possible;
- (ii) Soft-grade pencil;
- (iii) Ruler;
- (iv) Eraser;
- (v) Steep pens or felt-tipped pens;
- (vi) Coloured inks for use with pens;
- (vii) Lettering guides and stencils of various sizes;
- (viii) Poster-colour and brushes;
- (ix) Variety of coloured paper, plain bold colour;
- (x) Supply of white cartridge paper;
- (xi) Plain brown paper and grey sugar-paper;
- (xii) Rubber or other erasers;
- (xiii) Tube of quick-drying adhesive.

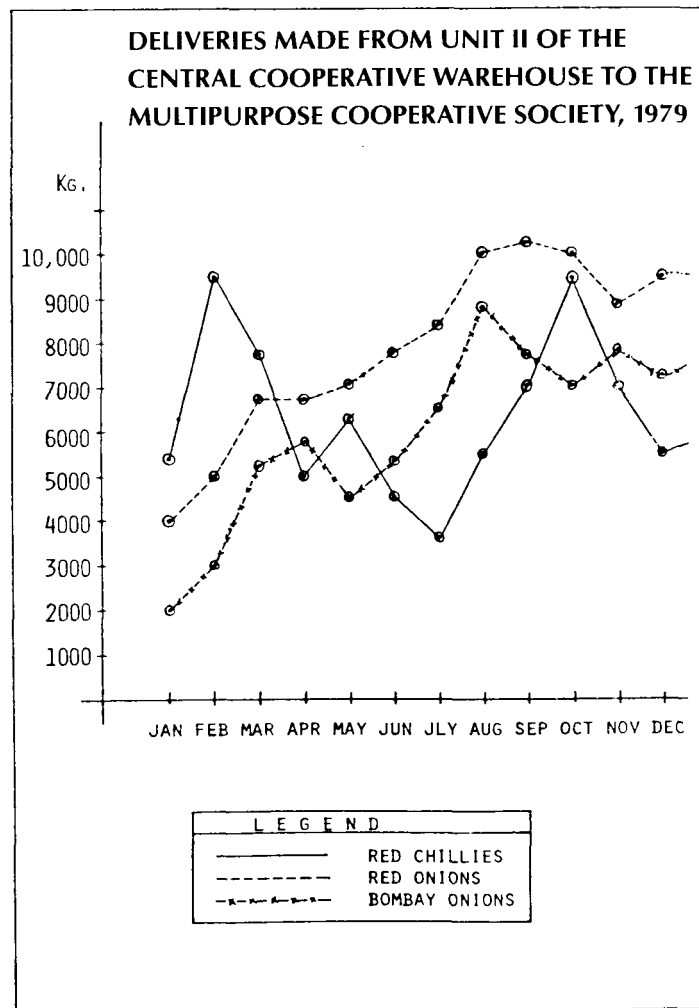
## Paste-Up Method

The paste-up method is a simple way of producing a wallchart or a poster. Pictures and illustrations cut from magazines and old posters could be used for this purpose. A rough layout has to be prepared in advance and then the plan transferred on to large-size poster paper. The pictures and illustrations should be fixed with adhesive and then the edges touched up with crayons or poster colour. Rubber- or latex-based adhesives are clear, clean and quick to use and any surplus adhesive can be easily rubbed out. Charts and posters made in this way should never be rolled, as the illustrations may peel off. They should be carried and stored flat.

## Graphs

A graph is a representation of quantitative data that presents information quickly and effectively. It shows comparisons and relationships of masses of statistical data, clearly and interestingly. Graphs are of many types but basically they have three forms: bar graph, line graph and circular graph.

FIGURE XLVI





In the preparation of graphs, we generally use graph paper, or squares drawn on a large paper. The figures to be presented are collected first and then transformed into units and durations. Some examples are given in Figures XLVI - XLIX.

FIGURE XLVII

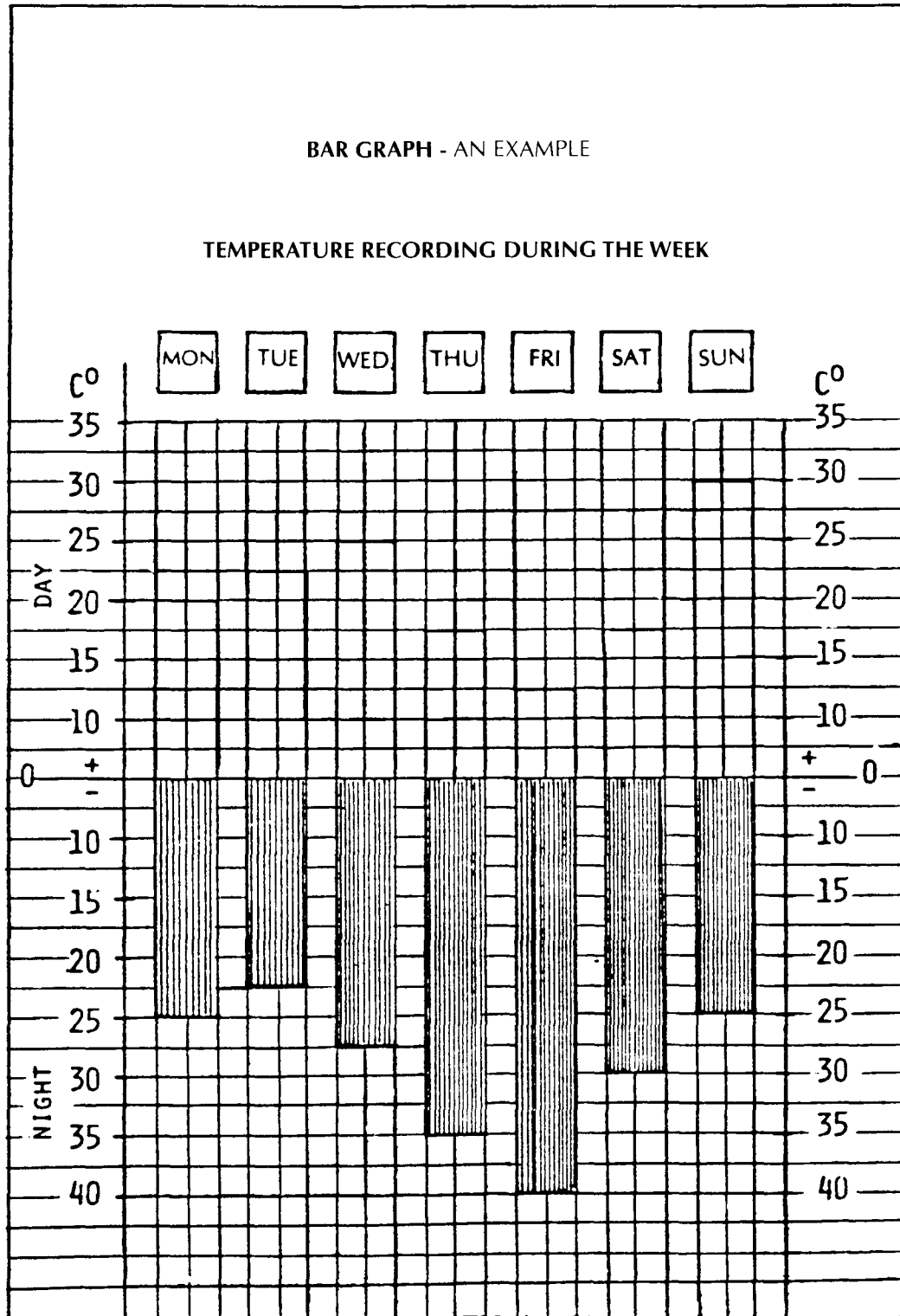


FIGURE XLVIII

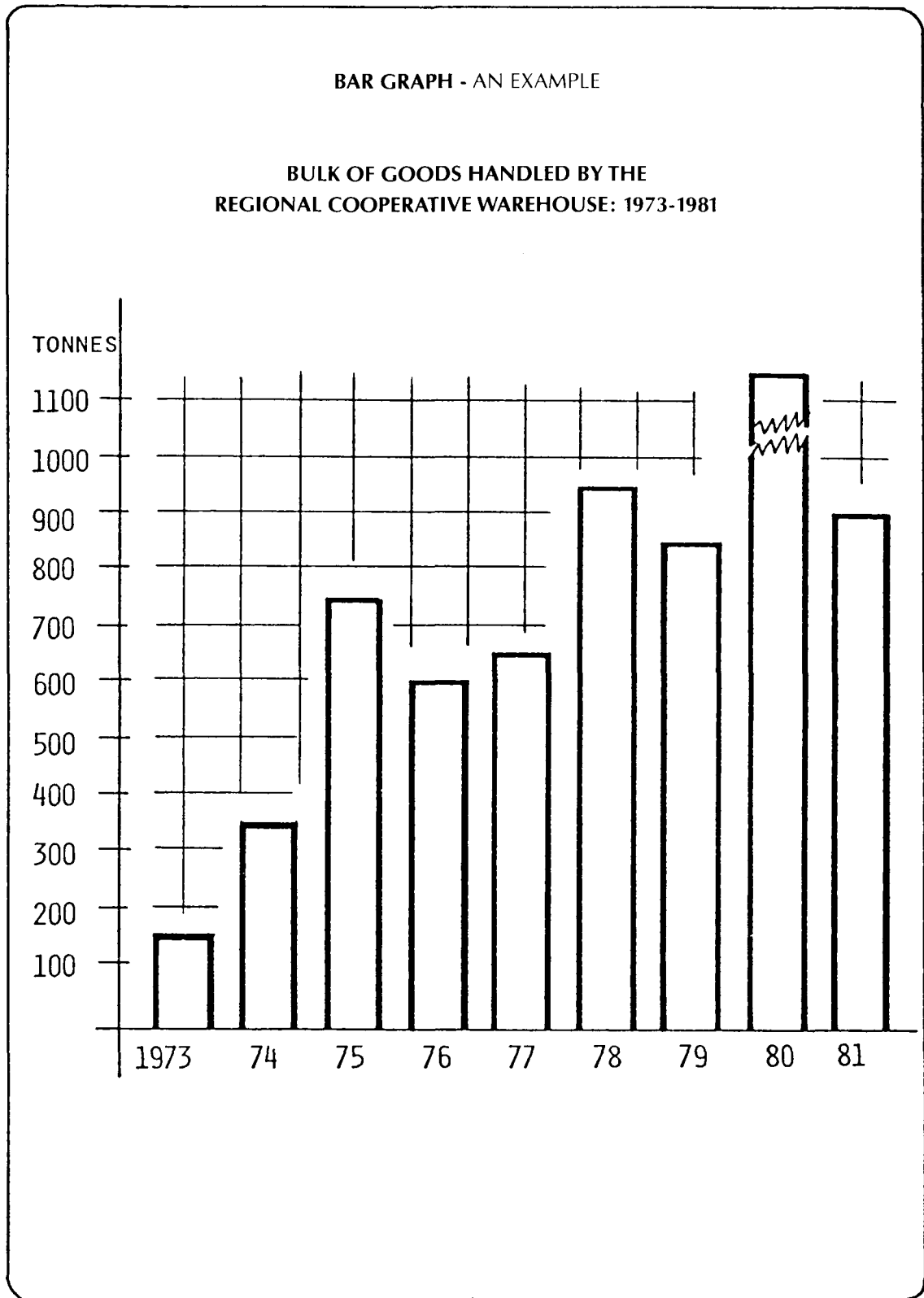
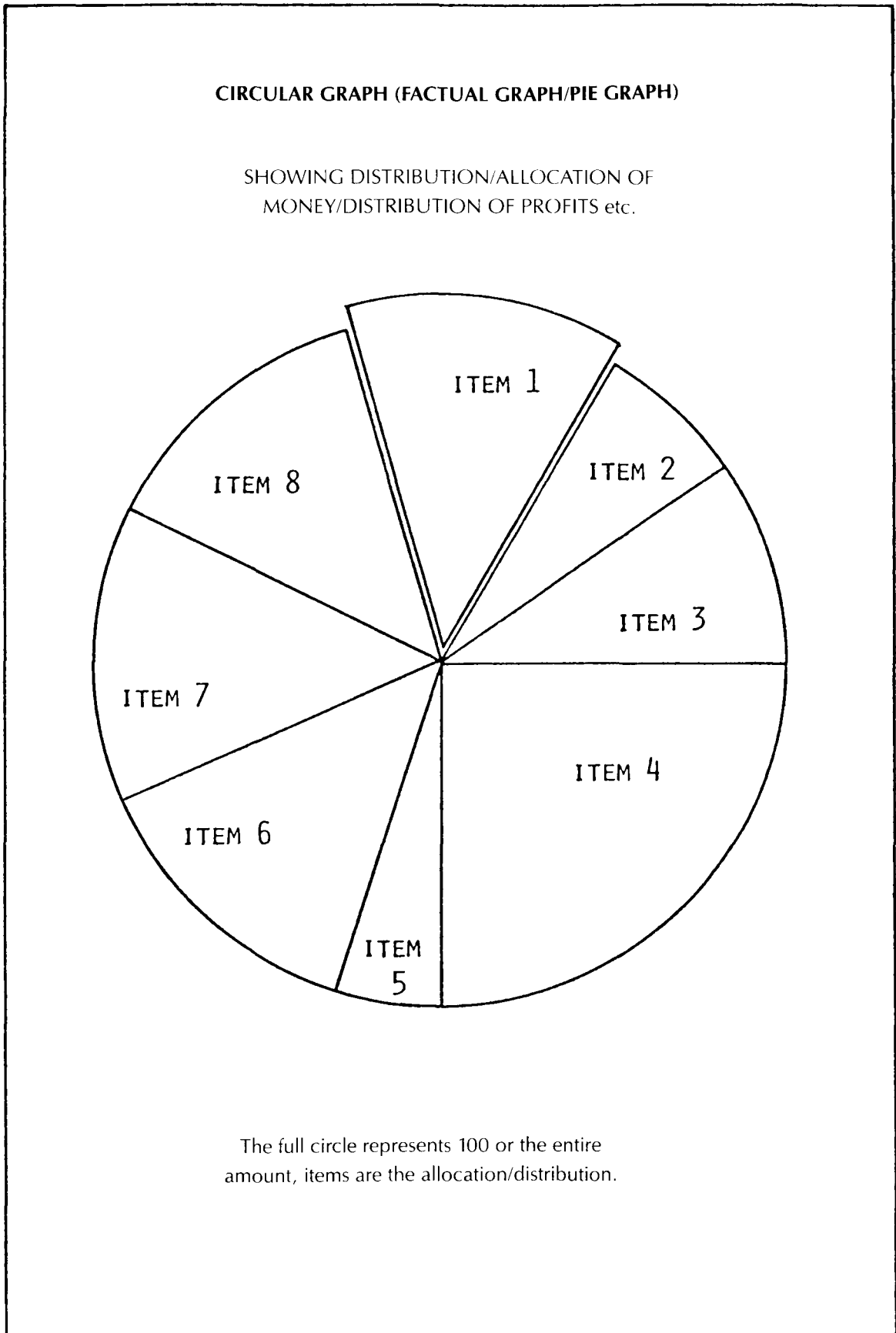


FIGURE XLIX



# Layout Technique

All graphic material has to be presented in such a way that the space on paper is fully and properly used, and a proper colour scheme is applied. Strong and clear lettering is used and the overall impression is attractive. Some examples of layout have been given in Figures LI.

Some layouts are formal, while others are informal. A formal layout is strict and rigid, while the informal one is personal, warm and appealing. An informal layout depends more on the style of the designer himself and also on the type and quality of the message. The use of informal layouts is on the increase these days.

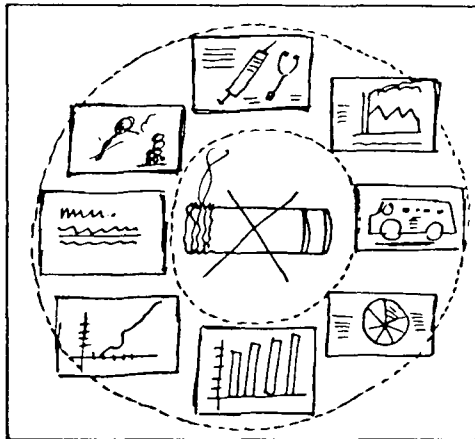
While preparing a layout, work to a plan, keeping the principle “A.C.T.” in mind:

- A** = AIM Determine the concepts and ideas to be taught;
- C** = CHOICE Select the necessary material; and
- T** = TRIAL Sketch or arrange a trial layout.

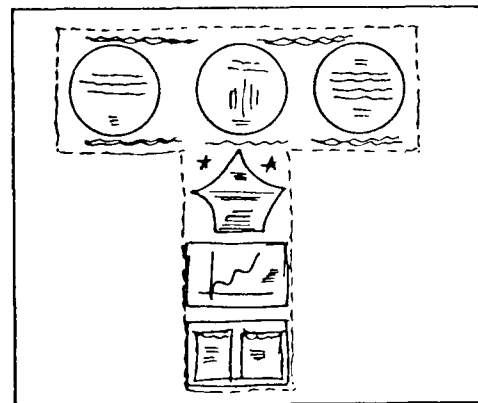
Items which are related must be shown to be related. Associations may be indicated by grouping.

- Shape and colour may indicate relationships;
- Lines and arrows may also be used;
- A coloured background may lay emphasis on one picture;
- Formal and informal layouts may suit different topics.

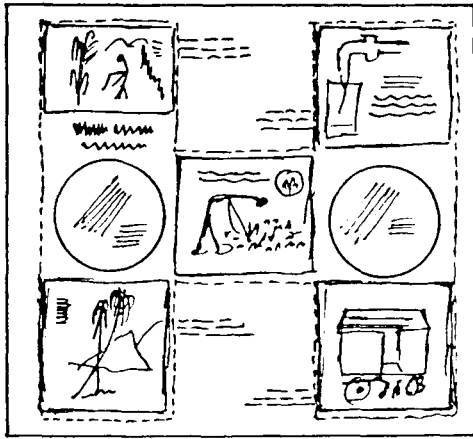
FIGURE L



“O” LAYOUT



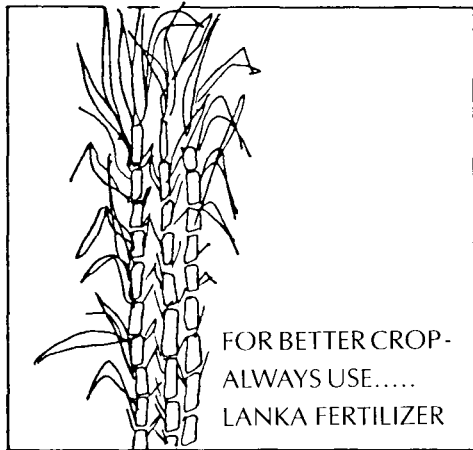
“T” LAYOUT



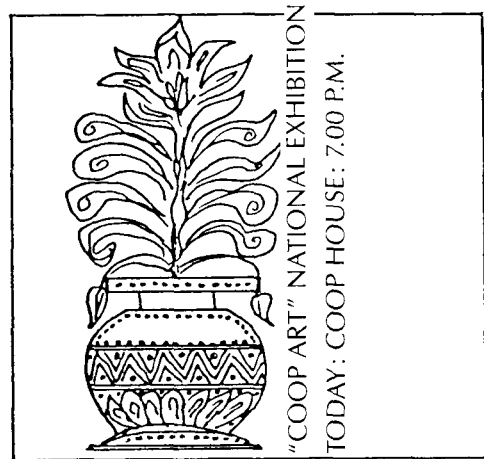
"H" LAYOUT



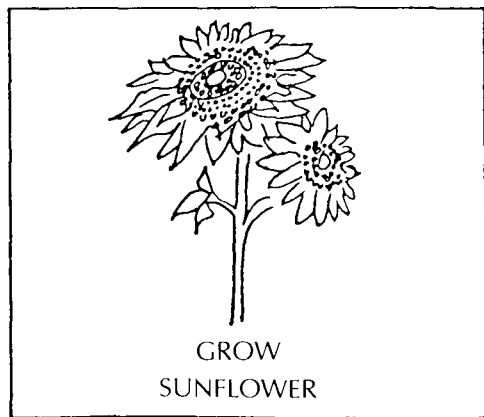
"Z" LAYOUT



"L" LAYOUT



"I" LAYOUT

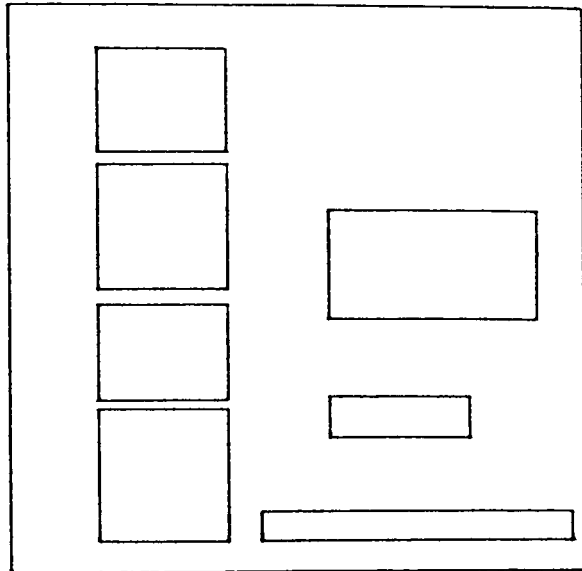


"T" LAYOUT

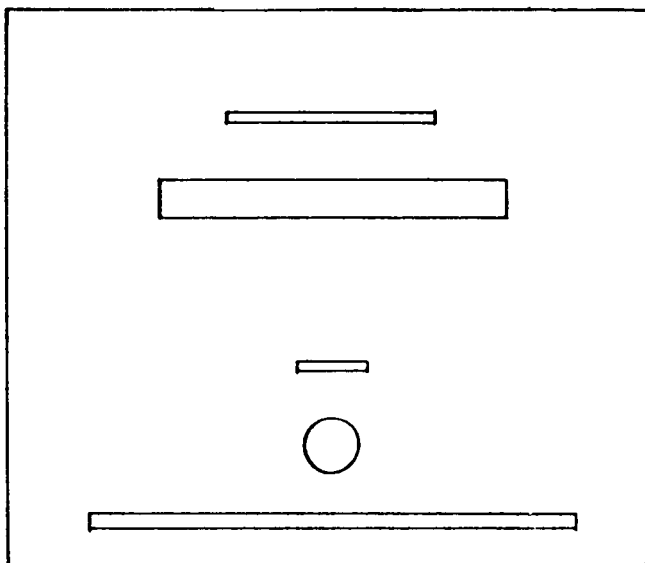


"S" LAYOUT

FIGURE LI

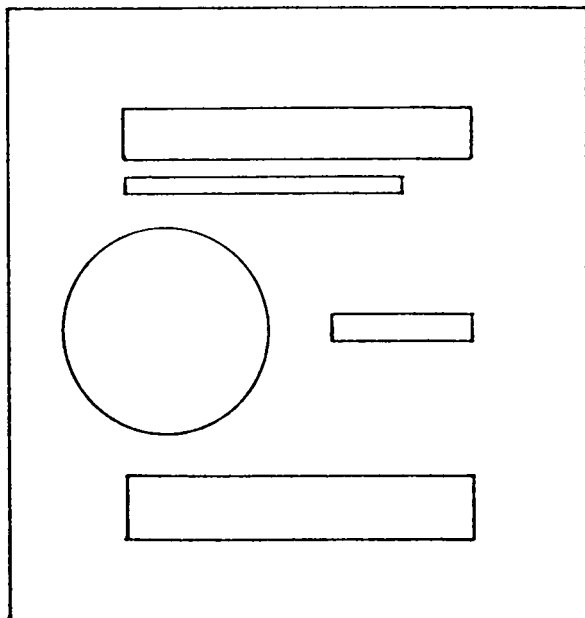


INFORMAL LAYOUT



FORMAL LAYOUT

INFORMAL LAYOUT



# Colour Selection

Colour has an irresistible charm and universal appeal. It has great carrying power and an emotional impact. Colour is an important element of an aid as it heightens the latter's effectiveness. It helps distinguish various items, emphasises the basic points and creates vividness. Colours, if properly used, bring life to the aid and the message. They help attract attention and appeal to the sight more than the text. They should be used in contrast. In preparing visual aids, a proper combination of colours is important. Colours are meant to emphasise and to highlight certain points in the message. It is best to use those which will contrast and complement. On the other hand, use of too many colours in one visual causes mental strain. A few colours are enough to highlight points of distinction. Use additional colours only if they help strengthen the message you are putting across. In order to achieve proper balance and harmony in colours, an effort should be made to produce as much of contrast as possible.

## Materials and Instruments Needed to Produce Graphic Aids

For the development and production of effective graphic aids, the producer should have access to some basic materials and instruments. These are:

- (i) Drawing board and accessories: Good quality and sizeable drawing boards with T square. In addition to the drawing board the following instruments should also be available: triangle, set square, ruler, protractor, a pair of compasses, thumb tacks, a pair of scissors, paper knife, and razor blades.
- (ii) Chart paper, card paper of light shade, poster papers, brown paper, heavy drawing sheets, mounting boards, ordinary pencils – e.g., H., 2H, 4H, 6H, etc. –; pencil sharpeners, pencil erasers, Indian ink, quick-drying inks, water-proof inks, water-soluble paints, poster paints, various kinds of brushes for painting and touching-up work.
- (iii) Lettering pens with metal nibs, felt-tipped pens, letter stencils, cutout letters, Letraset sheets, lettering guides etc.
- (iv) Drawing instruments: including ruling pen, jointed compass, dividers, bowpen, various kinds of nibs.
- (v) Artist's table: a good variety of professional table, if possible, otherwise an ordinary even-surfaced table top.
- (vi) Light-table: For copying work.

# VIII. Visualisation

## Introduction

The role of graphic and projected aids in co-operative education and training cannot be overemphasised. Graphic and projected aids, more commonly called Audio-visual Aids, help the teacher in establishing better communication and *holding the attention of his audience*. The value of audiovisual aids in co-operative education and training is further highlighted when the teacher or field worker has to encounter a heterogenous group or one with a low level of basic education. In such situations, the teacher has to rely on simple graphic sketches and illustrations. These illustrations may seem difficult to draw in the initial stages, but after some general guidance and practice, one develops confidence and skill.

## Every Individual is an Artist

Every individual is an artist! The talent is inborn but very few people are able to exploit it. Everybody can draw some type of picture, sketch or produce some fine characters. People who write beautiful letters, (A, B, C, D, X, Y, Z, etc.) may not be able to draw figures – human figures or other characters. If some guidance and training is given to such people, they might be able to develop a combination of the two arts – lettering and illustrations.

We do not lay emphasis on a long-term training course in drawing illustrations. That is not within the scope of our work. We do not have the time and resources to offer such training programmes to co-operative trainers and field workers. We can only give them some general guidance, ideas and support.

## Visualisation

By visualisation we mean: to produce visual symbols based on oral or written information or communication. With this process we make our own job less complicated. By using one symbol or visual we can avoid using many words. Remember the old saying “One Picture is Worth a Thousand Words”. So, why not use one symbol instead – a photograph, or a simple illustration?

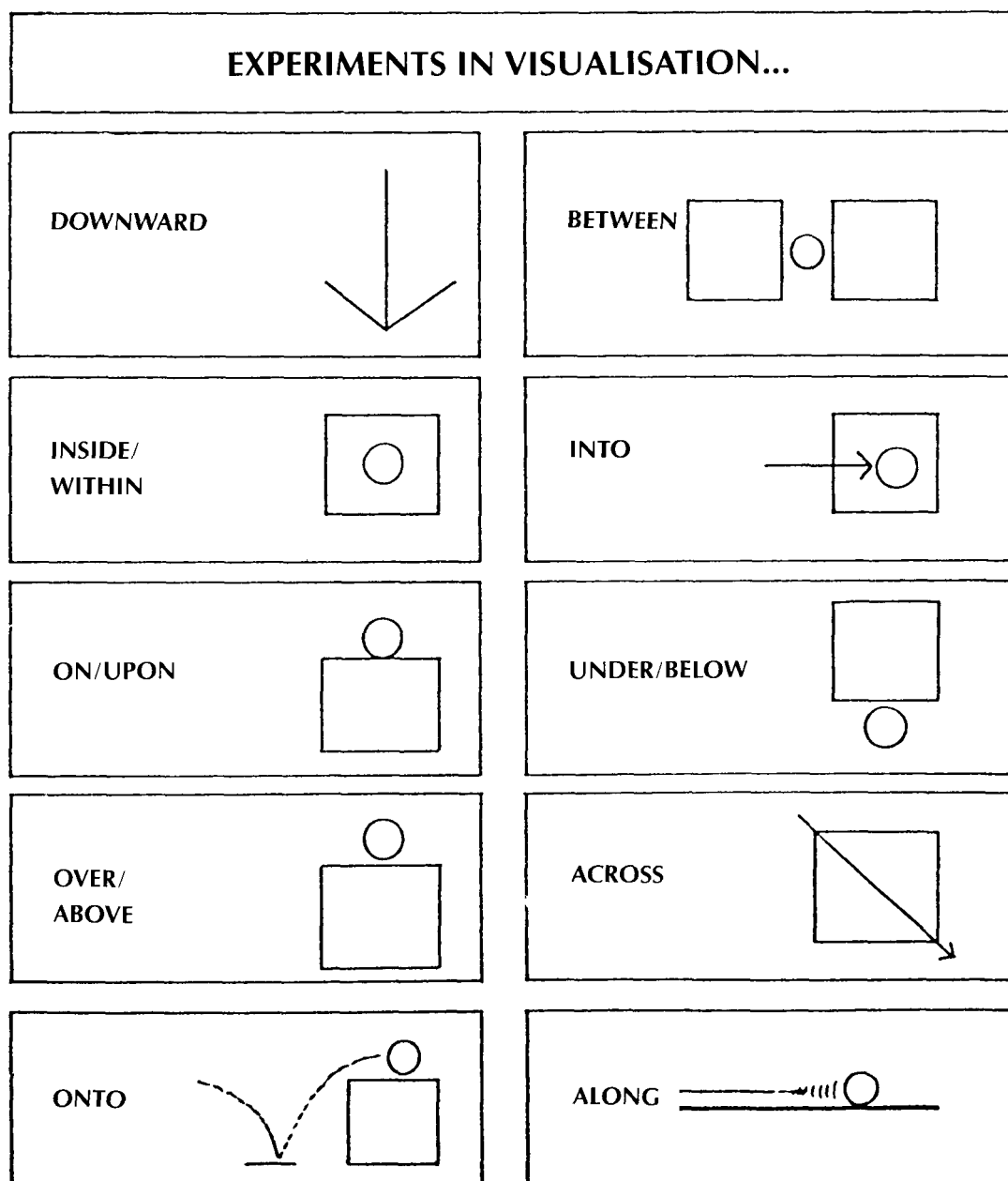


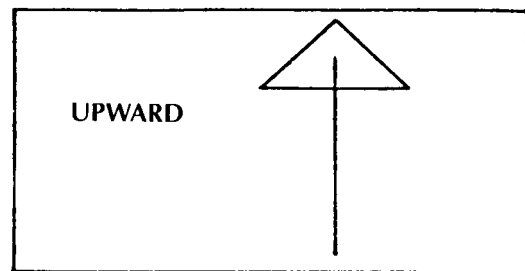
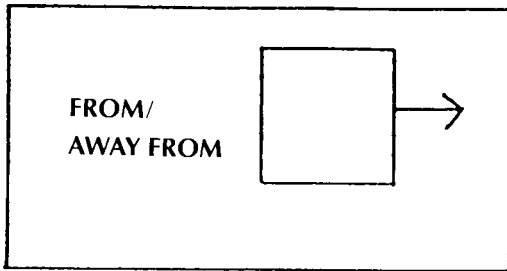
What, then, should the picture be like? Should it be a detailed and complicated one? No... We speak here of simple illustrations for educational purposes, and these should be kept as simple as possible. Human figures should not necessarily have all the details – e.g. wrinkles or eyelashes, on the face. The illustrations should give an impression of a human being – a man, a woman or a child.

Each line has a meaning. Each dot conveys something. You can obtain different meanings by placing the picture differently or by giving it some small twist. Stick figures can be made to appear as if they were walking, running, jumping, etc. So why not try these...?

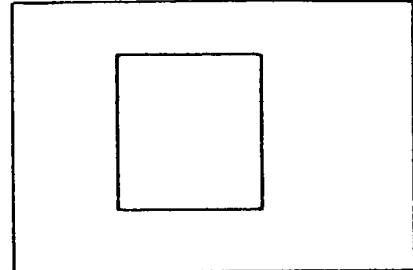
Small symbolic illustrations can be used to highlight different situations. The examples given here (Figures LIII) can be used in several contexts. Study them. Copy them. Enlarge them. Change them and play with them. You do not need elaborate equipment, or materials for this work. All you need is a pencil, an eraser, a ruler and a few blank sheets. And a lot of practice!

FIGURE LII

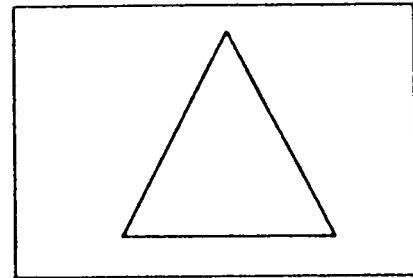




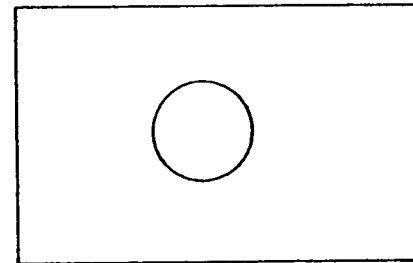
**SQUARE FORM**  
SHOWS EQUALITY OF  
INTEREST; SENSE OF  
CONFORMITY



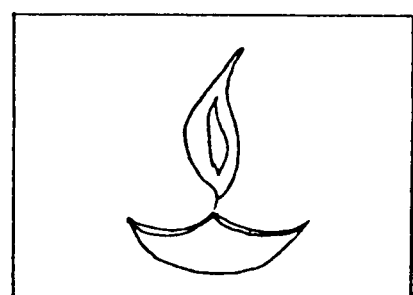
**TRIANGLE SHAPE**  
MEANS UNITY OF INTERESTS



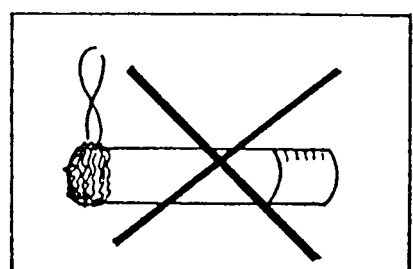
**CIRCLE SHAPE**  
MEANS CONTINUOUS PROCESS;  
INDICATES PROGRESS, GIVES  
CONTINUITY AND UNITY



**BURNING LAMP**  
SYMBOL OF EDUCATION, LEARNING,  
WISDOM, ENLIGHTENMENT,  
KNOWLEDGE

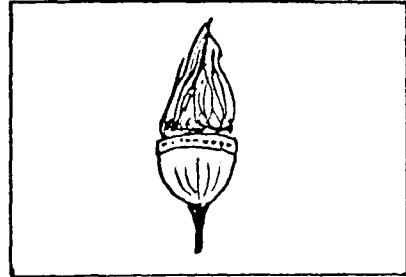


**BURNING CIGARETTE WITH A CROSS**  
SYMBOL OF NO-SMOKING AREA



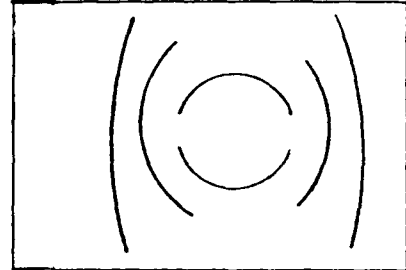
**BURNING TORCH**

SYMBOL OF SCHOOL, EDUCATIONAL INSTITUTION, GUIDE, PATH LEADERSHIP



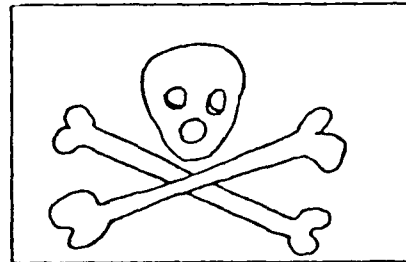
**CURVED LINES**

REPRESENT GRACE, BEAUTY, FEMINITY, SOFTNESS, SMOOTHNESS, TENDERNESS



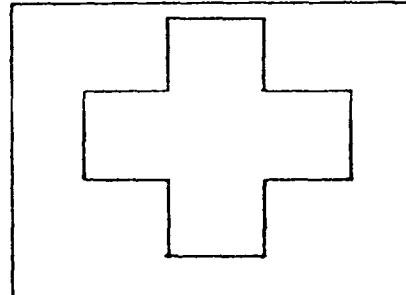
**SKULL AND CROSS BONES**

SYMBOL OF DANGER, DANGER ZONES, WARNING, CAUTION



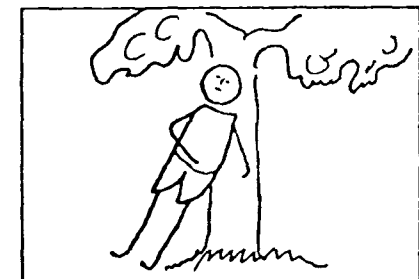
**CROSS PAINTED IN RED**

SYMBOL OF HOSPITAL, NURSING HOME, DOCTOR'S CLINIC, RED CROSS SOCIETY



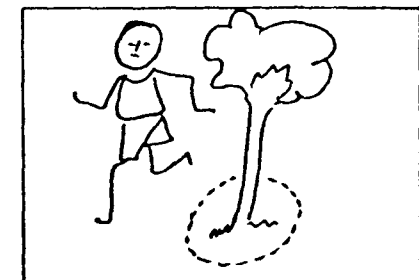
**AGAINST**

A SLIGHTLY SLANTED HUMAN FIGURE GIVES THE IMPRESSION OF A MAN LEANING AGAINST A TREE



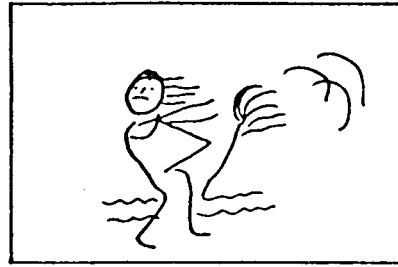
**AROUND**

A DOTTED CIRCLE AROUND A TREE WITH A HUMAN FIGURE RUNNING NEARBY GIVES THE IMPRESSION OF A MAN RUNNING ROUND A TREE



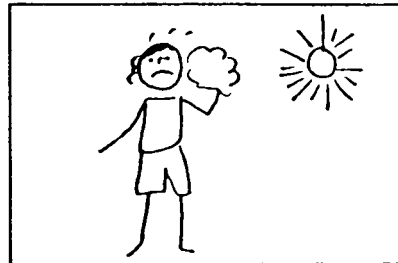
**BLOWING**

FLOW OF HAIR, DRESS AND PALM LEAVES GIVE THE IMPRESSION OF A STRONG WIND BLOWING



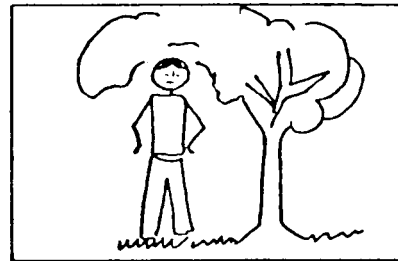
**HOT**

A PIECE OF CLOTH IN HAND AND RAYS OF SUN GIVE THE IMPRESSION OF HEAT APPARENTLY THE MAN IS PERSPIRING



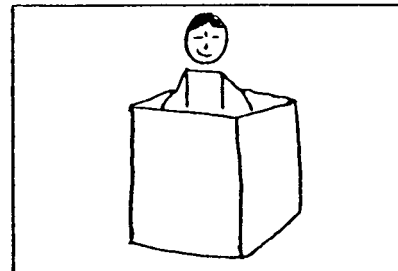
**UNDER**

MAN IS UNDER A SHADY TREE. GIVES THE IMPRESSION OF FRESH AND COOL WEATHER



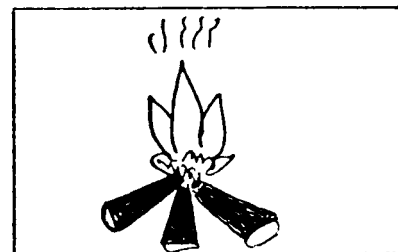
**INSIDE**

HERE THE MAN APPEARS TO BE STANDING INSIDE THE BOX



**FIRE**

THREE BIG LOGS AND A FLAME GIVE THE IMPRESSION OF FIRE AND THE HEAT THAT IT RADIATES

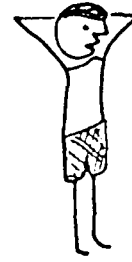


**SWEEP**

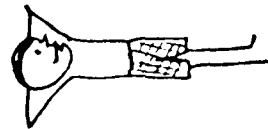
BROOMSTICK AND WOMAN. THE ANGLE OF THE STICK AND THE LINES GIVE THE IMPRESSION OF A FLOW . . .



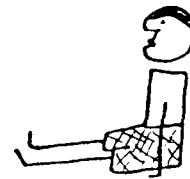
**A SIMPLE HUMAN FIGURE –**  
PROBABLY STANDING  
AND THINKING . . .



**NOW LYING DOWN,** PERHAPS  
TAKING A NAP. NOTE THAT  
IT IS THE SAME FIGURE  
AS ABOVE



**NOW HE SITS UP**



**NOW HE SLEEPS –** A SMALL BLANKET  
HAS BEEN PULLED OVER HIS BODY.



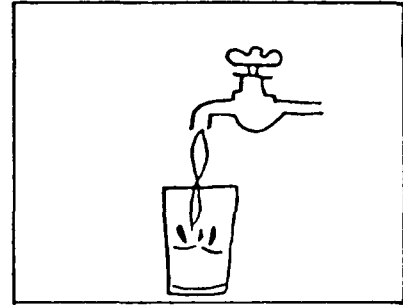
**GOING OUT FOR A LITTLE WALK –**  
PERHAPS GOING TO POST A LETTER.



**AND NOW IT IS PLAY-TIME.**

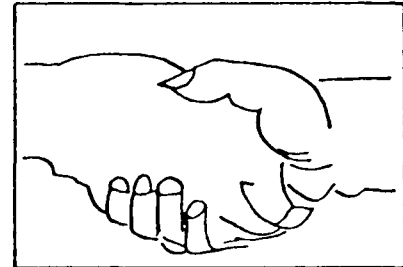


**A SIMPLE FIGURE TO  
DEMONSTRATE THE FLOW OF  
WATER FROM TAP INTO GLASS.**

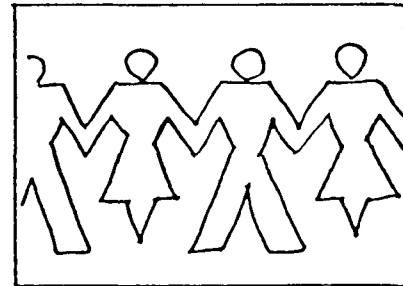


**COOPERATION**

A SYMBOL OF FRIENDSHIP,  
UNDERSTANDING AND  
COOPERATION

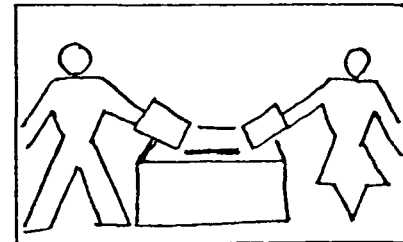


**COOPERATION, SOLIDARITY**



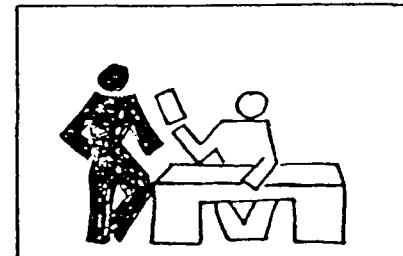
**DEMOCRACY**

MEMBERS ENJOY THE RIGHT TO  
VOTE – EXERCISING  
DEMOCRATIC CONTROL.



**MANAGEMENT**

THE MANAGER DISCUSSES A POINT  
WITH A STAFF MEMBER





















**SALESMANSHIP/BUSINESS**



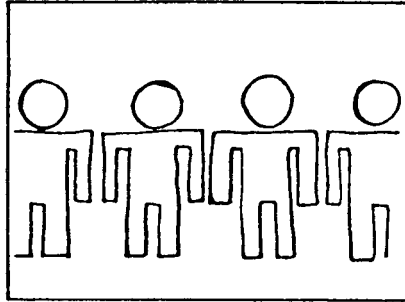
FIGURE LIII

INTERNATIONAL DEVELOPMENT COMMUNICATION LOGOS

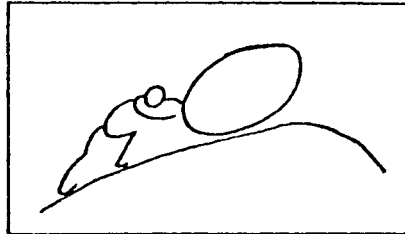
(Reproduced from DEVELOPMENT COMMUNICATION REPORT No. 34)

AGRICULTURE		INTERPERSONAL COMMUNICATION	
AUDIO-CASSETTE		NEW TECHNOLOGIES	
CINEMA AND MOTION PICTURE		NUTRITION	
EDUCATION AND HUMAN RESOURCES		POPULATION & FAMILY PLANNING	
FILMSTRIPS AND 35mm		PRINT MEDIA	
FOLK MEDIA		RADIO	
HEALTH		SATELLITE	
INFORMATION		TV/VTR	
INTEGRATED DEVELOPMENT		WOMEN IN DEVELOPMENT	

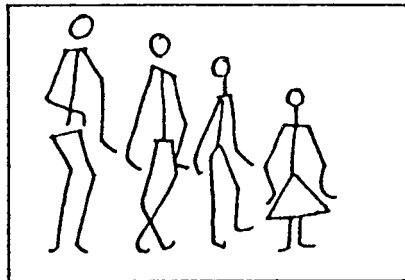
**HUMAN FIGURES CAN ALSO  
BE DRAWN IN THIS  
SIMPLE MANNER. NO  
DETAILS ARE INCLUDED**



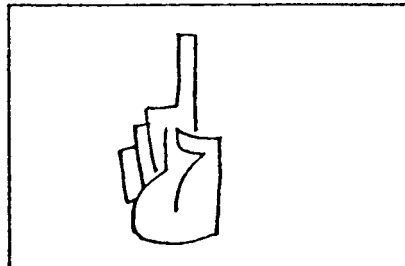
**THE MAN IS TRYING TO PUSH  
A STONE UPHILL. SURELY,  
AN UPHILL TASK...**



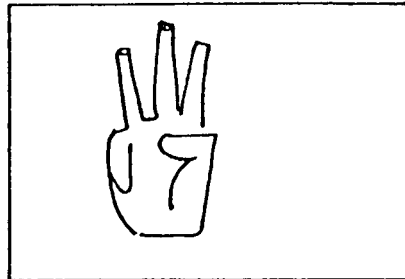
**A FAMILY OF STICK FIGURES  
PROBABLY ESCAPED FROM  
THE MATCHBOX – WATCH  
THE MATCHSTICKS CAREFULLY AND  
TRY TO BRING THEM TO LIFE**



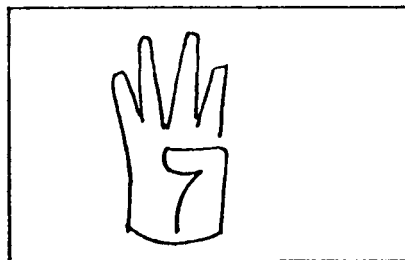
**POINT NUMBER ONE . . .**



**THE THIRD POINT IS...**



**POINT NUMBER FOUR...**







# IX. Bibliography

Listed hereunder are some of the important publications which deal with teaching methods and aids. It is strongly recommended that all training institutions should possess these publications. Field workers and co-operative teachers will derive great benefit from them.

**AN INTRODUCTION TO LETTERING.** R. Green. Pitman's Publishing Limited, London, U.K.

**AN INTRODUCTORY COURSE IN TEACHING AND TRAINING METHODS FOR MANAGEMENT DEVELOPMENT (Management Development Manual 36).** International Labour Organisation, Geneva, Switzerland.

**AUDIO-VISUAL AIDS FOR CO-OPERATIVE EDUCATION AND TRAINING.** Botham, CN. Food and Agriculture Organisation of the United Nations, Rome, Italy.

**AUDIO-VISUAL METHODS IN TEACHING.** Edgar Dale. Dryden Press, Holt, Rinehard and Winston, New York, USA.

**A-V INSTRUCTION TECHNOLOGY MEDIA AND METHODS.** Brown, Lewis and Harccleroad. McGraw Hill, New York, USA.

**COMMUNICATION AND THE CO-OPERATIVE TEACHER.** Daman Prakash. International Co-operative Alliance Regional Office for South-East Asia, New Delhi, India.

**EDUCATIONAL PSYCHOLOGY.** Pintner. Barnes and Noble Books, New York, USA.

**EDUCATION AND EDUCATION OF THE TEACHERS.** Peters. Barnes and Noble Books, New York, USA.

**EFFECTIVE COMMUNICATION MADE SIMPLE.** Eyre. WH Allen and Company, London, U.K.

**EXTENSION IN RURAL COMMUNITIES.** Savile, A.H. Oxford University Press, London, U.K.

**GRAPHIC COMMUNICATION.** Bowman. John Wiley and Sons, NY, USA.

**GRAPHIC HANDBOOK.** Ken Garland. Studio Vista, London, UK.

**HANDBOOK FOR PREPARING VISUAL MEDIA.** Ed Minor. McGraw Hill, New York, USA.

**INNOVATIONS IN TEACHING / LEARNING PROCESS.** Chauhan. Vikas Publishers, New Delhi, India.

**LEARNING AND HUMAN ABILITIES: EDUCATIONAL PSYCHOLOGY.** Klausmeier, Herbert, L. Harper and Row, New York, USA.

**MODERN TEACHING AIDS – A Practical Guide to Audio-Visual Techniques in Education.** Atkinson, Norman, J., Maclaren and Sons, London, U.K.

**METHODS AND TECHNIQUES FOR TEACHING.** Kochhar. Sterling Publishers, New Delhi, India.

**PRINCIPLES AND METHODS OF TEACHING.** Bhatia. Doaba House, New Delhi, India.

**TRAINING AND DEVELOPMENT HANDBOOK.** Craig and Bittle. American Society for Training and Development and McGraw Hill, New York, USA.

**TEACHING TECHNIQUES IN ADULT EDUCATION.** Michael Stephens and Gordon. David and Carles, Newton Abbot, U.K.

**TECHNIQUES FOR PRODUCING VISUAL INSTRUCTIONAL MEDIA.** Minor and Fry. McGraw Hill, New York, USA.

**TEACHING AND TRAINING: A HANDBOOK FOR INSTRUCTORS.** Mills. E.L.B.S. and McMillan Press, London, U.K.

**THE MODERN PRACTICE OF ADULT EDUCATION.** Malcolm Knowles. Association Press, New York, USA.

**THE MANAGEMENT OF LEARNING.** Ivor K. Davies. McGraw Hill, New York, USA.

**VISUAL AIDS: THEIR CONSTRUCTION AND USE.** Weaver, Gilbert and Bollinger. D. van Nostrand Company, New York, USA.

**WORKING WITH VILLAGERS: MEDIA RESOURCE BOOK.** The American Home Economics Association, International Family Planning Project, Washington D.C., USA.

**In addition to the above, several manuals pamphlets, brochures, and illustrated material on audio-visual aids and training methods are issued by several other organisations. Some of the more prominent ones are:**

**CEMAS – COOPERATIVE EDUCATION MATERIALS ADVISORY SERVICE,** International Cooperative Alliance, Geneva, Switzerland; New Delhi, India, Moshi, Tanzania, and Abidjan, Ivory Coast – (see addresses at the back cover of this manual).

**BRITISH COUNCIL** (Audio-Visual Aids Centre), London, U.K.

**INTERNATIONAL CENTRE FOR ADVANCED TECHNICAL AND VOCATIONAL TRAINING. ILO,** Turin, Italy.

**MATCOM – MATERIAL AND TECHNIQUES FOR COOPERATIVE MANAGEMENT TRAINING; ILO,** Vienna, Austria and Geneva, Switzerland.

THE END

# What can you do for CEMAS?

One of the main tasks of CEMAS is to stimulate and facilitate the exchange of ideas and experience among cooperative educators throughout the world.

That can only be achieved through real cooperation among cooperators.

You will make a vital contribution by sending us specimen copies or details of education and training materials that you have seen or successfully used yourself: books, manuals, exercises, handouts, posters, leaflets, brochures, materials for general member education, for committee members or for staff training at different levels.

Please send us a copy of any new production of yours. It will help us to build up and further develop the world-wide reference library, which is a basis for our information service.

You will find CEMAS address on the back cover.





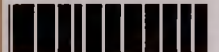
International Co-operative Alliance  
15 Route des Morillons, CH 1218 Le Grand-Saconnex, Geneva, Switzerland

ICA Regional Office for South-East Asia  
PO Box 7011, New Delhi 110065, India

ICA Regional Office for East, Central and Southern Africa,  
PO Box 946, Moshi, Tanzania

ICA Regional Office for West Africa  
01 B.P. 3969, Abidjan 01, Ivory Coast.

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