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ACTION-ORIENTED PRIMARY SCHOOL HEALTH CURRICULUM

Teacher's Guide to Teaching Health in Schools

(Draft for field testing)

WORLD HEALTH ORGANIZATION
REGIONAL OFFICE FOR THE EASTERN MEDITERRANEAN
1987

FIRST DRAFT

For a more equitable World

Among the many professionals in other sectors whose activities have an impact on health, teachers occupy a position of privilege. Schools indeed deserve considerable attention in any health policy that stresses cooperation with other sectors. Systematic efforts must be made to integrate health education in the curricula of primary and secondary schools, technical colleges, and universities.

Within the field of disease prevention and health promotion, health education aimed at children should make it possible for them to develop their physical and mental potential to the utmost, to appreciate the need to protect and promote the quality of life, and should help to prepare future generations to build a better, healthier world.

Health education, thus becomes a major aspect of "development education" the ultimate objective of which is to encourage "critically aware persons who have the motivation and the skills to participate in development efforts". In other words, development education aims at making people become effective workers for a more livable and equitable world. Such an education requires the support of specialists in different fields including, for instance, town-planners, architects, teachers and social workers. In fact, people from all sectors, and professionals in particular, should assume responsibility for helping young people develop a "will for health" through educational efforts that are positive and flexible, and use a non-moralizing approach.

This text is extracted from the Report of the WHO Expert Committee on New Approaches to Health Education in Primary Health Care (Technical Report Series 690).

TEACHER'S GUIDE TO TEACHING HEALTH IN SCHOOLS

CONTENTS

FOREWORD

The proposed Action-oriented School Health Curriculum for Primary Schools, sponsored by WHO in collaboration with UNICEF is outlined in four texts :

1. A TEACHER'S GUIDE.
2. A TEACHER'S RESOURCE BOOK (with sample teaching modules).
3. NATIONAL GUIDELINES
4. SAMPLE HEALTH CURRICULUM.

The Teacher's Guide is intended to inform the teacher of the general principles on which the proposed curriculum is based, and to outline the methods recommended for teaching health in schools.

The value and effectiveness of a curriculum depends as much on its content as on the ways and methods employed in dispensing this content. It appears, however, that currently ways and methods present greater difficulties than content, and that is why they have been given special attention in developing this Curriculum. More so, since the ultimate goal is the pupil's concepts, behaviour and life-style.

For the same reason, the role of the teacher assumes even greater importance, because unless he is first made proficient and willing, the best of curricula can achieve very little.

In attempting to provide useful suggestions in the Teacher's Guide, the writers have been handicapped by their inability to determine the exact needs of the teachers for whom it is intended; for while some of these teachers may be very proficient, others may have had little training and experience. Thus the contents of the Guide must eventually be adjusted to the actual conditions and needs the particular countries or categories of teachers who are going to use it.

Many ideas expressed in this Guide have been drawn from various publications and reports for whose authors we are most grateful, especially to D. Werner and B. Bower from whose "Helping Health Workers' Learn" so many suggestions and drawings dealing with teaching aids and techniques have been extracted.

As a companion to the Guide, the Teacher's Resource Book has been prepared to provide two things :

(i) Teaching/learning units divided into topics and activities on selected health subjects that are expected to be dealt with in most, if not all, countries. These are given primarily as examples or models to help the curriculum departments in each country to draw their own modules. Although for each activity school subjects and grades have been suggested, the ultimate decision has to be made at the country or school level.

(ii) Background material, related to these modules, to provide the teacher with more knowledge and more details on how to "teach" each activity to his pupils.

Finally, an important objective of this Guide is to stimulate teachers (and others concerned with the education of school children) to develop more and more innovative and effective ways of preparing the parents and citizens of tomorrow to enjoy a life of health and well-being in the spirit of Health For All by the Year 2000.

A country's educational system is already in place and can provide a means for promoting health and for resolving problems associated with a poor environment or lack of knowledge about health. There are many more village and community schools than there are health centres, and they are ususally located favourably to facilitate innovation, education and motivation.

1.4 Contemplating a New Health Curriculum for Schools

There is nothing new about instructing school hildren on health : it has always and everywhere been done. But changing conditions of life always demand that the purposes of education be restated. In the case of health education this demand was made more insistent by vast improvement in the knowledge of methods of prevention and control of diseases, as well as by the pressing need to find solutions to the aggravated problems of providing medical services. It was largely to answer this need that the concept of Primary Health Care has emerged; and along with it an urgency to review the state of health education in schools. In the following chapter, these two elements are discussed because they are together primarily responsible for motivating and shaping the Proposed Action-Oriented School Health Curriculum.

1. INTRODUCTION

"The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition." (WHO Constitution).

1.1 What is Health ?

Health is a state of physical, mental and social well-being and not merely the absence of disease and infirmity.

1.2 Health - A Universal Objective

One hundred and fifty-eight countries cooperate in the field of health and have set for themselves a common goal "HEALTH FOR ALL BY THE YEAR 2000". This does not mean that by then disease and disability will no longer exist, or that doctors and nurses will be taking care of everybody. What it does mean is that resources for health will be evenly distributed, and that essential health care will be accessible to everyone, with full community involvement. It means that health begins at home, in schools and factories, and that people will use better approaches than they do now for preventing disease and alleviating unavoidable disease and disability. It means that people will realize that they have the power to shape their own lives and the lives of their families, free from the avoidable burden of disease, and aware that ill health is not inevitable.

1.3 Most Children Go to School

There is no better place than schools, particularly primary schools, to work for the realization of these aims. The pupils of today are the fathers and mothers of tomorrow, and, once they are imbued with correct health concepts and attitudes and behavioural patterns, firmly established (because they have been acquired during the formative age), they grow to enjoy all the benefits of good health, and their impact on the life style of their future families and the community at large can be profound. Even before they are grown up and leave school they can in various ways change prevalent ideas and practices and help improve the health status of their families and communities.

In the Third World the school teacher is generally looked upon as a man of knowledge and wisdom, and as such it has always been possible for him to play a leading part in village life.

2. BACKGROUND

A. DEVELOPMENT OF THE PRIMARY HEALTH CARE APPROACH

2.1 Meaning of Primary Health Care

Primary Health Care originally meant the FIRST care given to a patient in need. It implied essentially MEDICAL CURATIVE services. In order to extend some of these services into unprivileged areas where there were few doctors or hospitals, various types of "auxiliary health workers", such as medical assistants, dispensers, dressers, etc., were trained and placed - as substitutes for doctors - in outlying dispensaries or treatment centres. But this approach had little impact on improving standards of health or on significantly reducing death and disease.

Recently, however, the concept of Primary Health Care has assumed a very different meaning from the original idea of treating the sick, and a clear distinction has been made between "medical care" and "health care". The medical care model of doctors and hospitals, auxiliaries and dispensaries ... help individuals who reach them after they have become ill. On the other hand, the health care model finds ways and means to prevent disease and promote health in families and communities and attempts to reduce the total amount of sickness.

2.2 "Medical Model" Gives Way to Primary Health Care

There are other reasons why the "medical model" has continued to lose ground, giving way to further development of the primary health care approach. The experience of developed countries has shown that it is better housing, better food, a clean environment, better working conditions, more access to education, greater affluence and implementing simple preventive measures of immunization which have made the difference in improving health, not supplemented medical care. Developing nations have found it more and more difficult to cope with the rising costs of providing hospital facilites, training medical personnel etc., to cater for populations whose numbers and demands were ever increasing. Even as the training and upgrading of doctors continued many of them became dissatisfied with working conditions in their countries and emigrated in quest of more lucrative positions or more amenable professional conditions in developed countries. This phenomena has come to be known as the "brain drain", and it has indeed amounted to the draining of the more proficient elements in most specialized fields.

The development of medical science has become increasingly inclined towards specialized and sophisticated technologies and less relevant to the more prevalent and basic needs of the population. The few who wanted kidney or heart transplantation attracted more attention than the millions of children who needed to be protected against the hazards of diarrhoea and meales.

The germs responsible for many common diseases have become resistant to penicillin and other drugs; and drug houses are flooding Third World markets with newer, more expensive drugs of questionable effectiveness. With the realization that many drugs may provide only short time curative effects, the need for greater emphasis on preventive measures have become more apparent than ever.

These are some of the reasons why primary health care is proving to be both more economic and more approapriate to the needs of developing countries than the curative model. It aims at providing conditions free from health hazards, thereby not only cutting down the country's expenditure on health services but also increasing the productivity of the population and enhancing social and economic development.

2.3 Definition of Primary Health Care

Primary Health Care has been defined as essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation, and at a cost the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.

2.4 Principles of Primary Health Care

Health Care is part of TOTAL HUMAN DEVELOPMENT - social, educational and economic. Its development programme cannot be fully successful if it is processed in isolation : it has to be supported by and coordinated with development efforts in other aspects of community life.

The basic rule in Primary Health Education is the ancient adage : PREVENTION IS BETTER THAN CURE.

Essential health care means PROVIDING THOSE THINGS NEEDED for a healthy life : safe water, nutritious food, proper sanitation, etc.

Health care should be AVAILABLE and ACCESSIBLE to all people.

Health care should be ACCEPTABLE to the community and APPROPRIATE, i.e. relevant, to the main health problems of the environment.

2.5 The Elements of Primary Health Care

Primary Health Care includes at least the following basic elements or functions - a country or community may include only some of them in its health programme, or it may add to them :

1. education concerning prevailing health problems and methods of preventing and controlling them;
2. promotion of food supply and proper nutrition;
3. an adequate supply of safe water and basic sanitation;
4. maternal and child health care, including family planning;
5. immunization against the major infectious diseases;
6. prevention and control of locally endemic diseases;
7. appropriate treatment of common diseases and injuries;
8. provision of essential drugs.

It can at once be seen that these elements are inter-related. For example, maternal and child health care involves particularly nutrition and immunization. Health education is the central theme : it embraces all the other elements.

2.6 Primary Health Care is an Approach

The principles and elements of primary health care have thus been developed through the years. It must be emphasized, however, that they represent an APPROACH that is highly adaptable in application. It is a flexible system which must be adapted to all types of circumstances and according to the community's health problems, culture, way of life and stage of development.

B. PRESENT STATE OF TEACHING HEALTH IN SCHOOLS

2.7 Aims of School Health Education

A recent survey [1] of teaching health in schools in countries of the WHO Eastern Mediterranean Region has revealed many common features. All countries are agreed on the importance of school health education, but there is also

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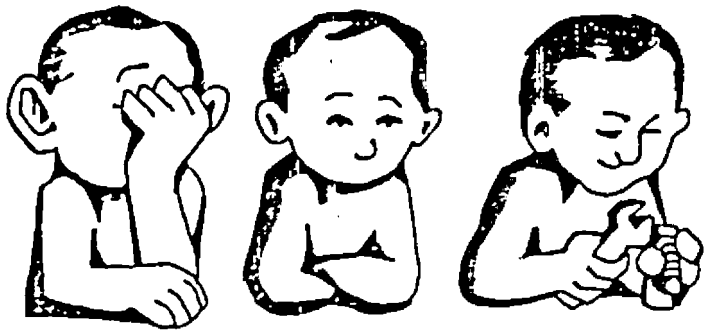
(1) This survey was conducted by two consultants (WHO & UNICEF), 1985-86.

a general concensus that neither the current content nor methods of teaching health are satisfactory, and that both need to be revised in the light of the real aims of school health education :

1. To make pupils aware of their health problems and needs.
2. To promote pupils' life-style through the inculcation of correct health concepts and behavioural patterns, and with the ultimate objective of enabling the pupil to make the best possible choice for his or her optimum health and total well-being.
3. To improve school and family health environment.
4. To enhance the role of pupils in conveying health messages to the community, and in giving active support to such national health programmes as their country may be launching at a given time.

2.8 Current Practices

Whereas these aims address the immediate health needs and practices of pupils and their community, and indicate a practical and activity-oriented approach, current health teaching in schools is far too knowledge-based, didactic and directed more towards teaching pupils facts of biology and human anatomy than promoting their health concepts, behaviour and habits. A pupil can score full marks in an examination on the present health subjects he istaught while his health attitutde and behaviour may remain completely unchanged. Knowledge alone will not alter health behaviour.



hear and forget.....see and remember ....do and understand !

The reasons for this state of affairs may include the increasing crowdedness of classes and syllabuses, the limited attention given to health in the training programmes of over-worked teachers, and the mounting preponderance of examinations in school practices. Paradoxically, some of these reasons should have dictated greater and more effective health education, because healthier pupils, being happier, livelier and more productive can live up to knowledge explosion, and can better withstand the rigours and make-shift arrangements brought about by rapid school expansion and classroom congestion in the face of economic constriants. For one thing, school attendance will improve, the rate of drop-out and repetition will decrease, and the internal efficiency of the education system as a whole will be enhanced.

3. FEATURES OF THE PROPOSED CURRICULUM

3.1 Substance and Method :

Taking into account the considerations discussed in the previous chapters it became apparant that :

(i) The substance and approach of the school health curriculum should be closely linked to the components and approach of primary health care. This would ensure that the curriculum addresses the basic health needs of the pupils and their communities, and that the school efforts shall be consistent with such primary health care programmes as are apt to be in progress outside the school.

(ii) The teaching methods to be employed should be as much as possible practical, i.e. action-oriented. The pupils should be made to learn by doing, rather than listening and reading, and to acquire attitudes and develop habits rather than study and recite facts. Correct attitudes and skills are not only retained long after facts are forgotten but they are themselves the best tools to recapture facts learned in the past,learn new ones, and benefit from them all.

3.2 Resources :

The past twenty or thirty years have witnessed many commendable contributions and innovations in the field of in-and out-of-school health education, initiated beside WHO and UNICEF, by a number of official and private organizations or by individuals. Although they may differ in approach, methods and target groups, their guiding principles, as well as their aims are essentially alike. Some of these innovative approaches are described in this book in the hope that they may generate greater interest and lead to more ideas and innovations.

In writing the Guide and the Teacher's Resource Book that goes with it many ideas and suggestions - sometimes whole extracts - have been drawn from these contributions, especially from :

1. David Morley's "Child-to-Child Programme".
2. David Werner and Bill Bower's "Helping Health Workers Learn".
3. David Werner's "Where there is no Doctor".

The effectiveness of the approaches of all three, and their practical value in promoting health education have been demonstrated in many countries. Apart from the knowledge and know-how they provide they are apt to encourage and inspire initiative and innovation among those involved in health education. Furthermore, their treatment of subjects is simple and non-technical.

3.3 Broad Guidelines

The Proposed Curriculum for health education in schools is necessarily presented in the form of general guidelines intended to suggest an approach rather than a detailed blue print or a prescribed set of syllabuses with standard methods for teaching them. Even where some details are given, the purpose is to give illustrative examples not actual teaching notes or lessons. A detailed curriculum can only be drawn in the light of conditions prevailing in the particular country which elects to adopt the Proposed Curriculum. Even then it may need to be further adapted to the conditions and needs of particular societies within the same country.

3.4 The Teacher's Resource Book

Similarly, the teacher must make his own choice of the particular activities the order in which he prefers to deal with them, and the method or methods he wishes to employ in tackling them with his class.

For this purpose a Teacher's Resource Book is provided in which there is a list of basic activities which are expected to be dealt with in nearly all countries. A teacher can choose from, or add to these activities, depending on local needs, teaching time available, etc. For the benefit of the teacher, the Resource Book also contains reference or background material related to the various topics and activities presented. The teacher should not hesitate to seek further information from other references or from local resource people. Often teaching aids are also suggested.

It must be emphasized, however, that some of the information supplied in the Guide is not intended for pupils, but only to give the teacher more background information, and sometimes to help identify health problems in the environment or symptoms of disease among his pupils which may call for referral to parents or doctors.

Although it is assumed that this Guide is going to be used by people already versed in the principles and methods of teaching, a variety of teaching methods which can be used with health education have been suggested.

3.5 Flexibility and Adaptability

It is most important that the flexibility and adaptability professed by the Proposed Curriculum be followed through by the teacher in dealing with his pupils, putting into full use his imagination and intimate knowledge of his surroundings; for no guide book or curriculum, no matter how comprehensive, practical or clearly conceived and written can directly effect action for health development. The child of a coastal community and the child living in inland or arid lands have the same basic nutrition needs but foods available to each may be quite different. Sanitation problems are universal but assume different forms under varying environmental conditions. Variations may sometimes need to be made to accommodate differences even between neighbourhoods within the same vicinity.

3.6 Integrated Curriculum :

Some countries may prefer to introduce health teaching as a separate subject in their schools, and they may have the means to do so. However, this Proposed Curriculum has been developed on the assumption that health teaching shall be integrated or fused with the various school subjects and activities.

The process of integration can only be completed at the national level, in two ways :

(i) After deciding what health topics and tasks are to be included in the school curriculum, curriculum planners can allocate these topics and tasks to the different school subjects and grades. Local conditions, contemporary developments or the nature of the topic may make it advisable that it should be included in more than one subject and/or more than one grade. In other words, the same health topic, e.g. body cleanliness, may be dealt with in first grade religion and in third year science and reading. In each case the approach, emphasis and scope, etc., may assume a different aspect while being mutually supportive.

(ii) In subjects where exercises are given in support of teaching certain rules as in mathematics, language or geography, these same exercises may use actual data, figures or precepts that can add realism and help promote the pupils' health education. Health-related matters may become the subject of reading or composition exercises; figures

for incidence of disease or rate of child growth may be used in the teaching of arithmetic or of drawing graphs; comparisons between a healthy child and one afflicted with some disease, or between a well-kept house and one where the household is careless with their garbage and water supply, can be the subject of an art lesson. In history pupils can learn about famous people who discovered solutions to serious health problems of the world. They can also learn how health and disease have affected the progress and decline of nations and empires.. (Some examples of using health-related data in the teaching of mathematics are given at the end of this chapter).

3.7 Basic Principles :

No matter how the integration is effected, full recognition must be given to the modern concept of curriculum as covering all learning experiences in health, both in class and out of class, which are under the guidance or influence of the school. Such experiences occur in connection with :

i. healthful school living,

ii. school health services,

iii. health instruction, and

iv. school, home and community relations.

This concept recognizes, of course, that schools provide learning experiences (either good or bad) whether or not they plan for health education[1].

The needs of the children themselves should have primary attention. These needs are basically related to biological processes such as eating, elimination and growth; to combating conditions which may cause or aggravate physical defects, disease and injuries; and to sound emotional and social development. Though such needs persist throughout life, they vary in their manifestations at different age levels, thus suggesting possible changes in teaching emphasis as children progress through school.

While these primary needs should guide the determination of the content of the school health subject the main objective of the teacher must always be to help his pupils acquire enduring health concepts, behaviour and practical self-help skills.

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(1) C.E. Turner, The Journal of School Health, p.475.

3.8 Involvement in Community Activities :

The pursuit of this objective can be greatly re-inforced, and its benefits enhanced, if it were closely associated with pupils' involvement in the activities of their communities. They must become aware of, and sensitive to, the health problems and needs of their families and communities, and they must willingly contribute in efforts to meet these needs. With a healthy life-style and a positive civic attitude the pupil can grow to become a better parent and a better citizen.

It may be remembered that the characteristics of children at the primary schools stage can be of great assistance to the teacher in achieving the desired objectives of health education. These are the formative years when most life-time habits and attitudes are acquired. Children at this age are not only inquisitive and willing to explore and discover but are also physically so active that they are far happier and more responsive in learning situations with greater opportunities for movement and action than in classroom situtations. More so when they feel that their actions are leading to palpable results and that they are being useful to others. Hence participation in community activities - in which sound education indicates that they be trained - provides not only a welcome change from the classroom routine but also a more effective and varied learning atmosphere, service to the community and greater opportunities for rapport and reciprocation. Moreover, community activities enable teachers to educate their pupils in many things besides health.

It may also be mentioned in this connection that people, young or old, who invest labour, time, materials and money in health-promoting activities are apt to value what they produce and be more committed to the use and maintenance of it.

However, different communities have different reactions to the nature and scope of school children's involvement in their activities, and the teacher is well advised first to make sure that the aims of the intervention of his charges are properly appreciated by both community and pupils. Such activities by the pupils as house-to-house collection of data or the putting up of exhibitions or enacting plays are usually assured of welcome by the community and may pave the way for more involvement and participation.

3.9 Pupils as Couriers of Health Messages

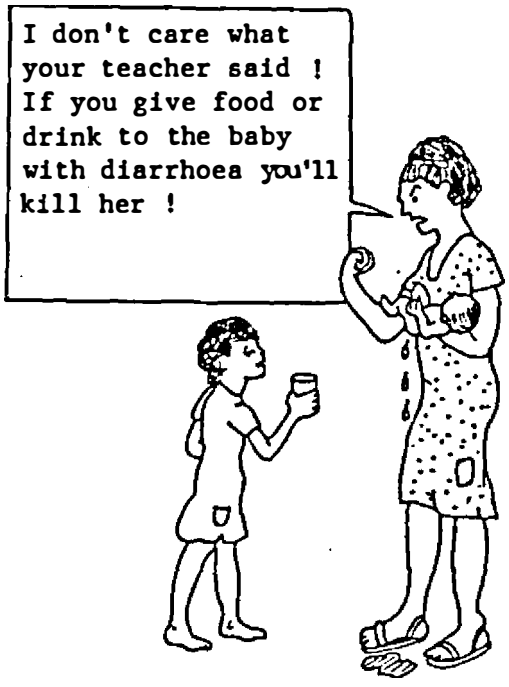
The Child-to-child International Programme, as an innovative approach, is dealt with in more detail at a later chapter (para. 5.7). It teaches and encourages children of school age to concern themselves with the health, welfare

and general development of their younger, pre-school brothers and sisters and of other younger children in their community. Children under five years of age spend much of their time in the care of their older brothers and sisters and the older child therefore has a strong influence on the development of the younger.

"Child-to-child helps the older child to understand this responsibility and explains how he or she can contribute easily but constructively to shaping the future life of the little children of the family and the community".

There are other ways in which school pupils can help carry health messages to their homes and families. When they go home and speak about what they learned, or start practising skills they acquired at school, some sort of dialogue may be initiated and new health ideas may be adopted by the family.

However, so much depends on the nature of the child-parent relationship prevalent in the particular society. Some parents may have enough affection and pride in their child to want to encourage and share his activities. Others may assume an apathetic or sceptical attitude towards the total impact of school education on their children; or, having been his first teachers since he was born, would be reluctant to switch places with him. Unfortunately, many parents who have real need to change their ideas and practices (often traditional and deep-rooted) would resent to have them challenged by their own erstwhile babies.



Will the new ideas children learn from CHILD-to-child get them in trouble at home ?

3.10 Dealing with Parents

On the other hand, the teacher must make every effort to enlist the support of parents in the pupil's health education; their indifference or ignorance of what the teacher is trying to achieve can undo his work. The inculcation of habits and attitutdes, and the development of a healthy life-style requires continuity and consistency of effort. Parents must therefore somehow be persuaded to :

(i) Get to know what the school is trying to do in the way of health education, and maybe suggestions in that respect;

(ii) Encourage children to practise at home the health skills taught at school.

Rapport between school and parents is commonly achieved through parent-teachers meetings and through visits by parents to the school, particularly on special occasions such as the school's open day.

In rural areas relations between community members are usually so close as to facilitate informal visits by teachers to pupils' homes and provide other opportunities for dialogue.

All such get-together occasions, beside helping to promote children's health education, can be very useful in passing open or implicit health messages to their families.

Once parents are made appreciative of the value of their children's health education they may be willing to promote it by actively supporting the school's health services and school health environment programmes. Those who have relevant knowledge or skills may be willing to put them in the service of the school.

School Open Day ...

3.11 Also Others Can Help

It is not only parents with knowledge and skills who can be called upon to help with school health education. Personnel working in various medical and health-related fields in the area, beginning with the school nurse, can assist the teacher in various ways. They can give talks, and demonstrations, participate in discussions, or allow teacher and pupils to benefit from mateirals and equipment in their charge.

Working or retired community members versed in other fields can also assist with matters associated with health educaiton, such as growing the school garden or poultry farm, making fly swatters or fixing mosquito nets. A former patient may be called in to relate his experience.

All these "outsiders", properly approached, can contribute so much to other aspects of school health. However, when invited in their resource capacity, a little briefing from the teacher may enhance the value of their contribution without necessarily depriving it from its novelty and authenticity.

Varius mass media products (T.V., Radio, Ministry of Health leaflets and posters, etc.,) can provide useful information and teaching aids for the teacher to use. Some countries have regular health programmes on T.V. or radio that can be of special value.

Below is a list of examples of organizations which may be represented in the community and can give assistane to schools in the promotion of health (some may be approached directly by the teacher, others only through higher education authorities). It would be quite educative to pupils if they were to know about the role of these agencies (at the level of the locality, or the world, as the case may be) especially in the course of class visits that might be arranged to some of them.

Government Agencies :

Ministry of Health
Department of Public Health (Sanitation)
Department of Water Supply

Ministry of Agriculture
Road Trafic Department
Fire Department
Ministry of Information
Local Government Authority

Voluntary Agencies

Red Crescent
Women League

Professional Organizations

Medical Society
Dental Society

Consumer Services

Hospitals
Pharmacies
Groceries

U.N. Agencies

WHO
UNICEF
UNFPA
FAO

3.12 Traditional Practices

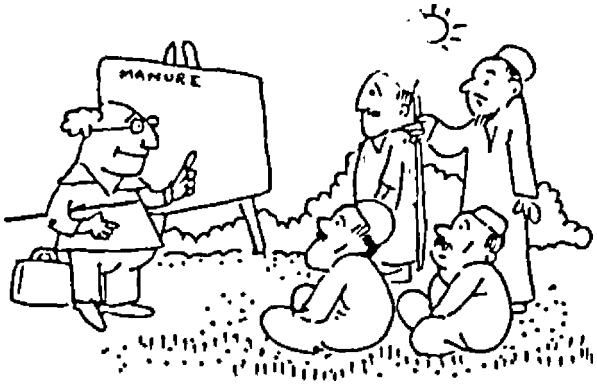
It is dangerous to suppose that a society's level of healthy life-style or its drive to achieve healthy conditions are very much dependent on its degree of sophistication or affluence. Societies at either end of the scale have their own peculiar health shortcomings and needs. Poverty and riches each furnishes its own problems; but the general assumption is that wealth can provide easier solutions, and that rural and backward communities are more in need of school education. However, it is important to bear in mind that :

First, lack of financial resources should never be an excuse for ceasing to pursue efforts for improving health conditions.

Second, it would be unwise of the health educator, whether in or out-of-school, to condemn the health habits and practices of these communities. Although they may lack the scientific and technological backing of their modern parallels most of these habits and practices have been evolved through centuries of experience and trial-and-error, in harmony with local cutural and physical conditions. They merit careful scrutiny by the health educator before deciding to fight them. Mostly it is a question of improvisation rather than substitution. Many of these traditional practices are not only more appropriate, accessible and acceptable to the community but also less expensive and usually less hazardous than modern medicines.

While efforts should be made to combat superstition and witchcraft, healthful traditional and indigenous beliefs and habits (e.g. reciting Koranic verses and Mohammedan sayings, ablution and tooth-brushing in Muslim culture) as well as popular proverbs and adages must be fully utilized to re-inforce the teaching of health education.

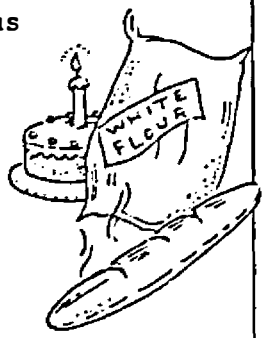
The expert must have his say



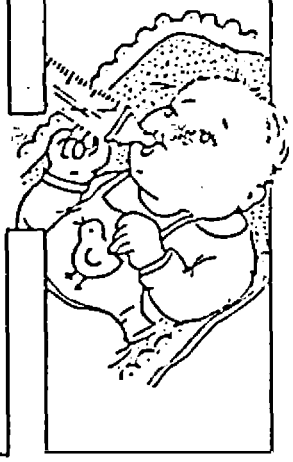
"Because you've done it successfully your way for generations, it doesn't mean it works".

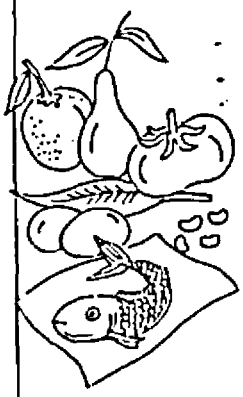
SOME HEALTHFUL PRACTICES AND FOODS REPLACED BY HARMFUL OR LESS HEALTHFUL ONES

Whole grain cereals and flour are more nutritious than whiter factory-milled grains and flour. But in many countries people have preferred the latter thus exposing themselves to health problems. Instead of eating their own nutritious whole grain they now sell it to buy the more expensive and less healthful white flour. In some countries they now grow a new strain of white maize in the place of the more nutritious native yellow maize.



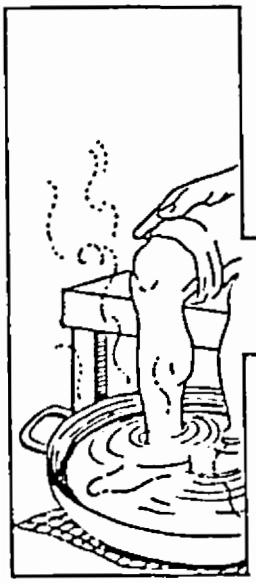
Although breast feeding is healthier, safer and cheaper, women have increasingly taken to bottle feeding and the use of artificial powdered milk, largely in response to misleading advertizing by commercial agencies. Some countries (e.g. Papua New Guinea)have forbidden the sale of baby bottles without a doctor's prescription.



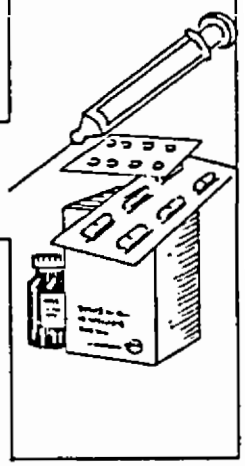


Pre-packaged foods and drinks have flooded the world, supported by powerful advertizing campaigns and marketing facilities. They are expensive and give rise to poor nutrition, decayed teeth, diabetes, heart disease and other health hazards. Local fruits, nuts etc., are safe and far more nutritious as the health of older generations testify.

Even before it was proven to cause lung cancer, heart disease, ulcer, harm to unborn babies, and many other illnesses, smoking was looked upon as bad and unreligious, especially in Muslim countries and particularly among women and youngsters. But it has now spread very widely and rapidly. Children are more vulnerable than older people, the smoking habit is difficult to get rid of, and it often leads to worse, more expensive practices. Youngsters who smoke face a life of weakness and "breathlessness".



Traditional medicines and cures are often safer, cheaper and more effective than modern medicines. Individuals, as well as countries have been led to liberal and misguided purchase of expensive drugs supported by dishonest and misleading campaigns spread through various powerful media.



Canned and bottled foods, which should have been used only in case of need and emergency, are now being widely used instead of fresh, nutritious, native foods. The former are expensive, contain unhealthy preservatices, far less vitamins and can easily become poisonous.

3.13 Some Mathematics Exercises (See para. 3.6)

Here are a few examples of how health data can be used in mathematics exercises :

(1) Draw a graph showing the relationship between adult literacy rate and the infant mortality rate :

RATE	COUNTRY				
	A	B	C	D	E
Adult literacy rate (%)	20	31	47	73	93
Infant mortality Rate	180	152	80	35	17

(2) The population distribution in one country, by governorate was as follows :

Governorate	POPULATION (in thousands) Total	Urban	Rural
A	6417	6417	0
B	3481	707	2774
C	2975	991	1984
D	3231	1842	1389
E	819	311	508

a) Calculate the percentage of urban population in each governorate;

b) Make a graph ranking the governorates in descending order according to the percentage of urban population.

(3) Below are the figures for birth rate and death rate in a certain country over a number of years :

Year	Birth Rate	Death Rate
1960	43.1	16.9
1965	41.7	14.1
1970	35.0	15.1
1975	36.0	12.1
1980	37.2	10.0

Draw two separate line graphs to show the trend in each rate. Comment on the difference between the two trends.

(4) Following is the distribution of hospital admissions and hospital deaths in one country.

Disease Group	Admissions	Deaths
Infectious & Parasitic diseases	28904	424
Neoplasms	1148	144
Circulatory System	6309	473
Respiratory System	20110	184
Pregnancy and delivery	46692	8
Accidents	12506	197
Other diseases	?	?
T O T A L	154789	2135

1. Calculate the percentage distribution of admissions by cause;
2. Calculate what percentage of admissions die in the hospital, for each disease groups;
3. Draw suitable graphs to show the distribution of hospital admissions by cause, and the ranking of the different groups of diseases according to the percentage of admissions that die in hospital.

(5) Below is total population in a country (in millions) and the budget of the Ministry of Health (in million pounds) over a number of years.

Year	Population (million)	MOH Budget (million pounds)
1950	21.3	7.155
1970	33.0	41.475
1980	42.3	179.313
1985	47.0	374.478

1. Calculate the share per person (in pounds) from the budget of the Health Ministry;

2. Make a bar graph to show changes in the share per person.

(6) Below are the average weights (in Kg.) among boys and girls at certain ages, in the coastal governorates and inland governorates, in one country, as compared to the standard universal weights. Draw a graph :

(a) To show increase in weight comparing the two groups of governorates with the international standards, separately for boys and girls.

(b) To compare increase in weight among boys and girls in each group of governorates and in the universal standards.

		WEIGHT (KG)		
Sex	Age (yrs.)	Coastal governorates	Inland governorates	Standard
Boys	6	19.4	18.7	21.7
	7	20.2	19.4	24.0
	8	22.3	21.6	26.7
	11	30.3	28.6	35.3
Girls	6	18.1	18.1	20.6
	7	19.8	19.3	23.3
	8	21.3	21.3	26.6
	11	30.4	29.5	37.0

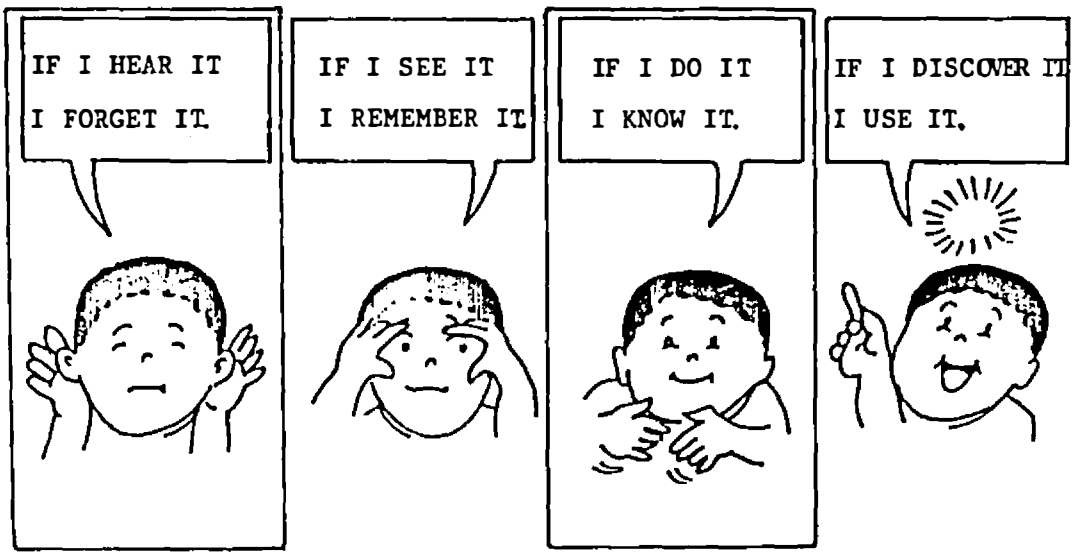
4. SOME GUIDELINES ON TEACHING HEALTH IN SCHOOLS

4.1 The General Idea

The saying that "HOW something is taught is just as important as WHAT is taught" has a special significance in the proposed school health curriculum. In developing this curriculum one aim was to make the content of health education in primary schools more RELEVANT to the needs of children, their families and their communities. Another, perhaps more important aim, was that health education be given in a way that would ensure a permanent impact on the pupils' CONCEPTS, BEHAVIOUR and LIFE STYLE. It also aims at making them - before as well as after they leave school - effective agents in promoting the health conditions of their communities and their countries.

With these aims in mind the methods of teaching have to be action-oriented. Pupils must participate fully in the learning process by observing, enquiring, discovering and doing things, instead of being merely shown and told.

LEARNING THROUGH SEEING , THINKING AND DOING



The following pages contain a number of suggestions on the methods of teachning. The teacher is expected to select from among these suggestions, add to them, adapt and innovate according to his or her particular circumstances. In the last resort it is the teacher's personality, imagination and creativeness that will determine the real impact of his teaching.

4.2 Reconnaissance

Every child begins to form his health concepts and behaviour shortly after being born. What the child learns differs from one community to another, sometimes even from one family to another.

Similarly every community has its own views and attitutdes with regard to communal and individual health matters. It has its ways and standards of cleanliness, sanitation, etc. It also has its own health problems, though it may not necessarily be aware of them or anxious to deal with them.

A teacher must first get to know his children's background and the community's health conditions, both within the context of the local physical and social environment. While doing this the teacher should try to discover potential sources of help by way of materials, advice and general support.

It is primarily the teacher's responsibility to maximize liaison between school, family and community, centred around the pupil; for without coordination and harmony in the inevitable influences of these agencies the pupil is apt to suffer the effects of discord and contradiction.

The reconnaissance would be incomplete without taking stock of the existing school curricula, not only to discover further elements of support and reinforcement but also once again to safeguard against possible contradiction or unnecessary duplication. In some countries there are already some on-going school education programmes on related subjects such as nutrition, population or environment. When dealing with health educaiton the teacher would need to coordinate his activities with such programmes.

4.3 The Learning Process

Children benefit most from learning

When it has a PURPOSE they appreciate;

When they WANT to learn what they are being taught - that it was their own choice and not simply imposed on them;

When they are FINDING OUT the answers BY THEMSELVES, through their own investigation, experimentation and discussion among themselves and with others;

When the learning process involves positive ACTION and effort on their part ; ... and

When the final results are demonstrative, and the pupils can feel the DIFFERENCE before and after.

4.4 Interest

If the teacher can successfully trigger and maintain the interest of the pupils the learning process can be assured of immediate enjoyment and lasting impact.

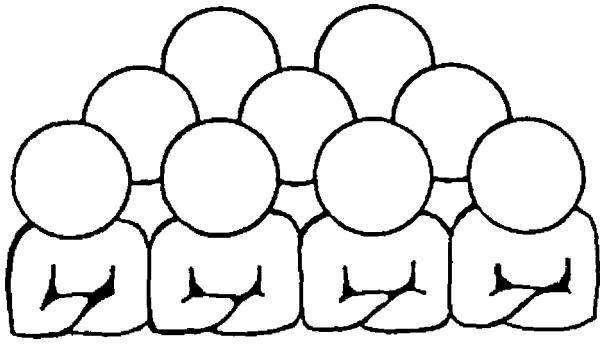
There are many ways of arousing and sustaining the pupils' interest in health educaiton in general. It has been observed in Third World countries that the ambition of most school children is to become doctors when they are grown up. Similarly, like all youngsters they also have their sports 'idols' who could never have achieved such eminence without first enjoying good health.

Continuous encouragement and individual attention can further boost the pupils' interest.

4.5 Variation

However, the most effective way to sustain pupils' interest is variation and change of activity. Children cannot tolerate monotony : both their bodies and their minds need to be engaged in different exercises now and then. This is why a fairly wide range of teaching techniques is offered later on in this chapter, along with the criteria to be employed in selecting the most appropriate. Often it may be simply a question of conducting the lesson outside the classroom instead of inside, or inviting somebody to talk to the pupils in the place of their regular teacher.

Variation in method and technique serves another very important purpose. It can accommodate the differences that naturally exist between pupils; for each child, just as he learns at his own rate, he also learns in his own way.



But often schools treat all students as if they were identical ...

4.6 Follow-up

Practice makes perfect. In order to help children develop and maintain certain health habits and concepts a certain measure of persistence is indispensable. This may take the form of drill or repeating certain instructions by the teacher or certain acts by the pupils; or that the same topic may be approached or expressed differently in various school subjects or different occasions and situations. Often picnics, games and other out-of-school activities provide excellent opportunities. In the past many countries where governments were responsible for the provision of exercise books to school children, a number of basic health messages were printed on the back of each exercise book for the benefit of pupils as well as teachers and parents. Examples of such messages were :

1. Brush your teeth daily first thing in the morning and before going to bed;
2. Take a bath with soap and water at least twice a week;
3. Wash your hands before and after eating.

4.7 A Sense of Responsibility

At all times the teacher must impress upon his pupils the seriousness of health education and bring them up with a sense of responsibility towards themselves, their families and their community. This attitude may well be strengthened by their actual participation in community activities (especially health projects), by going out to collect data or by conducting simple field surveys. Of course undertstanding and encouragement on the part of the community itself can help a great deal.

The pupil's sense of responsibility, especially towards himself, is directly related to his self-esteem and his ability to consider options and decide for himself. Failure in these two respects is always at the root of hazardous behaviour.

4.8 Seizing Opportunities

The same learning situation often provides a number of opportunities, some of them quite unforeseen by the teacher, to transmit items of knowledge or promote certain qualities and skills quite unrelated to the original aims of a particular lesson. For example, when a teacher gets his pupils to work in groups, though his initial motive may have been merely to introduce some kind of variation in the study of a particular topic, a situation is created where

pupils can learn so much in the way of social behaviour and mental health. A teacher must always be prepared to make the best of such opportunities even when it means altering his teaching plan.

4.9 Tests and Examinations

The teaching of the school health curriculum must never be done with the purpose of helping pupils to pass examinations on it. The motivation to learn must arise only out of the pupil's interest and desire to learn; and the only objects of examinations and tests should be to determine the effectiveness of teaching and to help in evaluating the school health education programme.

The tensions and worries of examinations !

4.10 Evaluation

A school health programme must be continually evaluated at two levels :

i. the impact of the programme as a whole, i.e. inclusive of efforts in school health services and school environment; and

ii. the impact of the curriculum.

Only the latter shall be discussed here.

Since the school health curriculum aims at bringing about health improvements in the pupils themselves, their families, communities and local environment, then such questions as the following need to be pursued :

Is the health of an individual child or a group of children better as a result of teaching this school health education curriculum ?

5. EXAMPLES OF METHODS AND TECHNIQUES

5.1 Activities in the Resource Book

The companion Teacher's Resource Book contains a number of health topics suggested for teaching in primary schools. Each topic is broken down to several activities in order to :

(i) assist the teacher in determining learning objectives, and

(ii) indicate the actions pupils are expected to perform as they learn the topic. Neither topics nor activities are meant to be adopted exactly as they appear, but to be treated as examples, or models for adaptation - both at the country level and the teacher's level - to suit the conditions where they are ultimately going to be used.

5.2 The "Topics" Method

(i) General Remarks

The "Topics" method is dealt with in somewhat more detail than other methods because it incorporates more educational concepts and approaches. Also because most teachers are likely not to be familiar with it, since its application in schools has been greatly restricted by the ever increasing crowdednesss of both classes and school curricula.

(ii) Work Plan

The class is allowed to choose one of several topics which have already been experimented with and for whom pupils' reference booklets have been prepared in the light of the experiment. The class is then divided into groups, each to deal with a particular aspect or section of the topic. The work is then further divided among the members of each group. Each pupil is thus responsible to his group and each group to the class.

The pupils prepare timed plans for their work, involving the determination of objectives, activities and materials needed for their realization, and the manner in which they intend to present the outcomes. In each case the work will involve collection of data (from written sources, teachers or community members), visiting places, writing letters, making models, collecting samples, drawing maps, diagrams and graphs, colouring or pasting pictures, rehearsing plays or practising games, etc. The approach to school subjects is synthetic;

and during the hours they are doing the topic the pupils would be seen scattered all over the classroom and school, each individual or small group intent on drawing a map, writing a letter or tinkering with a model.

(iii) Advantages

The topics method can be credited with several educational advantages, including :

a) It encourages pupils to carry on with their learning activities beyond the school boundaries;

b) It emphasizes both the problem-solving and practical approaches in the learning process;

c) It provides excellent training opportunities in planning and implementation as well as in team work;

d) By encouraging the pupils' earnest involvement in the learning process it minimizes disciplinary problems;

e) The need to interact and cooperate with others helps to promote the pupils' mental health and character development;

f) It helps the pupils to acquire many manual and study skills.

(iv) Teacher's Role

However, the success of the topics method depends above everything else on the teacher's realization that it is essentially a pupil-centred method, and that his (the teacher's) problem is not so much in giving his pupils ample leadership and guidance but in doing so as indirectly and unobstrusively as possible. The teacher must prepare the whole plan of the topic beforehand but he must neither impose it or give it away to his pupils : it is only to help him supervise their discussion and manoeuvre them into making a similar plan of their own..

(v) Conclusion

The treatment of the topic, which may take an hour or so daily for several weeks, culminates in an "exhibition" organized by the pupils. Parents and other community members are invited to the school to see the outcome, and the pupils will give them welcome and proudly show them round.

(vi) Suggested Topics Related to Health

a) The Food We Eat

b) The Water We Drink

c) Accidents

d) Can We Avoid Illness

e) Prevention is Better than Care

f) The Hazards in our Environment

(vii) Example

The following pages show the plan for a topic with the title of "A Feast for my Friend" in Sudanese schools. As the plan was originally prepared many years ago some of the details have been up-dated.

TOPIC: A FEAST FOR MY FRIEND

Group Assignment	Pictures	Maps	Models and Specimens	Facts
'Kisra' (native bread)	1. A man cultivating millet. 2. A man weeding cultivation. 3. People reeping millet. 4. A grain mill.	1. Rain distribution in Sudan. 2. Millet distribution in Sudan. 3. Areas which supply our village with millet.	1. A model of a mill. 2. Clay models of utensils used with 'kisra'. 3. Samples of as many millet varieties as possible.	Seasonal activities of the farmer. 1. Millet cultivation itinerary. 2. Pests and insects harmful to millet. 3. Millet varieties resistant to birds. 4. 'Suwaid' disease and how it is treated. 5. Difference between polished & unpolished millet. 6. What does a balanced diet consist of?
Milk	1. A cow grazing. 2. A man milking a cow. 3. A woman making butter.	1. Important areas for making cheese and butter in the Sudan.	1. To show how yoghurt is made. 2. To show how cheese is made.	1. How is yoghurt made? 2. How is cheese made? 3. Report on visit to a cheese factory. 4. The nutritional value of milk.

Group Assignment	Pictures	Maps	Models and Specimens	Facts
Vegetables	1. Pupils in the school farm.	1. The school farm (to scale).	1. Samples of vegetables.	1. Optimum season for planting different vegetables.
	2. Local vegetable market.	2. Areas which supply our village with vegetables.	2. Samples of vegetable seeds.	2. Time required by various vegetables to ripen.
	3. A poster to show that vegetables are useful to eat.		3. Insects that are harmful to vegetables.	3. The nutritional value of vegetables.
				4. What happens to people who do not eat vegetables.
Meat	1. Vet. examining livestock before slaughter.	1. Cattle distribution in the Sudan.	1. Models of animals that are slaughtered.	1. The nutritional value of meat.
	2. The meat market.	2. Cattle distribution in the world.	2. Covers that can be used to protect meat from flies.	2. Which kind of meat is best?
	3. Poster to show that flies are harmful.		3. Scales used in butcher shop.	3. What does a balanced diet consist of?
				4. Experiment to show how meat goes bad.

Group Assignment	Pictures	Maps	Models and Specimens	Facts
Bread	1. Tractor ploughing farm. 2. People preparing land for cultivation. 3. Oxen threshing wheat.	1. Wheat areas in the Sudan. 2. Wheat areas in the world.	1. Samples of wheat seeds. 2. Samples of wheat products. 3. Grow wheat in tins.	1. Optimum growing season for wheat, and time it takes to ripen. 2. Nutritional value of wheat. 3. Way to ferment wheat flour. 4. Report on a visit to a bakery.
Tea	1, Tea tree. 2. Tea farm. 3. Women and girls picking tea leaves.	1. Tea-growing areas in the world. 2. Routes for importing tea into the Sudan.	1. Samples of different brands of tea. 2. Samples of other drinks like tea.	1. Optimum conditions for growing tea. 2. How planted and when picked. 3. Do different brands come from different kinds of trees? 4. The benefit of drinking tea.

5.3 Exercises

Exercises support teaching and facilitate learning in may ways. They get pupils to apply what they are being taught, and assure them - as well as their teacher - that they got the right messages. They largely serve the purpose of tests without inflicting the tension associated with them. Doing exercises correctly gives the pupil satisfaction and confidence, and makes him look forward to what is yet to come.

Exercises (theoretical or practical, oral or written, in notebooks or on the chalkboard) should be short and simple, and are best given at convenient phases as well at the conclusion of each teaching unit. Their results reveal the gaps and loopholes left by the teacher which he must hasten to fill in before proceeding further with his teaching.

Most exercises can be done during lessons (to which they add an element of variation), but exercises which require longer time to do (because they are numerous or otherwise time-consuming) may be given as homework.

Different school subjects vary in the extent to which they give opportunities for exercises. For instance, mathematics gives so many opportunities- in fact one cannot think it is at all possible to teach it without exercises - whereas the teaching of history seldom calls for any. Whenever the object of exercising is merely to master the application of certain rules as in mathematics, language, handwriting or drawing the teacher is strongly urged to use for substance in the exercise some health material or message.

5.4 Demonstration

Practical work in the form of demonstrations, experiments etc., has a special appeal to school-children especially when they take an active part in it. At this age they naturally prefer physical to mental activity. Demonstrations are more convincing than verbal descriptions, better at clearing misunderstanding, and leave a more lasting impression on memory. When properly performed, demonstrations can provide pupils with excellent training on orderly, scientific thinking and procedure.

Some teachers tend to avoid using demonstrations on account of the effort and time required for their preparation and execution, whereas in fact the benefits and satisfaction of a carefully performed demonstration are far greater than can be achieved by mere description.

Demonstrations and experiments are best performed under natural conditions : simulations and artifical settings should be avoided. They are also best carried out in a way that facilitates participation, or at least, observation by every pupil in the class. For this purpose it may sometimes be necessary to divide the class into groups. Safety requirements must, however, be carefully observed and neither pupils nor teacher should be exposed to injury or the dangers of fire or contamination. Demonstrating is a teacher-skill, and like all skills it needs practice.

When conducting a demonstration the teacher must also :

- Make sure that all the materials and equipment he needs is prepared before the demonstration;
- Explain what he is going to do;
- Do the demonstration step by step while explaining each step;
- In the end, discuss the demonstration with the pupils to make sure that everybody understood.

A demonstration must be easily seen by everybody.

5.5 The "Lecture" Method

Teachers must remember that the "lecture" method used with adults is quite inappropriate with primary school children. Even with adults its use is prompted by convenience (whose ?) rather than by effectuality. The younger the pupil the more difficult it is for him to give his full attention to what is being merely spoken to him. It has been estimated that the average primary school pupil can continue to listen attentively to his teacher for no more than two or three minutes at a time, although he can manage to APPEAR attentive much longer than that. In order to maintain the pupils' attention, the teacher's talk must be interspersed at close intervals with items that can restrain children from their natural straying off the dreary position of just listening to somebody talking. Alternate use of short questions, quick exercises (oral or written), humour, display or flashing of pictures, slides, specimens or models can do the trick. Sometimes it may be helpful to have the children do a physical exercise - without actually leaving the classroom - or to take them out to the school yard or to the shade of a tree. Only, when they are taken outside the classroom they would be exposed to more distracting elements than just their child throughts and day-dreams.

To avoid "lecturing" altogether is impossible, but the teacher must be aware of its problems and do the best he can to overcome them :

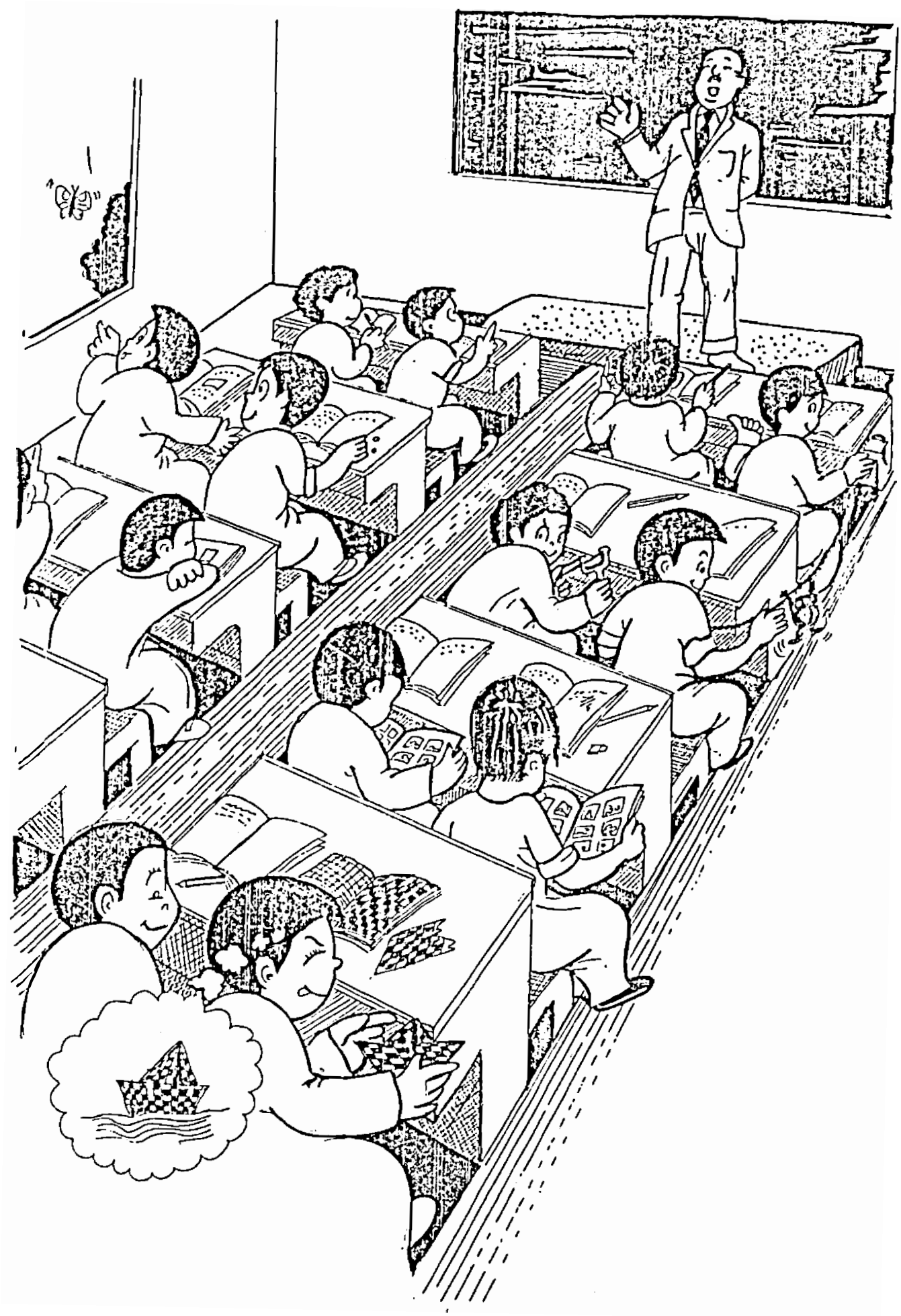
(i) Get the pupils'attention by flashing an unusual sample or picture or by relating a relevant incident or story;

(ii) Give them some exercises during and at the end of your "lecture";

(iii) Make sure that you speak AUDIBLY and CLEARLY, using simple words and addressing equally the children at back and the front of the classroom;

(iv) Let your voice suggest your enthusiasm and interest;

(v) Try to stick to one place and avoid such gestures as might distract your audience.



Lecturing to primary school children ...

Group discussions ...

5.6 Group Discussion

Discussion groups can lead to several educational benefits, apart from facilitating variation in methods of teaching. A class can be broken into small groups each to discuss part, or the whole of a topic. The subject can be planning an excursion, the outcome of a visit, participating in a project, studying a particular phenomena (e.g spread of an epidemic in the area, or rise of incidence of road accidents), holiday activities, etc. When they talk about these topics, whether they are future plans or current problems, they become more involved and treat them more seriously and with a greater sense of responsibility. They no longer feel that they are being dictated what to think or do. As initiators or originators of ideas and action they are motivated to start by studying and understanding the topic as best as they can. As they deal with the subject of discussion, and with one another, they learn to become more orderly and disciplined and they become adept in team work and social behaviour. Needless to say, dividing into groups allows better opportunities for individual pupils to participate.

Braking topics into smaller areas makes it easier for school children to discuss it, make appropriate records and to reach conclusions.

The discussion groups may meet inside the classroom or somewhere outside.

As in the topics method, the teacher should remain as unobtrusive as possible - guiding from a distance, but at the same time looking out for instances of misconception or misunderstanding which such discussions often help to reveal.

5.7 Child-to-child Programme

This Programme has been developed in the late seventies by Professor David Morley and the Institute of Child Health's Tropical Child Health Unit in London. Since its start many people from all over the world have become involved in the working of the Programme and it has been adopted in many developing countries. It aims at teaching and encouraging children of school age to concern themselves with the health, welfare and general development of younger children in their community. It is activity-oriented between old, usually schoolage children and the young children in their extended family.

According to its originators Child-to-child "is not a clearly defined programme, but rather a basket of ideas aiming at generating interest in each community." Similarly it cannot be described as a teaching method, but rather a combination of methods (work sheets, story books, games, etc.) which can be employed in out-of-school as well as in-school or classroom situations, and they can thus enrich the school teacher's resources, especially when extending his activities beyond the school limits.

Some examples of the Child-to-child approach are given in the Teacher's Resource Book in connection with the following topics :

Accidents (para 6.1)
Toys and Games (para. 1.2 B)
Playing with Younger Children (1.2 A)
Looking after Eyes (3.1)
Early signs of Illness (para 11.4)

CHILD-to-child programme

c/o Institute of Child Health
30 Guilford Street
London WC1N 1EH

5.8 Story-telling

Children are fond of stories. The teacher can tell them stories that help them to think about health problems and to look for solutions. This is best done in small groups, with pupils taking part or discussing the story afterwards. They can appear in readers where they can be coupled with the teaching of language. Flashcards or drawings can help to illustrate the story and encourage discussion. Open-ended stories that everyone helps to tell can be used. However, the entertaining aspects of story-telling should not be allowed to over-run the health "morals" to be derived from the story

A good example of a story for school children is given in the Teachers' Resource Book (11.8 C). This or similar stories should be adapted to fit the situation and language of children in the area.

Telling a story..

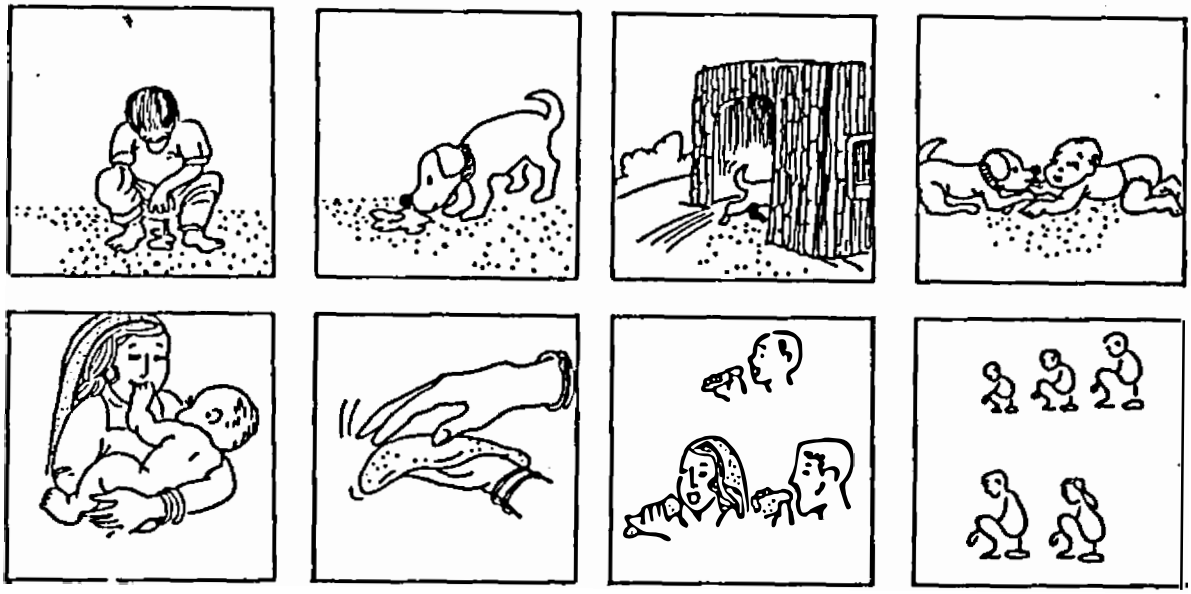
5.9 Stories told with pictures

(i) Using pictures with story-telling helps in several ways :

- Pictures let people "see" what is happening in the story.
- A series of pictures can serve as a guide for the story teller.
- Pictures can be used to help a group tell a story from their own experience.
- A teacher can use flash cards or flip charts in discussing health problems with groups of pupils, letting the group try to explain what is happening in the pictures. This way pupils discover the health message themselves and tell it to the teacher (rather than the teacher telling them).

This set of flash cards is based on pictures from page 132 of Where There is No Doctor.

(13)



(ii) In many countries, people read comic books more than other written materials. As a result, many comic books and photo-novels* have been produced on a variety of health topics. A few of them are excellent, but many are a boring mixture of preaching and brainwashing, masked by a silly story.

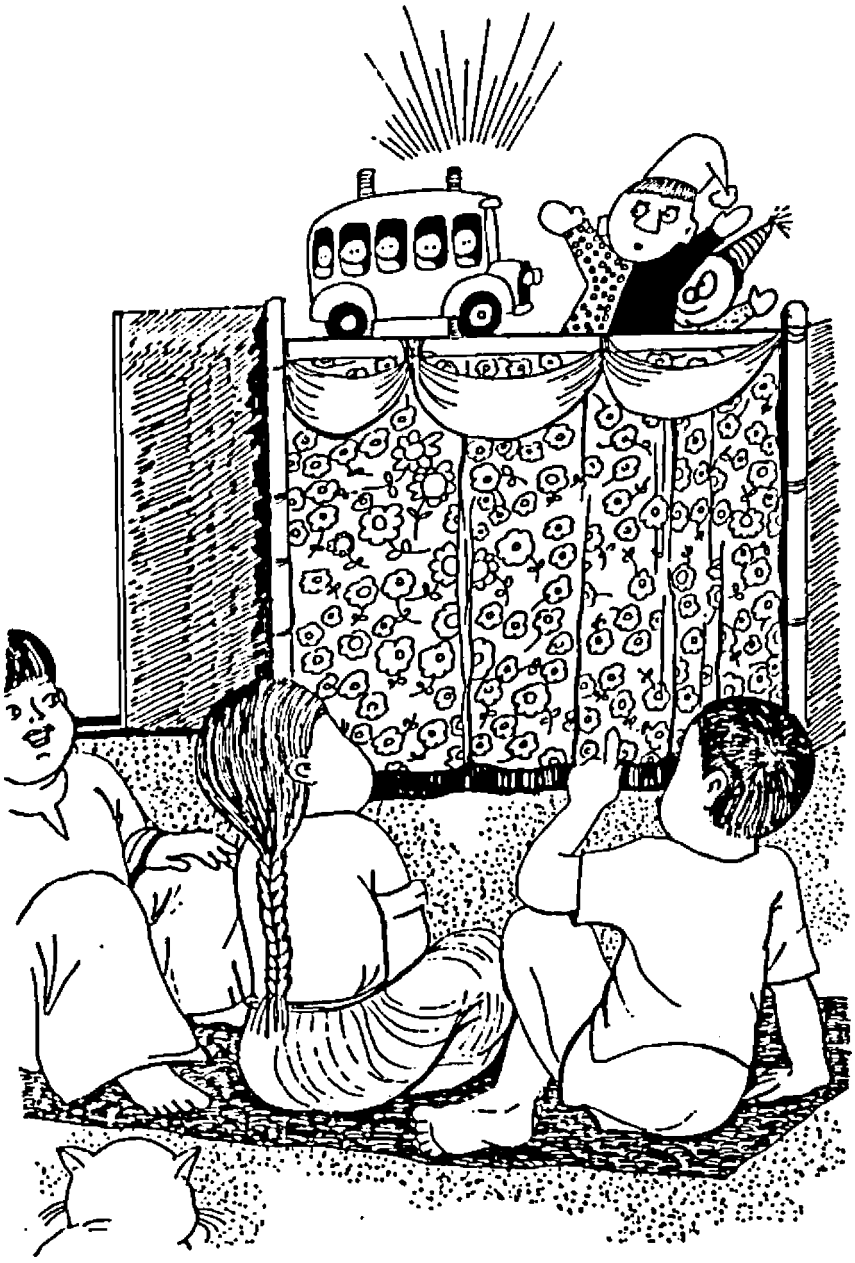
Instead of using prepared materials, teachers can make their own comic strips on health or organize school children to make them. They can make up stories and draw pictures to go with them, or copy pictures from other comic books. If someone has a camera, the group may even be able to make photonovels using local peoples as "stars".

Teaching idea :
Try showing this comic strip to a group of mothers or children. Discuss with them what the family in the story could do to stop the problem from spreading. Then have the group make their own picture story about a common problem in this area.

This comic strip, or "picture story", is from the Voluntary Health Association of India edition of Where There is No Doctor.

Note : Pupils will find stories more real and more interesting if the characters have names (instead of just being called "this boy" and the "mother"). Try to make the people in the story seem as lifelike as possible.

* Photonovels or fotonovelas are comic books that use photos instead of drawings.



Puppet Show ...

5.10 Puppet Shows :

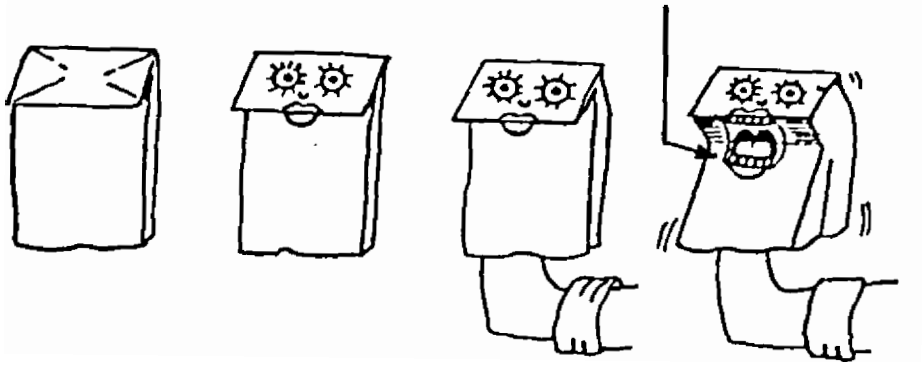
Puppet shows can combine entertainment with learning about health. They are often more appealing than plays, especially to younger children, and the children themselves can help the teacher with their ideas and handiwork in making puppet shows. To both of them it opens an infinite field for ingenuity and imaginativeness. The idea is to make puppet characters as expressive and lifelike as possible, but not to the extent of losing the essential touch of caricature and fun.

Here are some useful suggestions about puppet shows, taken from "Helping Health Workers Learn" :

(i) Puppets that open their mouths :

These work especially well for health skits about the mouth, throat, or teeth.

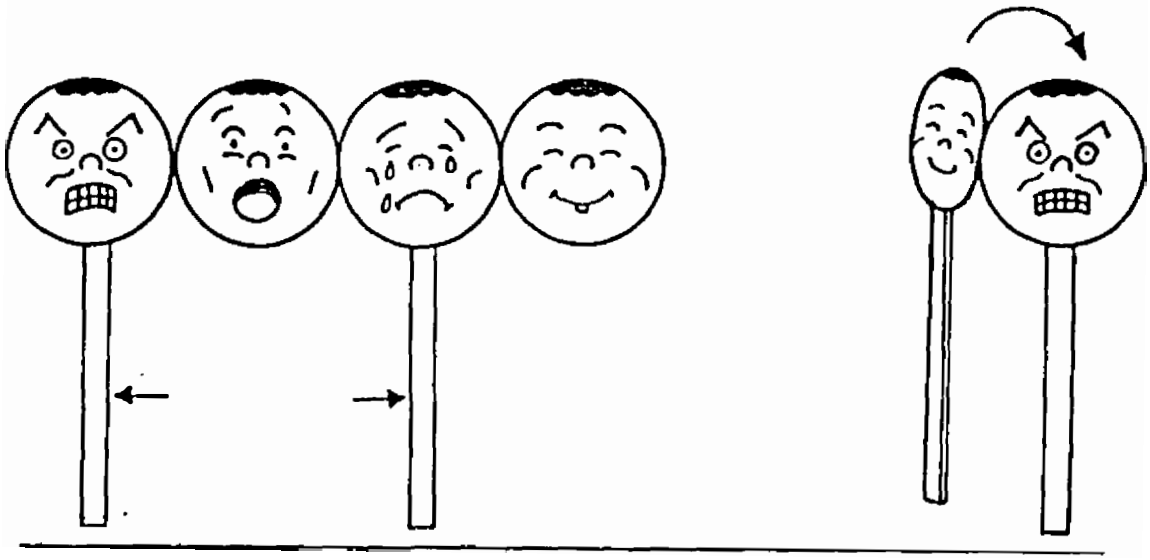
They are easy to make from a paper bag with the botom folded over. To make a bigger puppet attach a cardboard face to the bag.



Open and close your hand to make it eat or speak.

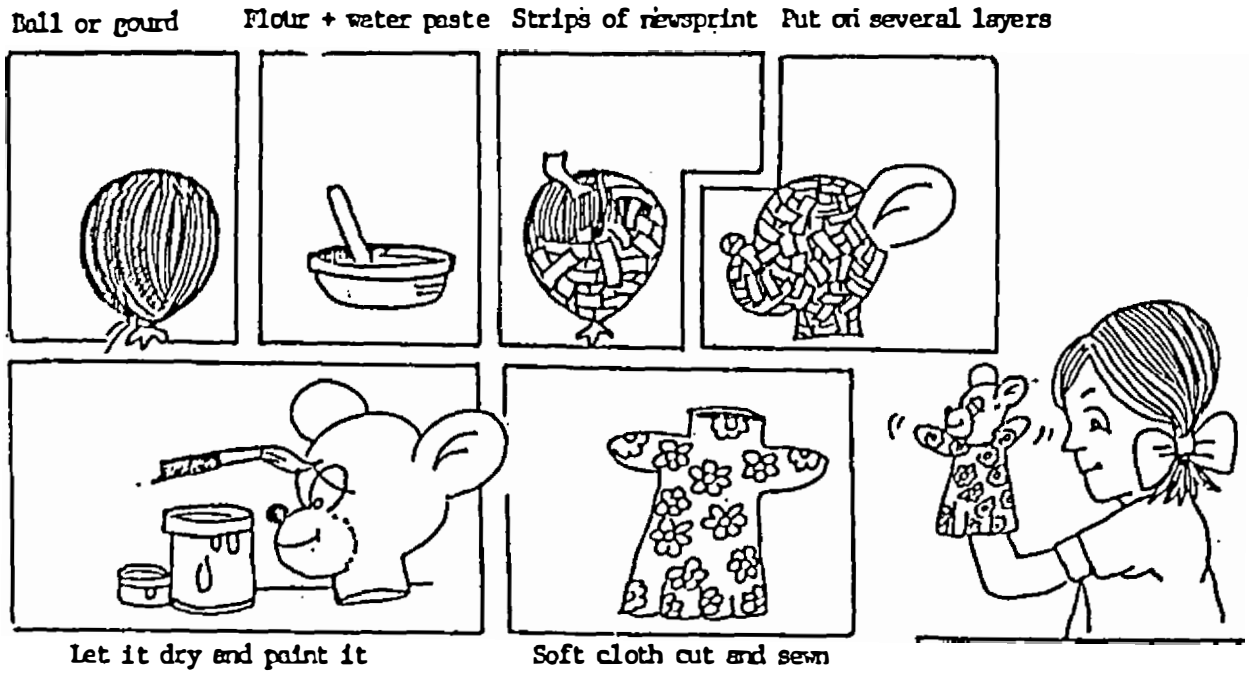
(ii) Puppets that change faces :

The puppets below have 4 different expressions - angry, frightened, sad and happy. Glue two pairs of faces back-to-back and attach them to two sticks.



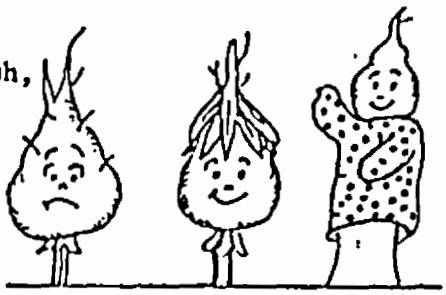
The expression can be changed by turning the sticks like pages of a book.

(iii) Making hand puppets out of papier mache (one of many ways):



Puppets can be made funnier or more interesting by gluing on 'hair' made of feathers or unraveled rope.

Vegetable puppets : Carve faces on squash, turnips, potatoes, etc.



(iv) <u>Guidelines for children's puppet shows :</u>

- Keep your puppet facing the audience (especially flat puppets).
- Stay hidden behind the curtain.
- Move and nod your puppet when it speaks
- Speak loudly, so everyone can hear.
- Use your own words instead of memorizing.
- Practice until everyone knows what to say and when.

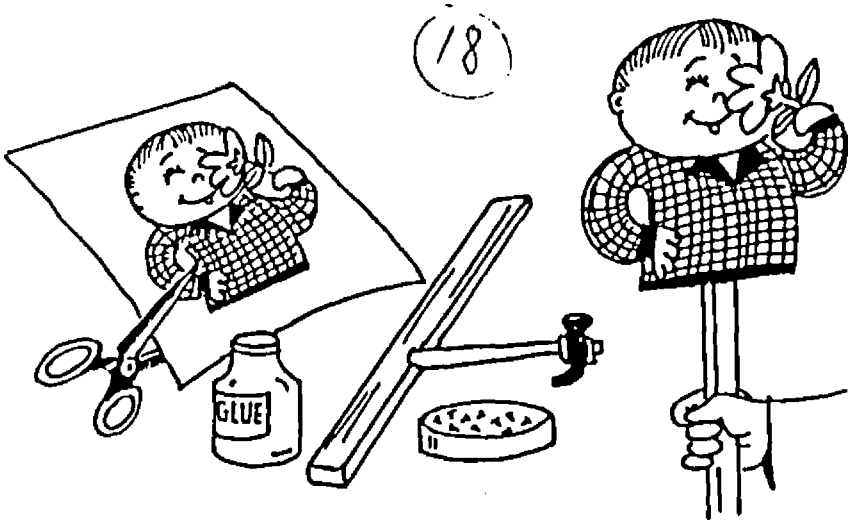
(v) A Puppet Show About "Special Drink" (oral rehydration)

Although the story of Hamid and Zahra (11.8.C) was written in Indonesia, it has been used with school children in Mexico and with health workers in Central America and Africa. Everyone enjoys the story and learns a lot from it. It shows how a school child - through love, concern, and good will - overcomes resistance at home in order to put into practice a "new way" learned in school.

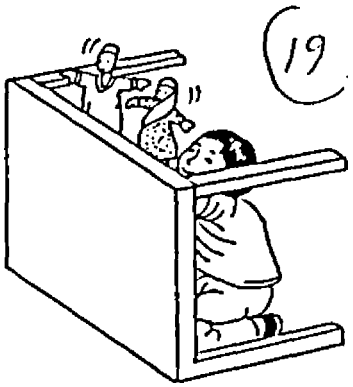
The school children in Ajoya, Mexico read the same story after doing the Child-to-child activity on diarrhea. They thought the story was so important that everyone in the village should hear it. So with the help of a village health worker, they decided to put on a puppet show and invite the whole village.

They changed the names of the boy and the girl to "Pepito" and "Juanita". They even changed the story somewhat, to seem more like things in their village..

They made simple stick puppets like this one.



Draw a picture on cardboard or posterboard. Cut it out and glue or nail it to a stick.



A simple "theatre" for a puppet show.

If the puppet needs 2 expressions, put 2 cardboard drawings back to back. During the show, turn the puppet to show the face you want.

5.11 Role Play :

The basic idea of role play is that a few pupils are asked to play the part of other people in a specified situation. For example, one pupil may be asked to be a village health worker, another will be a mother with a malnourished baby, a third will be the baby's grandmother. The situation could be the health worker visiting the family to explain how the mother could better feed her baby.

This basic situation can be made a little bit more elaborate by telling each of the role players a little bit more about their character or opinions. For example, the grandmother might be told that she is very conservative, has brought up eight children and thinks she knows what food is good for them. The mother might be told that she has had some education and is open to ideas, but is frightened of the grandmother. The health worker might be told that she is rather bossy and unsympathetic - all she knows is the nutritional value of foods, and cannot understand that other people may have different ideas or customs.

The situation can also be made more explicit. For example, the health worker may only have ten minutes for this visit, the mother's husband may be a farmer who is in debt and has to sell all he grows to pay off the debt, etc. etc.

In general the teacher should define the people and the situation in about as much detail as is given above. More detail will make it very difficult for the pupils playing the roles to follow all the instructions. Fewer details may leave the pupils too uncertain about what they should do.

The teacher should explain each of the roles and desctibe the situation to the class. Then ask the role players to start.

In this case the health worker might greet the mother and grandmother, explain what the visit is about and start to explain about nutrition. The grandmother might interrupt and disagree, or the mother might ask for help about how the different foods can be obtained. The group will talk and behave as they imagine the real people would.

The role play may come to a natural end (e.g. the health worker leaves the house) or the teacher may decide that it has gone on long enough for the educational pupose and stop the play.

A variation of the above pattern is to define the roles one day and then ask the students to perform the role play on a later day. This allows time for preparation, but it does need more careful planning by the teacher.

Role Play .....

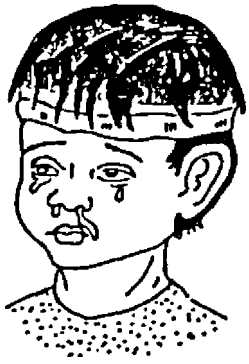
This then is the role play itself. If the role play stops here it provides variety and interest in a teaching situtation. But it is hardly a learning experience. To transform the role play from entertainment to purposeful learning, the teacher must prepare the audience and follow role play with a structured discussion.

5.12 Drama

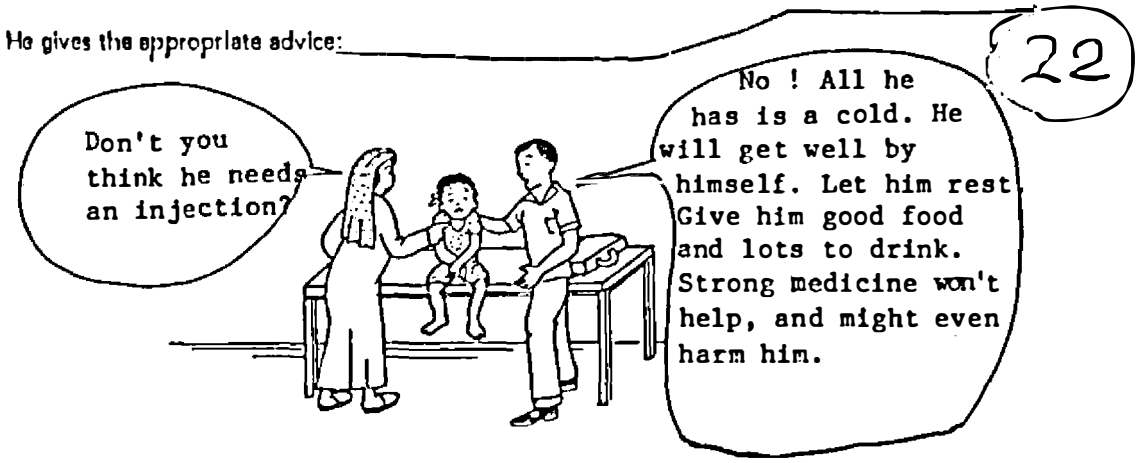
The educational value of theatrical performance is well-known. When school children and their parents are involved both actors and audience share the enjoyment, see things in a new perspective and are exposed to new ideas. Some of the best village theatre presentations have grown out of role plays and sociodramas that first took place in the classroom.

Example : A skit about sensible treatment of the common cold .

A common difficulty for health workers is trying to convince people that injections and antibiotics are not needed for the common cold. Some health workers in Mexico used role playing to explore this problem. They acted out such a powerful skit that they decided to develop it into a short play and present it to the whole village. in its final form it included the following scenes :



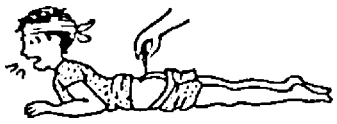
Scene 1. A mother, Marta, arrives at the health post with her small son, Ringo,who has a bad cold. She asks the health worker to give him an injection. The health worker examines the boy and finds only signs of a common cold.



But Marta insists that her son needs an injection of Respicil. (This is an antibiotic containing penicillin and streptomycin, commonly used in Mexico for cold, by doctors and by people in general.) The health worker explains as best he can why antibiotics are of no help for colds. and may be harmful, but Marta looks doubtful. She thanks the health worker and leaves.

Scene 2. Another mother, Gloria, arrives with her daughter, Ana, who has a bad cold, too. Gloria also wants her child to be injected. But she listens to the health worker's advice and decides to try treating Ana with fruit juice, aspirin, and good food. For the cough, she agrees to give her daughter lots of water, and to have her breathe hot water vapors. The health worker shows Gloria how.

Scene 3. Marta, on leaving the health post, goes to the home of an inyectadora (a woman who injects). Much to Ringo's protests, the woman injects him. He screams in pain. Then, limping and crying, Ringo is led away by his mother.



Scene 4. (Several days later). Marta brings Ringo to the health worker. The boy limps in with the aid of a stick. He has a high fever, and an abscess on his backside where he was injected. The health worker recommends hot soaks and other appropriate treatment. He reminds Marta not to inject any of her children the next time they have a cold.

Scene 5. On their way home, Marta and Ringo meet Gloria and Ana on the street. Gloria asks Marta why her boy is limping. Marta explains, but adds, "At least the injection cured him of his cold!"

"Maybe not," says Gloria. "My Ana had a bad cold at the same time as your son. But I followed the health worker's advice. I gave her lots of fruit juices and aspirin and good food. She got over her cold in no time!"

"I'm sure glad I didn't get an injection and end up like you," says Ana to Ringo.

"Next time my boy has a cold, I won't have him injected either," says Marta. "I'll just give him aspirin!"

"Don't forget fruit juice, lots of water, and good food," says Ana. "They help fight off the cold. Next time Ringo will get well again as fast as I did!"

5.13 Songs

Children are fond of rhymes and songs. In many communities adults also like singing. Songs can be used to help emphasize and spread health messages, but they first need to be simple and cleverly made for people to pick them up and continue to sing them.

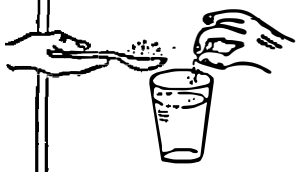
When songs are mixed with drama both can be more entertaining.

Here is a song written by a group of health workers during a training course:

"The D and V Blues

(Diarrhea and Vomiting)

Babies who have D and V
Shrivel up and fail to pee.
To regain their health we oughta
fill them up with LOTS OF WATER.

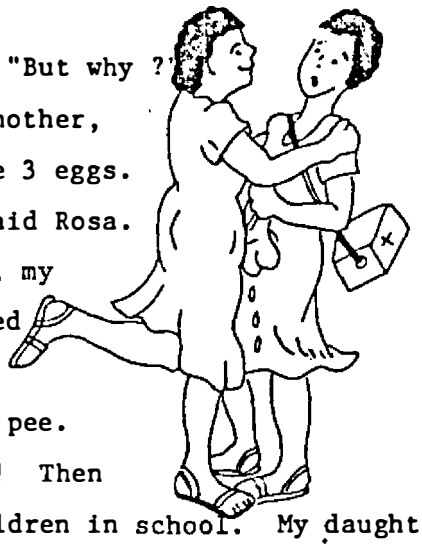


Making Special Drink's a cinch...
Sugar : 1 Teaspoon. Salt : 1 Pinch.
Water : 1 Glass ... or BIG FAT CUP.
Toss them in and stir it up !

But carful ! You would be at fault
If you put in too much salt !
So mix it. TASTE IT. GIVE 3 CHEERS
If it's no saltier than tears !

Each time your baby dribbles shit
Give one glassful.. bit by bit.
And if the darling's on the breast
Give breast milk too.. for BREAST IS BEST !

Several months later, after the course was over and the students were back in their villages, one of the health workers, named Rosa, was met in the street by a mother. The mother gave her 7 eggs wrapped in a leaf.



"Thank you," said Rosa with suprise. "But why ?"

"You saved my baby's life!" said the mother, hugging the health worker so hard she broke 3 eggs.

"But I didn't even see your baby !" said Rosa.

"I know", said the mother. "You see, my baby had diarrhea, but the river was flooded so I couldn't bring him to the health post. He was all shrivelled up and coudn't pee. He was dying and I didn't know what to do ! Then I remembered a song you had taught the children in school. My daughter's always singing it. So I made up the Special Drink, tasted it, and gave it to my baby, just like the song says. And he got well !".

5.14 Games

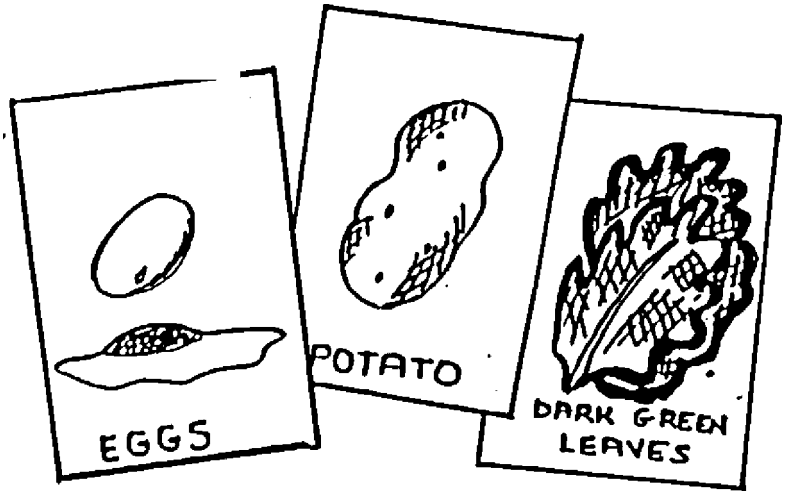
Games can provide children with opportunities to learn and to exercise their mental and physical faculties in an atmosphere of fun and recreation. The disadvantages of games are that they can become time-consuming and are likely to become boring with repetition. It is up to the teacher to decide on both points, and to adapt existing games or device new ones for the promotion of health teaching. The pupils can help prepare the "materials" required for the games and he can explain the rules to them. Otherwise he does not need to be involved; and he might solve the problem of time by encouraging the pupils to play in their free time rather than during class hours. By doing so, the benefits may include the family members and friends who do not go to school.

The Teachers' Resource Book contains several examples of the use of games, and here is just one example :

Card Games

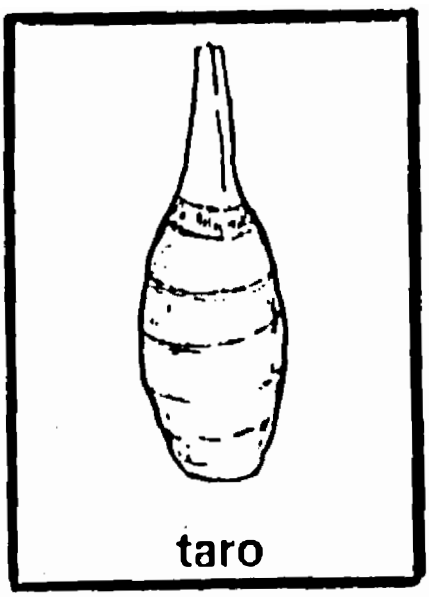
(i) How to make food group playing cards

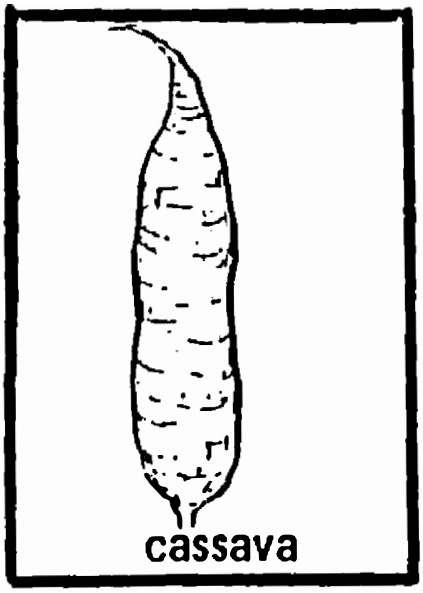
1. Make a list of commonly-eaten foods.
2. Group these foods into the food groups recognized in your area. Remember that some foods may belong in more than one group. if this is the case, make more than one card for that food.
3. Using a playing card-sized piece of cardboard or strong paper, make a card for each food on the list. Draw the food as realistically as possible, and in clear letters, write the name of the food below the drawing.
4. If coloured pens or paints are available, colour the drawings.

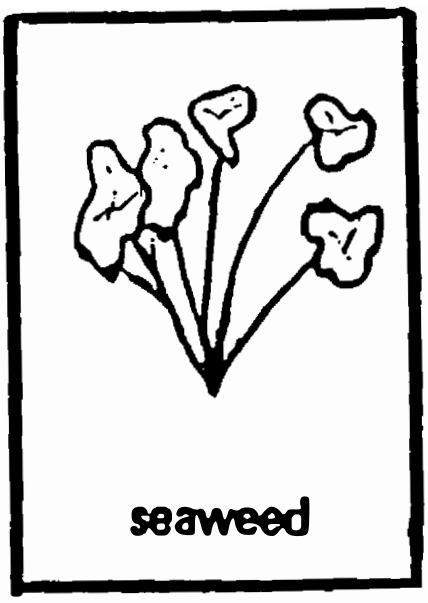


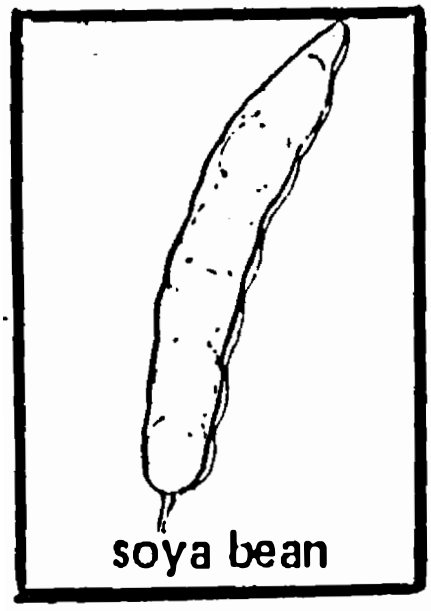
5. These cards can be used for card games such as "Food Groups"; "Memory For Food Groups", "Meal Memory"; "Test for Food Groups"; or with Food Holders to make a balanced, nutritious meal.

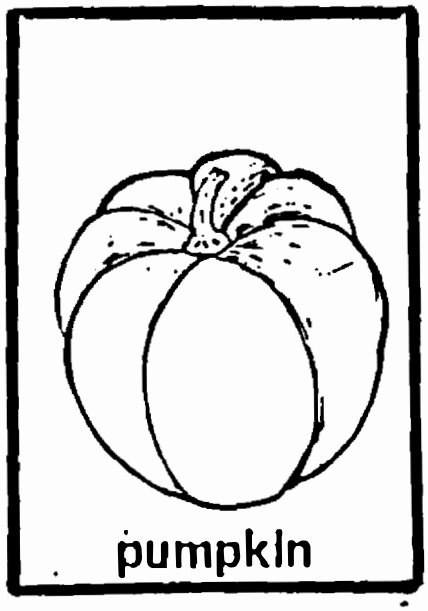
SOME FOOD PLAYING CARDS...

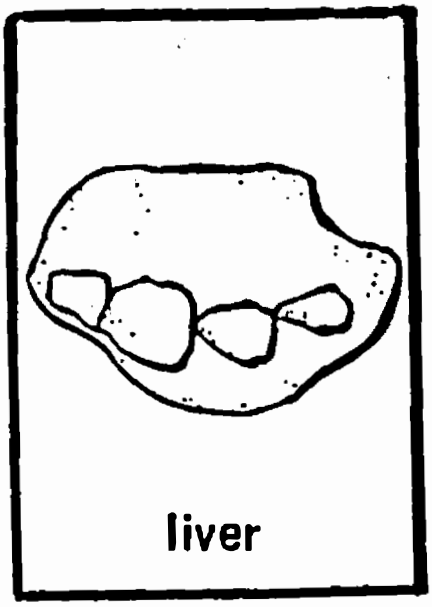

taro

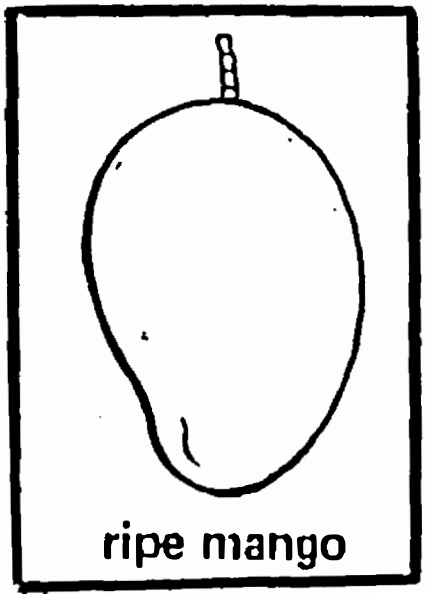

cassava

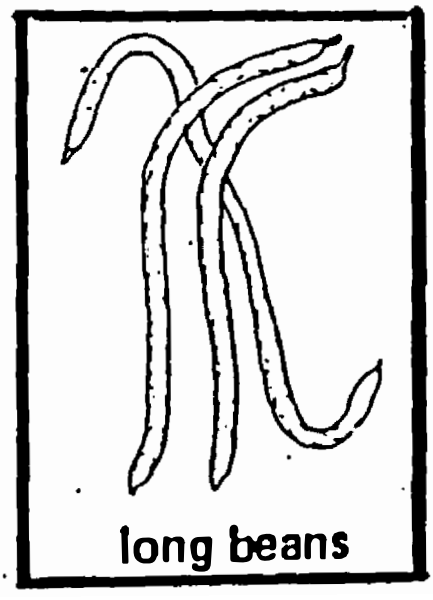

seaweed


soya bean

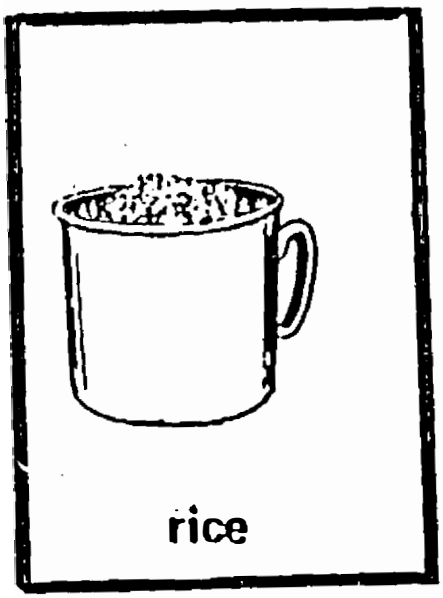

pumpkin


liver

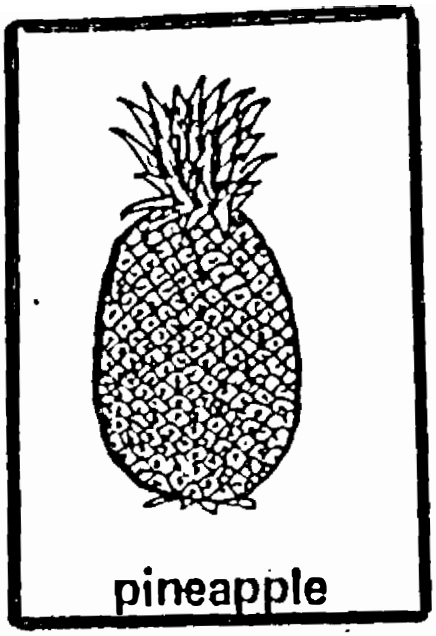

ripe mango


long beans

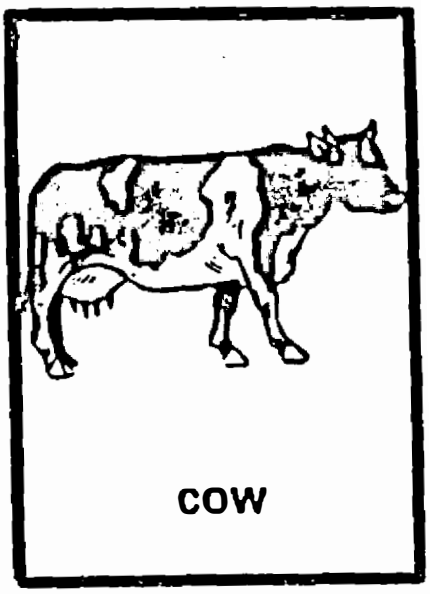

pumpkin tips



rice

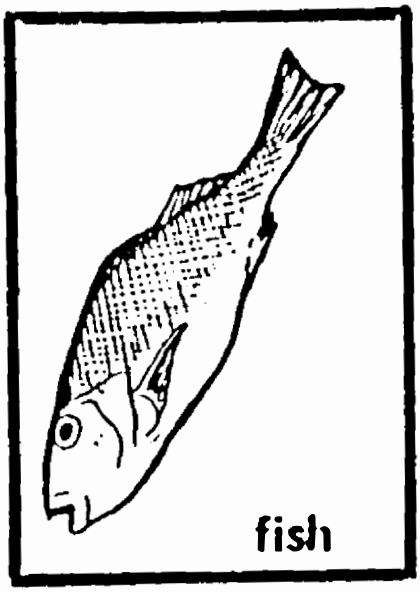


pineapple

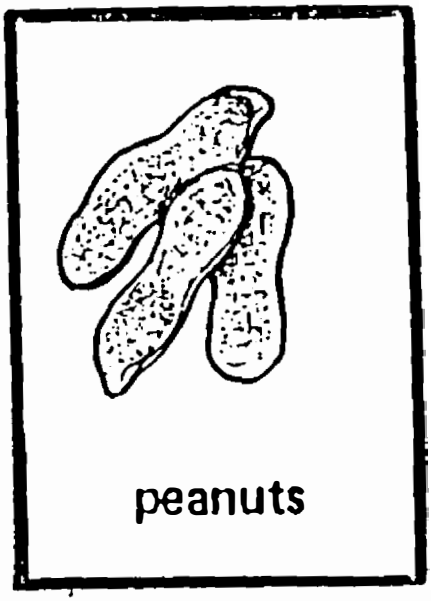


cow

sweet potato leaves

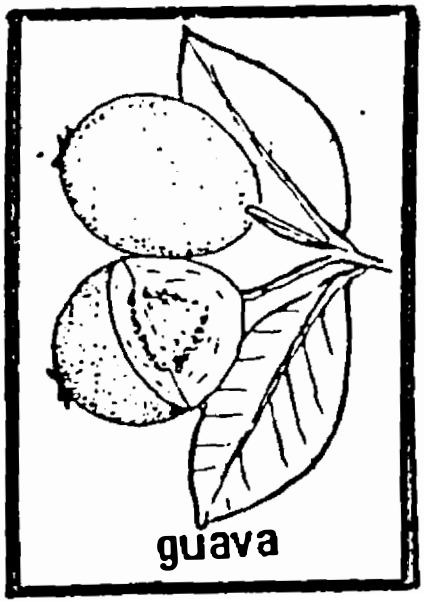


fish



peanuts

goat



guava

winged bean

(ii) How to play food card games

Food groups

One player holds the entire deck. He turns one card at a time for the other players to see. Each player must quickly name the correct food group. The first player who says the correct food groups wins the card. When two or more players say the correct food group at the same time, the card goes back into the pile of cards. The player who has the most cards at the end of the game is the winner.

Memory for food groups

This game should be played at the end of several weeks study on food groups. All cards are turned face down. Five players pick up one card each. One player does not play ... he or she is the "judge". The judge sees that each answer is correct using the list of foods and their groups for reference if needed.

Each player takes a turn. The player reads the name of the food on the card he has drawn and tells the food group to which it belongs. When the answer is correct the player gets to keep the card. When the player is wrong, the card goes face down on the table. A time limit is set such as five seconds to name the food group for the card. The players take turns picking up and naming the food groups until there are no more cards. The player with the most cards wins the game.

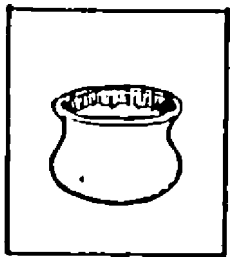
Meal memory

Six players are dealt 4 cards each. The remainder of the cards are spread out face down in the middle of the table. Players look at their cards and see if they have a balanced meal. Players discard, face down, any card they do not want when their turn comes. The next player has a turn. The goal of each player is to make as many balanced meals as possible. Players must try to remember where a card they want is placed, so they can use it when their turn comes. A player may pick up or place

face down only ONE card each turn. The player with the most balanced meals at the end of the game is the winner. (For this game, a balanced meal must have 1 protein or body-building food, 1 energy food and 1 protection food.).

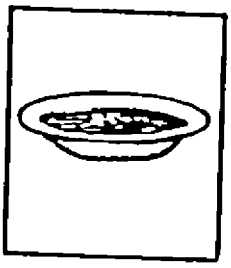
Test for food groups

Give each player in one groupa set of food cards. Have them work at their own desk so the card sets will not get mixed up. Ask the players to put the energy foods in one line, protection foods in a second line and the protein foods in the third line. Check each line to see if they are correct. Players with correct lines can help to check other players' card line-ups.



Sooji Kheer

Mushed Vegetables



Porridge

Mushed Banana

5.15 Local Visits

From time to time pupils may be taken out to visit places where they can observe for themselves some health aspects or witness practices related to health in their environment (e.g. dairy farm, vegetable market, water-works, museum, etc). They should be encouraged to ask questions, take notes and pictures, collect specimens and draw sketches. When they are back in school there would be enough material for discussion and putting together an illustrated record of their visit.

The teacher should let the children themselves undertake the planning and organization of the visit : that way they would enjoy it much more. But there are certain preparatory steps that the teacher himself must attend to, e.g. :

a. Securing the necessary permissions from the headmaster, from the place they intend to visit, and from parents (agree to let their children go);

b. Briefing the children on how to behave during the visit.

Such visits add to the reality of health educaiton, and to the childrens' interest in it.Moreover, they can learn many other things, beside health, in the course of such visits.

5.16 Outings

School picnics and excursions can provide more fun and more favourable learning situations than any of the arrangements described above, because, in addition to the atmosphere of fun they create, they provide opportunities to practice all these other arrangements : games, songs, play-acting etc. Moreover, the teacher will have an excellent opportunity to see how his pupils are applying the practices and habits he was trying to teach them. They can discuss the benefits of various physical exercises as well the nutritional values of their picnic meals.

Outings bring children closer to nature and to their environment. They also help bring out the real nature and potentialities of the children.

Apart from what is mentioned under "Local Visits", the teacher is required to observe all necessary precautions to avoid such accidents as pupils are sometimes exposed to in similar activities.

5.17 Vacation projects

In many countries of the Region people have expressed concern over the activities (or rather, the inactivity) of school children during the long summer holidays. They appear to be wasting much time, forgetting what they learned during the school term, and presenting disciplinary problems to their parents. The issue is quite complex, and an overall solution may be hard to find. But, depending on local conditions and the availability of teachers or other competent persons for supervision, pupils can be engaged in health projects during school holidays, as well as their leisure time during school term. The community, as well as the children's education can benefit from such activities. They can cultivate a vegetable garden, start a poultry or animal farm or they can launch an anti-mosquito campaign. Where a school lacks latrines they may participate in digging some.

Encouragement and patronization from community members would greatly help such projects.

5.18 Home Models

Girls are fond of making small models depicting homes, kitchen, family life, or some other fields associated with their lives and activities. Boys

sometimes share in this pass-time. The simplicity of materials used helps even more to encourage the children's ingenuity and imaginativeness.

This exercise can be used to emphasize health aspects or demonstrate features of the "healthy home".

5.19 Health Society

A health society, enroling pupils who show more enthusiasm to health affairs, can give added support to school health education, especially through looking after the school health environment and persuading other pupils to observe healthful behaviour during school hours. The society can take the lead in organizing special occasions such as the World Health Day, the School Health Day, and the Village Immunization Week. The teachers' role is to encourage and supervise the work of the society and ensure that its members are not tempted to badger their schoolmates instead rallying them to the cause of health.

5.20 Wall Newspaper

The idea of editing a school wall newspaper has a special appeal to many pupils. Apart from articles and reports on class visits and outings the newspaper may include caricatures, verses, jokes, pictures, puzzles, quizes, etc., relevant to health.

5.21 National Radio and T.V.

National radio and television services have special health programmes which may, or may not, be geared to suit school children. Sometimes the programme is dramatized and adopts a comic or entertainment approach, as in the case of the Gulf States "Salamtak" and "Iftah Ya Simsim" serials. The former is a health programme directed to adults, whereas the latter is for children's general education with occasional health messages.

Such programmes are usually well planned and produced since they use facilities seldom available in schools. Recordings of them can be used by the teacher for variation, emphasis and demonstration, as well as for encouraging pupils to follow these programmes at home.

5.22 "Visiting" Teachers

It has been previously mentioned (para 3.11) that the school may invite some resource people from the local community, such as health workers, medical professionals or even traditional healers, to give talks or demonstrations

to the pupils. Such presentations can be very interesting and stimulating especially when they are kept short and followed by a lively discussion.

However, these guests are often not familiar with appropriate ways of addressing school children, and the teacher may need to brief them tactfully beforehand, especially to be simple and non-technical in their presentation.

5.23 Choice of Method

It has previusly (para 4.5) been mentioned that for puposes of variation the teacher should employ different teaching methods and techniques, more and more of which have come to replace the obsolete rote and "lecture" mehtods. In this chapter a number of these methods and techniques have been described. They have been successfully tried in various parts of the world and in different teaching/learning settings. With creativity and resourcefulness the teacher can modify and enrich any of these methods as well as devise his own innovations. Of course, the teacher may use more than one method in pursuing the same learning objective.

For selecting a particular method the teacher may be guided by the following criteria :

- Suitability to the nature of the topic.
- Appeal to the pupils.
- Suitability to the pupils' age and grade
- Extent to which it encourages pupils' participation through activities and practical work.
- Available time.
- Available facilities.
- Consistency with teacher's aptitutde and inclination.

5.24 Warning :

In search for motivating devices a teacher may be tempted to resort to certain methods which, although at first sight may be appealing, have actually proven to do more harm than good. Thus, beside himself refraining from showing any poor health practices, he should avoid the following :

1. Setting unrealistic or impossible standards
2. Using abnormal, repulsive or fearful teaching matter
3. Teaching health as a fill-in for physical education
4. Using technical material
5. Prejudice and hearsay
6. Holding contests for the "Healthiest Child".

7. Holding competitions between pupils (e.g. height, weight, speech, essay)
8. Artifical rewards
9. Using a pupil as an example of ill health
10. Making a pupil feel conspicuous or humiliated.

6. TEACHING AIDS

6.1. Value of Teaching Aids

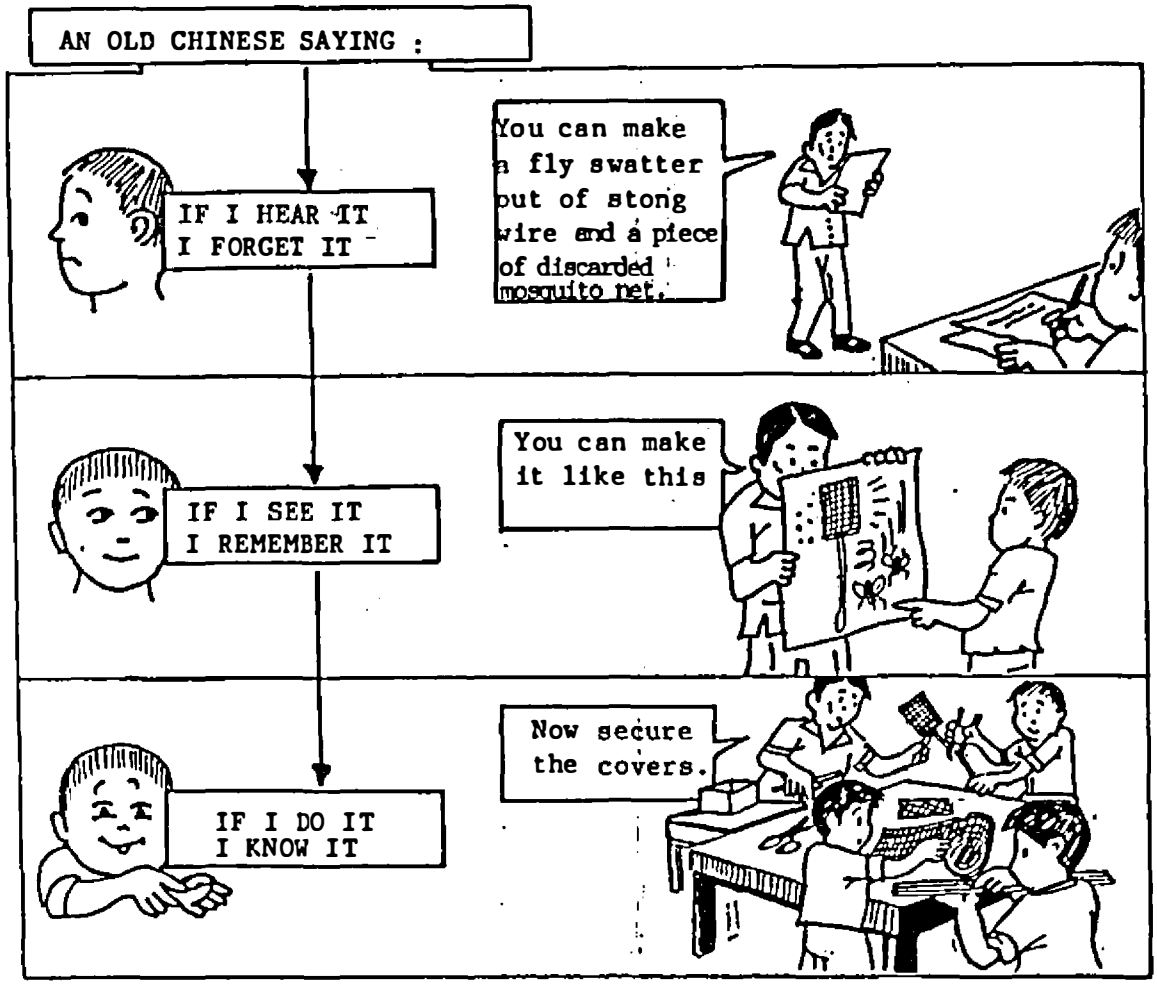
(i) There was a time when school teaching was done almost entirely through getting pupils to read their books or listen to their teachers talking. With the recognition of the effectiveness in the learning process of extensive and coordinated use of all "five senses" audio-visual aids have been developed. They are now frequently referred to as teaching aids, because very often they can also be touched, tasted and/or smelled. The more senses a teaching aid accommodates, the greater its teaching impact is likely to be.

A teaching aid can be worth a thousand words of written or spoken explanation. It can make abstractions tangible and replace explanation with concrete experience. With teaching aids pupils can understand more clearly and concisely, and can remember more easily. When they need to apply what they have learned they would do so with more confidence.

The value of teaching aids is considerably enhanced if the pupils were to share not only in their use but, whenever possible, in their preparation in the way of planning, collecting material or making the aids.

Teaching aids may eventually provide good collections for the school museum, and can be used again and again if for any reason new ones cannot be made.

MAKING AND USING TEACHING AIDS *



(ii) We all learn best when we take an active part in finding out things that are new to us !

- A class in which we take part in discussions is more interesting than a class in which we just listen to a lecture.
- A class in which we can see for ourselves what things look like and how they work, is more interesting than a class in which we only talk about things.
- A class in which we not only talk and see, but actually do and make and discover things for ourselves, is exciting ! When we learn by finding things out for ourselves, by building on experience we already have, we do not forget. What we learn through active discovery becomes a part of us.

* Werner and Bower : Helping Health Workers Learn.

6.2. Guidelines for Preparing and Using Teaching Aids

A teaching aid ..

- must be planned and prepared in advance,
- should be appropriate to the topic,
- should be simple and can be understood with the minimum of explanation,
- must be appealing, with as much fun, colour and/or sound as to leave a lasting impression,
- used to illustrate or explain no more than a few points at a time,
- should be as natural and lifelike as possible, especially when detail is important,
- is more effective when it calls for doing as well as seeing,
- when it lends itself to the use of as many of the five senses as possible,
- whenever possible be made by the teacher, with the help of pupils, using low-cost, local materials,
- should be placed where it can conveniently be seen by all,
- should be displayed only during the part of the lesson connected with it- however, it may be available for later examination by the pupils,
- if difficult to make, or if it is exceptionally well made, should be kept in the school museum (if a number of schools are situated near one another they can share a museum).

The teacher should also observe the following points:

- to face the class, not the visual aid,
- not to stand where he can prevent the pupils from seeing the aid,
- use a pointer to indicate specific details,
- avoid as much as possible using more than one aid at the same time,
- not to employ films or recordings merely for entertainment or filling up time,
- mass produced teaching aids like films, filmstrips, photographs, health comics, etc., often use a content or an approach that is not appropriate for pupils. Cultural or language differences on films or video-tapes may even interfere with pupil learning rather than assist it. In such cases only related segments may be used.

6.3. Availability of Teaching Aids

An important part of a teacher's job is to investigate the facilities available for teaching. Many facilities are under-used because teachers are not aware of their existence, or are not familiar with their use. So, it would be good for the teacher to start with listing the facilities available in his school such as posters, slides, diagrams, overhead projection transparencies, models, instruments, samples,..etc.

Then he may think of what he can add to these facilities through borrowing, making,..etc. So much can be obtained from various sources (see list in para 3.11). It is said that the variety of teaching materials is limited only by the imagination of the teacher.

6.4. Making Teaching Aids

Teachers often find it more suitable to make their own teaching aids because in that way they can be sure that the aids provide exactly the information which is appropriate to their particular classes. Many books have been written to help teachers who want to make their own aids, and some are listed among the references at the end of this Guide. The following pages will deal with some of the principles involved in the design and use of commonly used aids.

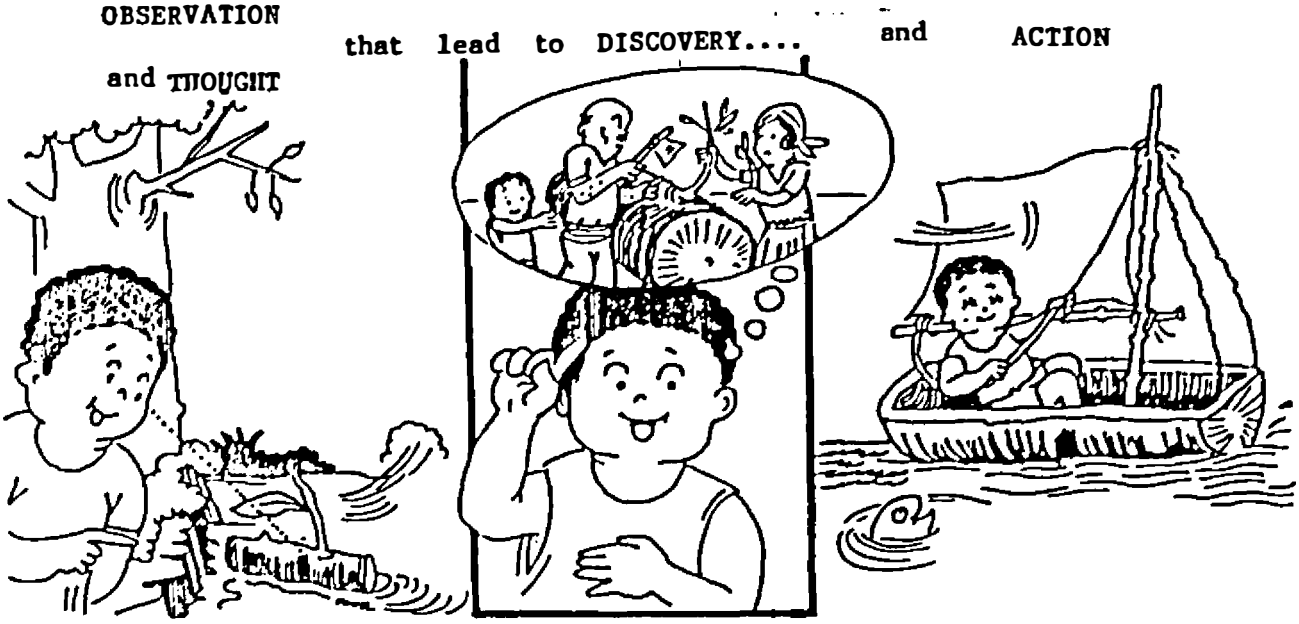
6.5. Types of Teaching Aids

The more commonly used aids include:

- drawings on chalkboards, posters, etc.,
- photographs on posters, slides, films, etc.,
- moving photographs on films or video tapes,
- models of real objects or simulations,
- real objects of events themselves.

They are listed in this particular order because going down the list they come progressively closer to using a real object or event to demonstrate the topic being taught.

As a general rule using a real object is the best teaching aid to demonstrate a certain point, but that is not always the case. Sometimes real objects or photographs of them are too complex for the pupil, or fail to bring out essential details for observation. For example, if a teacher is trying to show his pupils how a pit latrine is constructed it is much easier to start with a simple diagram showing the relationships and dimensions of the underground and over-the-surface parts of the structure.



6.6. Chalkboard

The chalkboard is the traditional and most commonly used teaching aid in schools. It is assumed that every teacher is familiar with the techniques of putting it into use. However, some of the principles and guidelines that will be mentioned in connection with other teaching aids along with the rules stated below can also help to improve the teacher's utilization of the chalkboard:

- keep the board clean and tidy; that helps to give better teaching and a better example for pupils to follow,

- the board is used mainly to reinforce teaching, by facilitating explanation and by emphasizing points. The teacher must therefore be fairly selective in the items he puts on the board: a new word or rule, a diagram or sketch-map important for illustrating the lesson, or a summary,

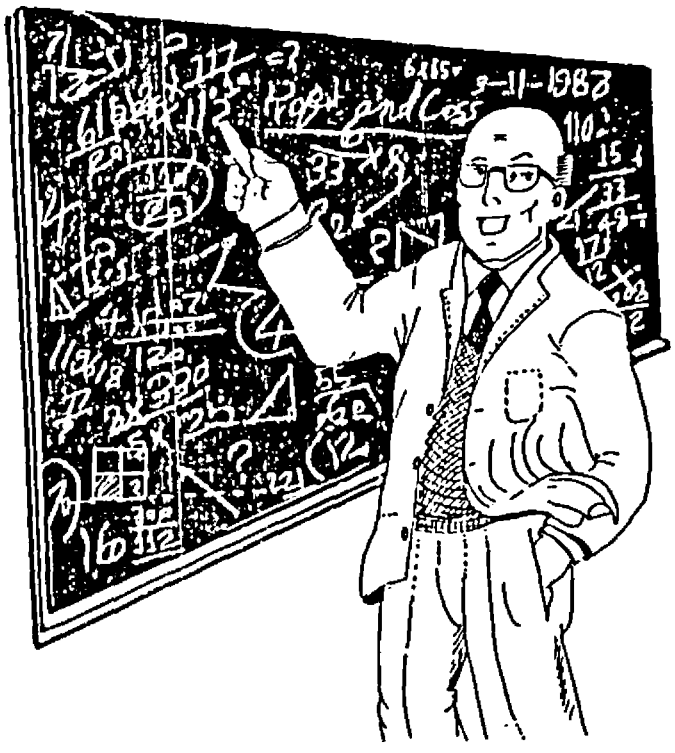
- if the writing or drawing on the board have no direct connection with what you are saying, wipe them out because they would detract from the pupils attention, and will give less room for further use of the board,

- writing on the board should be easily readable and visible from the back and from all angles of the classroom,

- diagrams should be simple; if they are too detailed or complex:
  . their drawing will occupy much time and so they will temporarily 'isolate' the teacher from pupils,
  . they will be confusing to pupils

- if the lesson requires a carefully prepared diagram, the teacher should either practise drawing it beforehand, or otherwise have it prepared separately, so that it only needs to be hung on the board during the lesson,

- never talk and write on the board at the same time, because:
  . when the teacher is facing away from the class they cannot hear what he is saying,
  . as the teacher will be speaking faster than he is writing, speech and writing do not go together and pupils will find it difficult to cope.



Confusion on the chalkboard ...

6.7 Flannel-board

A flannel-board is a display board on which pictures and other drawings or captions can easily be placed and removed. It consists of :

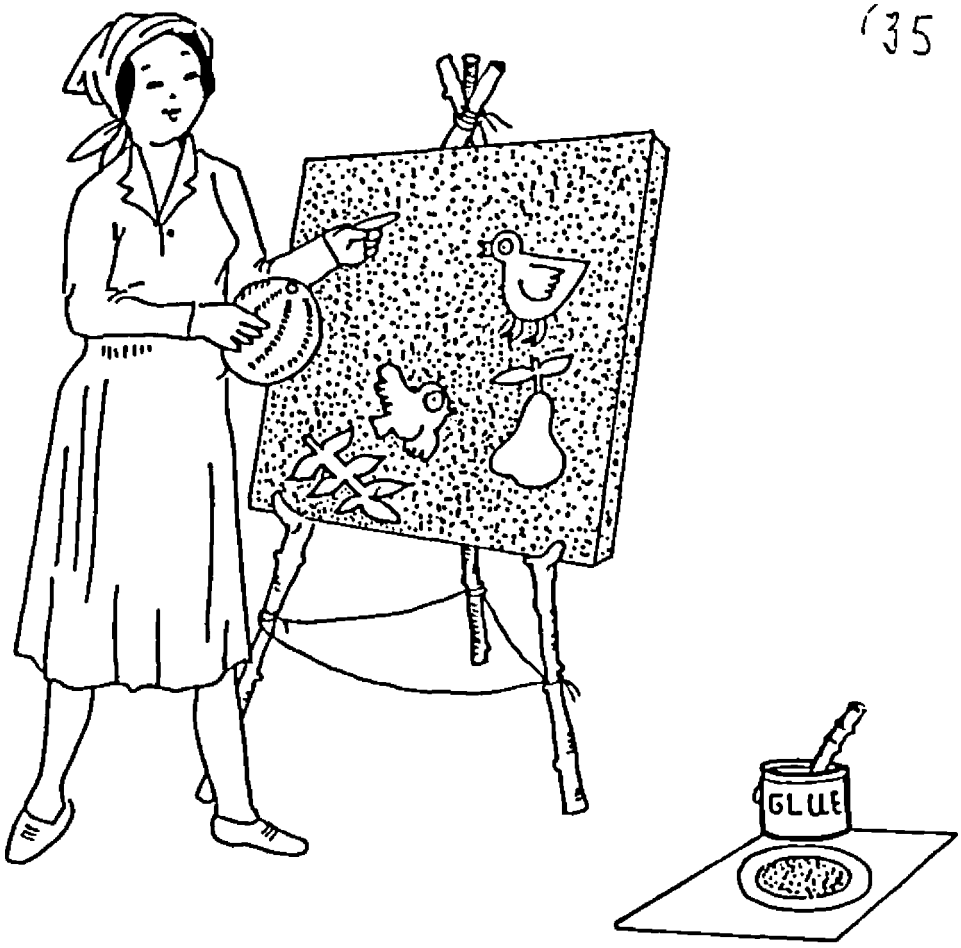
(i) a frame with a firm surface made of boards, plywood, fiberboard, masonite or strong cardboard;

(ii) a large sheet of flannel or soft cloth stretched over the frame;

(iii) some sort of stand to hold it up (even a chair will do).

Pictures for the flannel-board can be cut from magazines or posters or drawn by the teacher. Glue flannel, sandpaper or soft cloth on the backs of the pictures so they will stick to the flannel-board.

A flannel-board is a very handy teaching aid. It can be large and static, or small and mobile. It is re-useable, almost indefinitely, and the pictures and drawing can easily be kept, improved and added to.



6.8 Problems of Flannel-boards

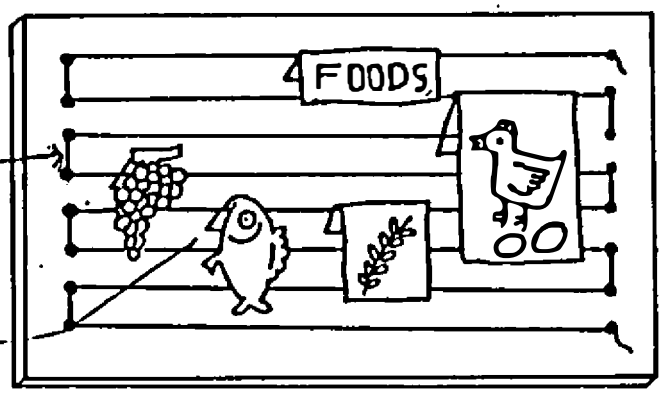
Two common problems with flannel-boards are that :

- The pieces fall off if there is the slightest breeze, and
- the materials are too expensive.

Neither problem is beyond the teachers imagination to overcome, using local resources. However, here are some suggestions.

- To prevent pictures from falling off or blowing away, a string-board can be used instead of (or combined with) a flannel-board.

Stretch string or elastic ribbons across a board or frame.
Then slip pictures on folded paper or cardboard over the strings.



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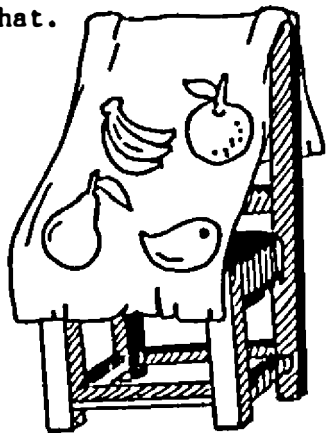
- If plywood, masonite or fiberboard is too expensive, the flannel can simply be tacked on a wall. However, pictures will stay in place if the surface is tilted backward somewhat.

- For the display board, a BLANKET, folded over the back of a chair, can be used.



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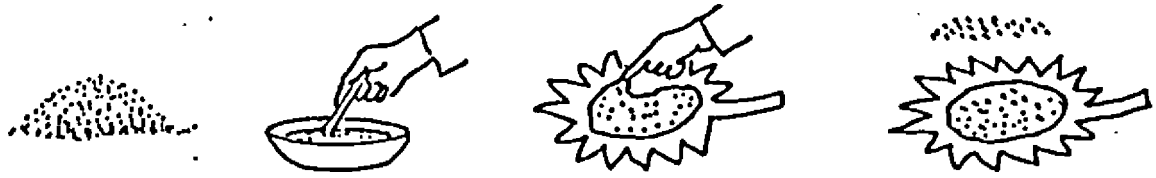
To make the pictures stay in place make a paste of flour and water and smear it on the backs of the pictures. Then sprinkle wheat or millet chaff (the waste husks of the grain) on the wet paste. The tiny barbs of the chaff work better than sand paper or flannel to hold the pictures on the blanket.

Mix white flour in water Spread on back of picture and sprinkle with wheat chaff



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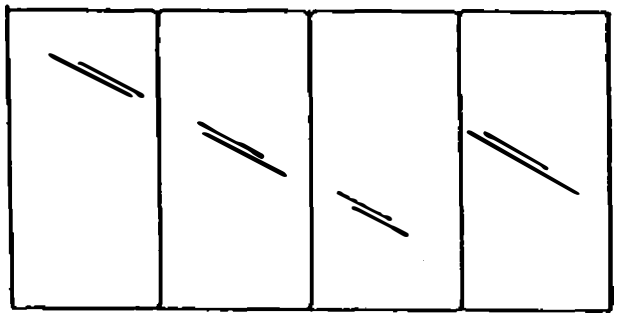
Rice chaff or other grain husks may work as well.

- The rough back of a masonite works just as well as a flannel-board. It does not need to be covered with cloth.

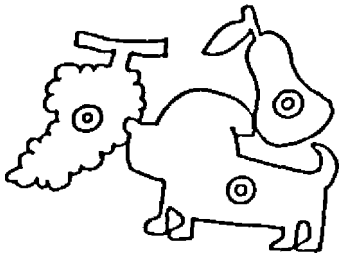
6.9 Magnet-board

This is another wind-resistant alternative to the flannel-board. Use a thin piece of tin-plated steel. Perhaps you can find an old metal sign board or open up and flatten in old lard tin.



(39)

- You will now need some way to magnetize small pieces of iron. One way is to use an old induction coil from an authomobile. Ask an electrician or mechanic to help you. Glue or tape the bits of magnetized iron to the backs of your pictures. They will then stick to the metal board.



(40)

If you paint the magnet-board with black non-glare paint, it can be used as a chalkboard as well.

6.10 Flash Cards

Flash cards are cards showing a series of pictures or messages. They can be used to tell stories or teach skills step by step. Every time they are used they can be arranged in a different way according to what the teacher thinks is more appropriate for his purpose. The size of the card will depend on how they are going to be used, and on the size of the class.

Flash cards can be used :

- To teach basic concepts of health care.
- To start discussions that help people to look critically at the physical and social factors that affect their health and well-being.
- For playing educational games. In this case the cards are often smaller.

The drawings on flash cards must be as expressive and self-explanatory as possible; when there is a need for words to be written they should be as few as possible.

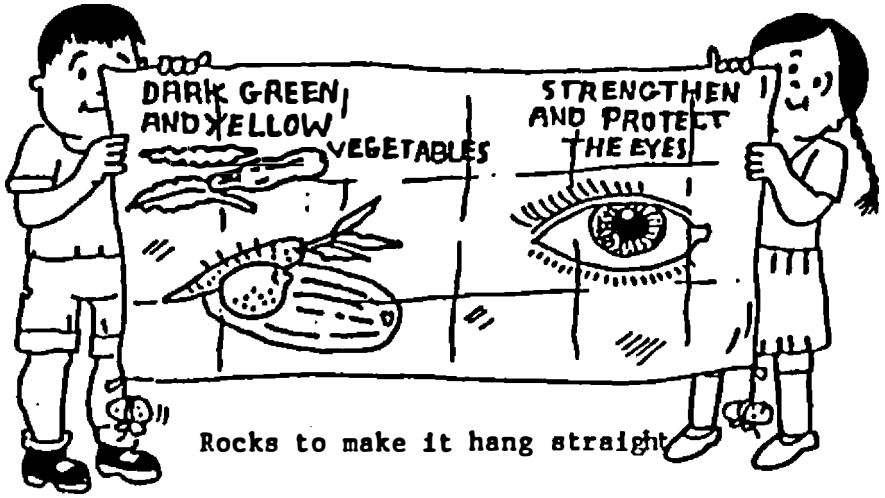
Instead of cardboard, flash cards can be made from old tins or metal cans. First, the tin is hammered flat, cut into cards, and painted white. Then pictures can be drawn or painting on the cards.

6.11 Posters on Thin Plastic Sheets

Large posters can be made from thin plastic or old plastic mattress covers, etc. Draw on them with "waterproof" marking pens. These posters can easily be folded, carried about, and even washed.

FOLDED UP ..

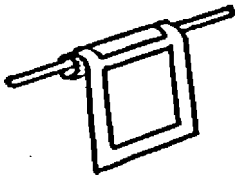
UNFOLDED...



6.12 Flip Chart

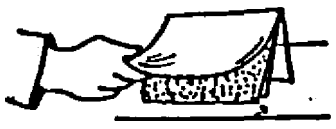
Instead of having his pictures and drawing separate from one another, the teacher may like to have them joined together in some way. They can be linked together for rolling on a stick, arranged in a chain, or made into a flip chart. They can be attached together by stapling, gluing, sewing, attaching them to rings, or bolting them between two thin boards.

ROLL

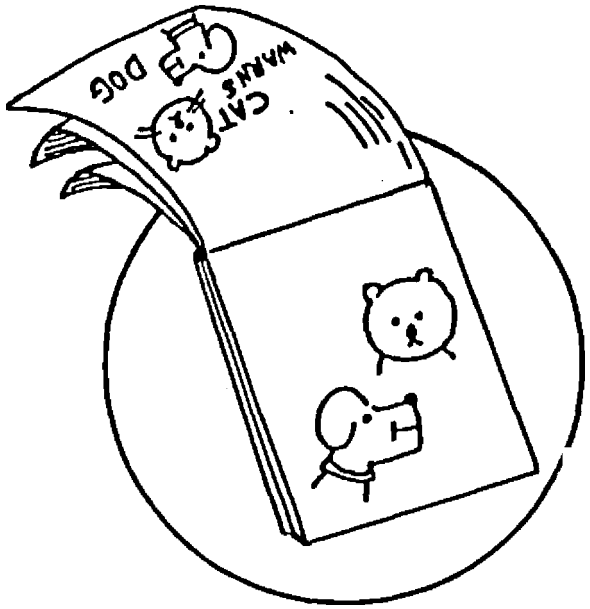


LINKED IN A CHAIN

FLIP CHART



To make it easier to read a flip chart story to the class, write the part of the story that goes with each picture on the back of the page before. With the writing include a small copy of the picture being shown. This lets you know which picture the class is looking at. But even better than telling them the story, you can let them tell you what they see happening in the pictures.

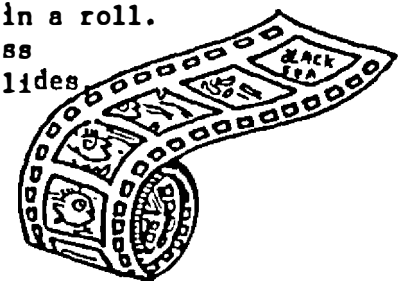


6.13 Filmstrips and Slides

Pictures and photographs can be made into filmstrips and slides which are easier to store, and inexpensive to buy, especially as they can be used again and again, almost indefinitely. For use with classes a projector is needed to show the enlarged pictures on a screen or a wall. Some projectors are battery-operated. Although the projected pictures can be seen in a dimly lit room, they are at their best only at night, or when the room is darkened.

Filmstrips and color slides are similar, except that ...

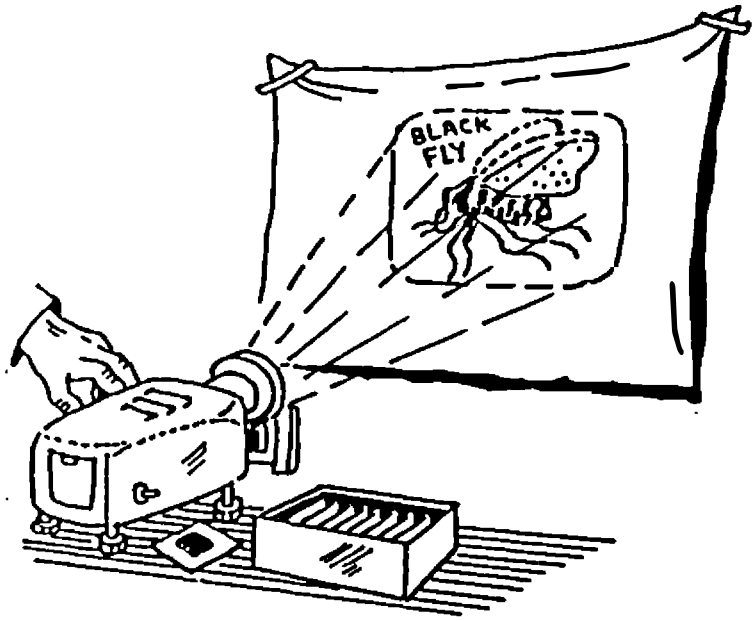
Filmstrips come in a roll. They are much less expensive than slides but can only be shown in the order they come in.



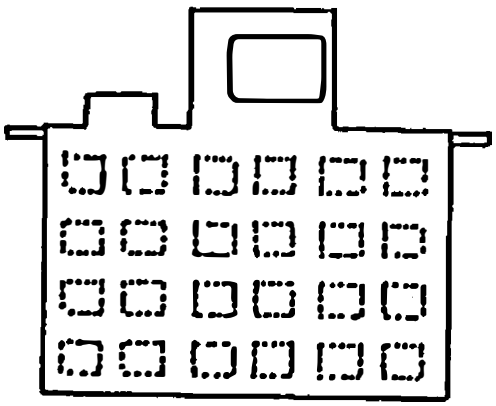
Slides are individual pictures. They can be shown in any order.

Filmstrips come in samll rolls, and slides in sets, both with commentaries, or notes to go with the pictures. Recently slide/tape sets have been produced. The set comprises a mounted set of slides, a cassette with the script recorded on it, and the written script in a plastic file. Pupils can listen to the commentary recorded while viewing the pictures that go with it. For this purpose, any cassette tape player and projector can be used, or a special instrument which combines both devices.

SLIDE PROJECTOR



SET OF SLIDES WITH CASSETTE



6.14 'Movies' and Video Tapes

Movies and video tapes can be much more attractive and instructive than still pictures and photographs, but they are so costly that relatively few schools can afford them. Some organizatins and community members may be persuaded to lend their sets for shows in the school every now and then.

Since such shows are usually given in the evening, they can include both educational and entertainment films, but they must be followed by a serious discussion of the health messages conveyed by the show.

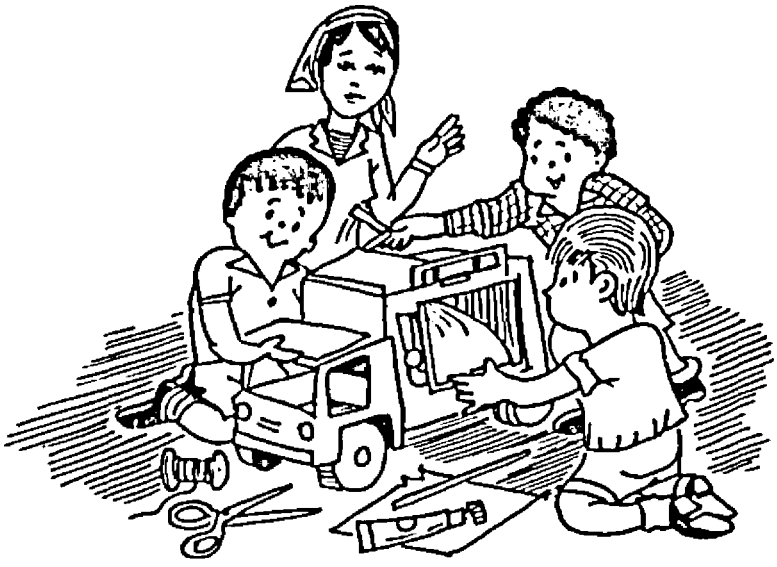
Some still and motion cartoon films are available. They are usually both funny and instructive and are enjoyed by children as well as adults.

Certain precautions must be taken in the selection of films to be shown in order to make sure that they carry the correct health messages a teacher wants to convey (see para 6.2).

6.15 Models

Models, like pictures and films, present a life-like appearance of things. With models the representation has the advantage of being three-dimensional, and can be better appreciated by being touched and felt by hands. Some models can also simulate motion and even sound. A good model can be the best substitute for the real object and the most understandable way of presenting it to school children. Furthermore, their fun and understanding would be greatly enhanced if they were themselves to share in the making of the model. They would notice many more details and learn more about the nature and functioning of the object they are trying to represent. Their imaginative and creative abilities as well as their manual skill can benefit from the exercise. They would like health education all the more.

All sorts of materials go into the making of models, but another test to the ingenuity of the makers of the model is to rely on local materials, discarded or obtained at low cost.



Making a model ...

6.16 Samples and Specimens

Samples and specimens add reality to teaching. Many sources would be pleased to supply, and most children would enjoy, collecting relevant samples for display to the class or in school exhibitions. Various grains, vegetables fruits, insects, tools, etc., can be used for better illustration, and later provide additional exhibits in the school museum. They can also be used for teaching subjects other than health.

6.17 Photographs

Photographs, especially when large and in colour, can be very useful in attracting pupils' attention and in showing them objects which cannot be brought into the classroom. Various ways in which they can be used have already been mentioned in previus paragraphs.

They can be obtained from very many sources such as magazines, government departments, educational institutions, embassies, travel agencies, individuals, etc. But they are often not quite suitable for direct use in the classroom :

- They may be too small. The teacher should avoid showing such photographs by having them passed around from one pupil to another. Instead, they should be either enlarged, if possible, or shown through a projector.

- They may contain too many unwanted or distracting details. In such cases the teacher may cut away the unwanted parts. Sometimes good results can be obtained by assembling together cuttings from the same or from different photographs.

- When a photograph is taken it is usually with the purpose of focussing attention on a particular aspect or detail which may not necessarily coincide with the teacher's puprose of showing the photograph to the class; sometimes it may even be contrary to it. A certain measure of manipulation, like masking or removing some details, would then be needed, so that the attractive elements of the photograph can become consistent with what the teacher is trying to emphasize.

Many of the hints given later in connection with the use of drawings can be applied to photographs.

6.18 Some Methods of Pictorial Illustration

The following pictures and drawings are meant to bring out important differences between methods commonly used for illustration.

1. Photo with background complete

Appropriate if background adds to the message (but here it adds nothing and confuses.)

2. Photo with background cut away or "whited out".

Appropriate for many health illustrations. Subject stands out more clearly. Less confusing.

3. Shaded drawing

Usually less appropriate because it is difficult for people to copy and because heavy shadows can be confusing.

4. Line drawing

Often most appropriate because it is relatively simple, yet adequately detailed. Relatively easy for people to copy for flip charts or posters.

5. Stylized drawing

Usually less appropriate. Simplified so much that personal quality is lost. People will not identify as much with these characters.

6.19 Drawing Pictures

Being able to draw his own pictures is a great assest to the teacher. Drawing pictures can be enjoyable as well as beneficial. Yet many teachers are reluctant to practise drawing because they think it requires a special talent that they lack. Actually almost anyone can learn to draw if he is prepared to practise and be patient.

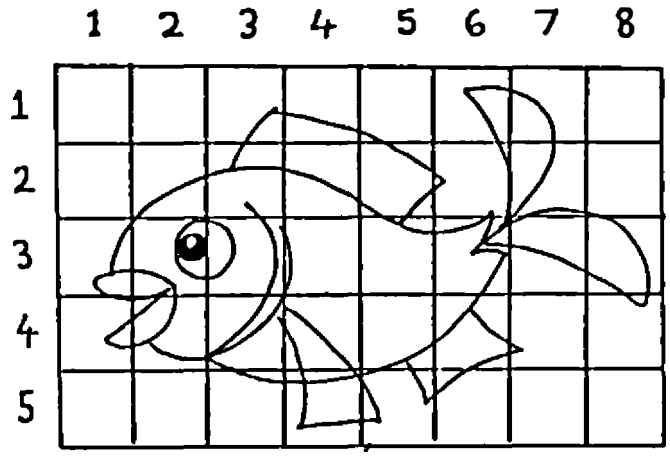
Here are a few hints to help the teacher develop his drawing skill and make effective illustrations :

(i) Observe objects carefully, noting details, proportions and relative positions.

(ii) It is often best to start by tracing and copying other drawings or photographs

(iii) When drawing people or animals begin by sketching the general shapes, then go for the details.

(iv) Many objects can better be copied or drawn with the help of grids or geometical shapes.



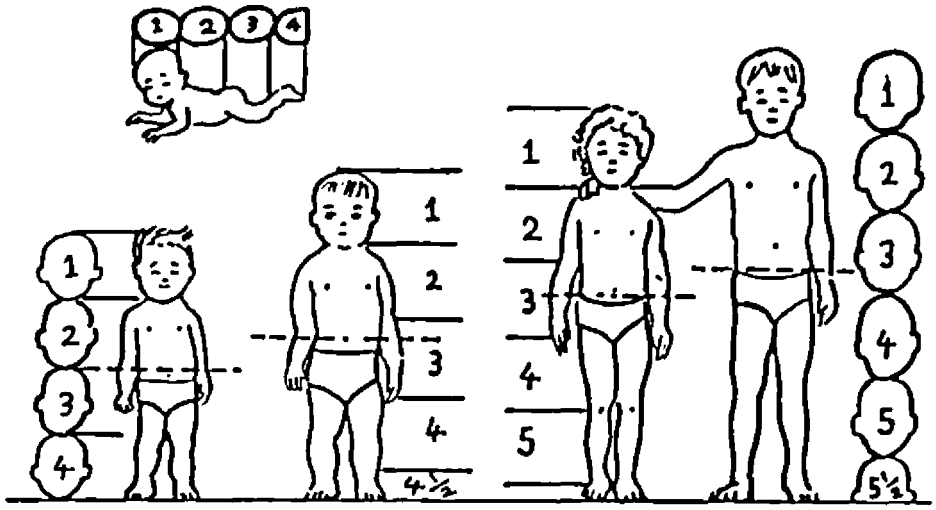
You can copy other drawings by using a grid and drawing the contents of each square at a time.

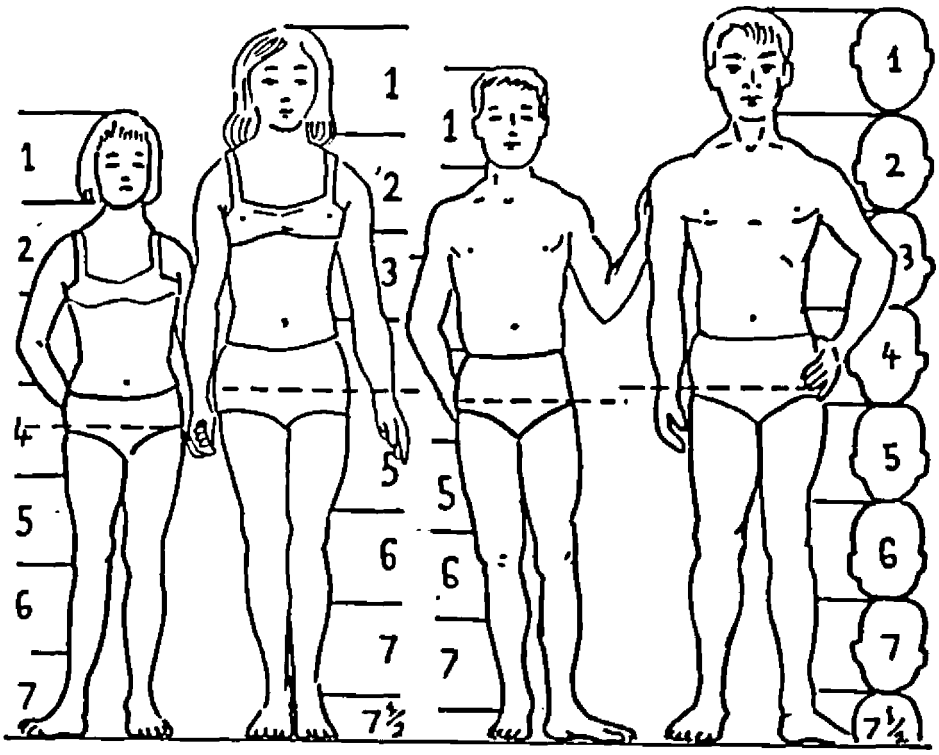
You can turn rectangles, squares, circles and other simple shapes into recognizable objects with a little extra detail drawn in.

(v) When drawing people, watch for 3 important things:

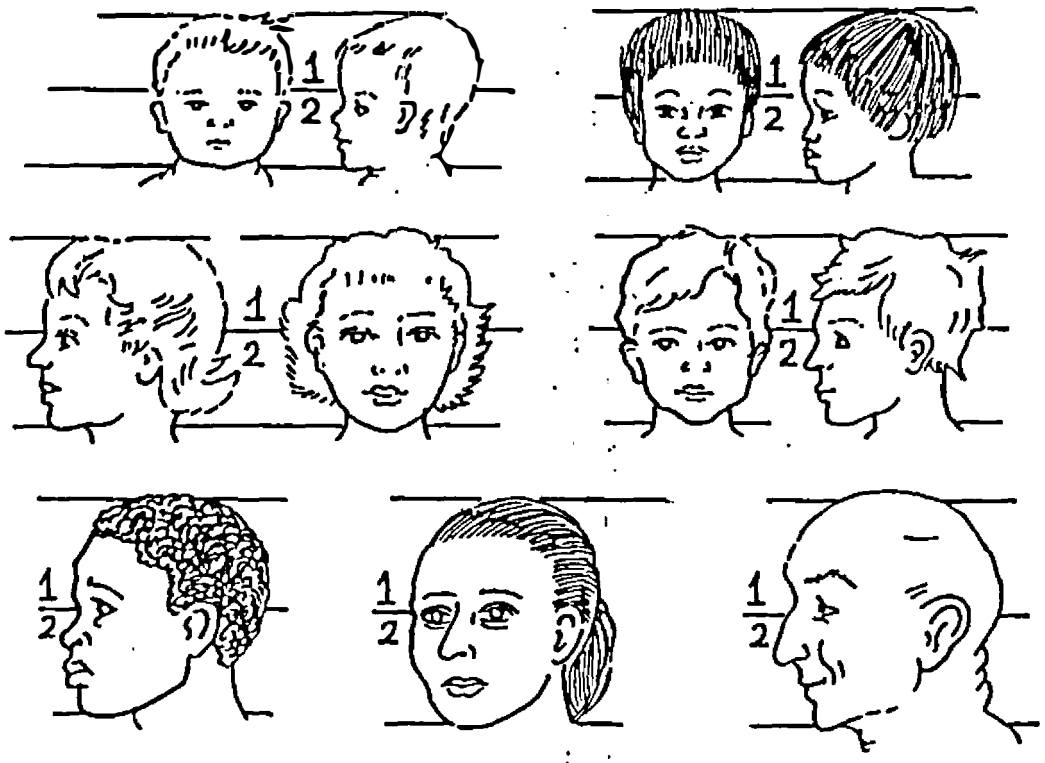
- relative SIZE OF THE HEAD
- relative POSITION OF THE EYES
- relative LENGTH OF ARMS AND LEGS

(vi) Notice that in children the head is much bigger, relative to the body, than in adults. Also, young children's legs are relatively shorter. Notice how the halfway line gets lower as the child grows.

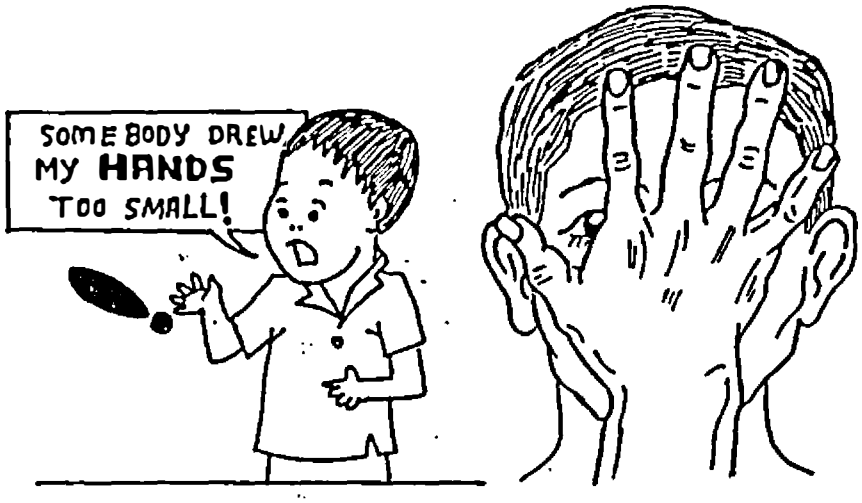




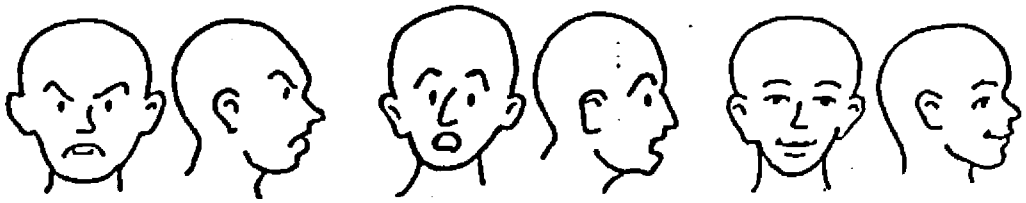
(vii) A child's face is relatively small in comparison with the head. In the drawings below, notice that the eyes of young children are well below the halfway line. In adults the eyes are slightly above the halfway line. Notice also that the tops of the ears are at about the same level as the eyes.



(viii) Hands are hard to draw. Practice drawing your own and copying good drawings or photos. One common mistake is to draw hands too small. Notice that an adult's hand is almost as big as his face. (Children's hands are relatively smaller).



(ix) To change expression, change the shapes of the eyebrows and mouth.



Pupils will not learn from a drawing if they cannot see it clearly. You should check the following points in all of your drawings and diagrams by viewing them from the back row of seats in the classroom:

(a) Size - is the drawing big enough to be seen and to attract attention? Are the letters or numbers big enough to be read?

(b) Thickness of lines - visibility depends not only on the size of the drawing but also on the thickness of the lines.

(c) Colour of lines is also important in visibility. If you are using a white background, colours which are dark and provide more contrast will be more visible. Good colours for visibility on a white background are black, navy blue, brown, dark red and dark green. Bad colours are yellow, orange, pastels or paler shades of blue, green or red.

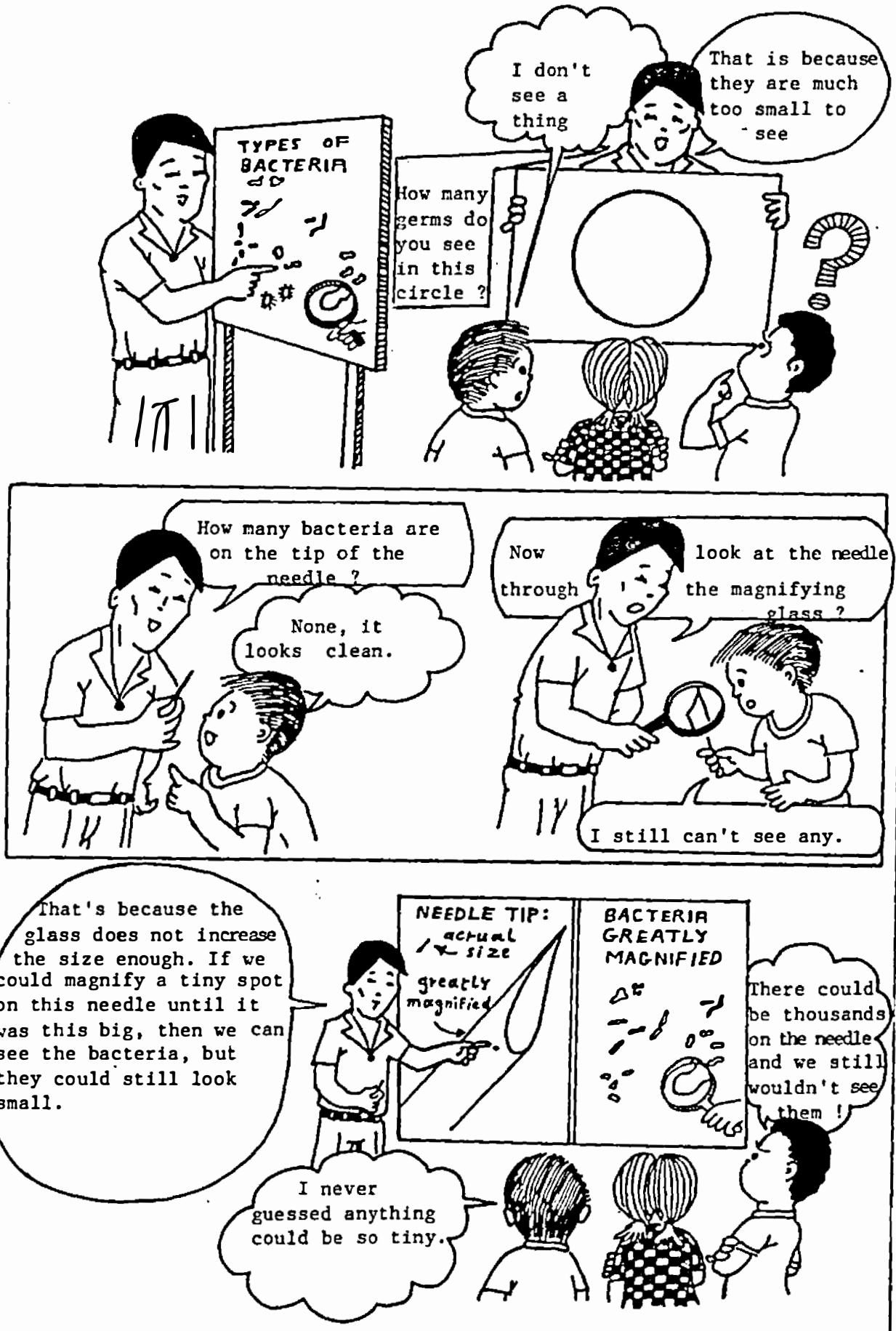
6.20 Some Hints on Using Drawings

(i) Objects that are too small to see

School children cannot fully appreciate how small microbes are. It would helpful if a microscope can somehow be made available for them to see bacteria, worms, etc. Otherwise the following method suggested in "Helping Health Workers Learn" can be used.

Objects that are too small

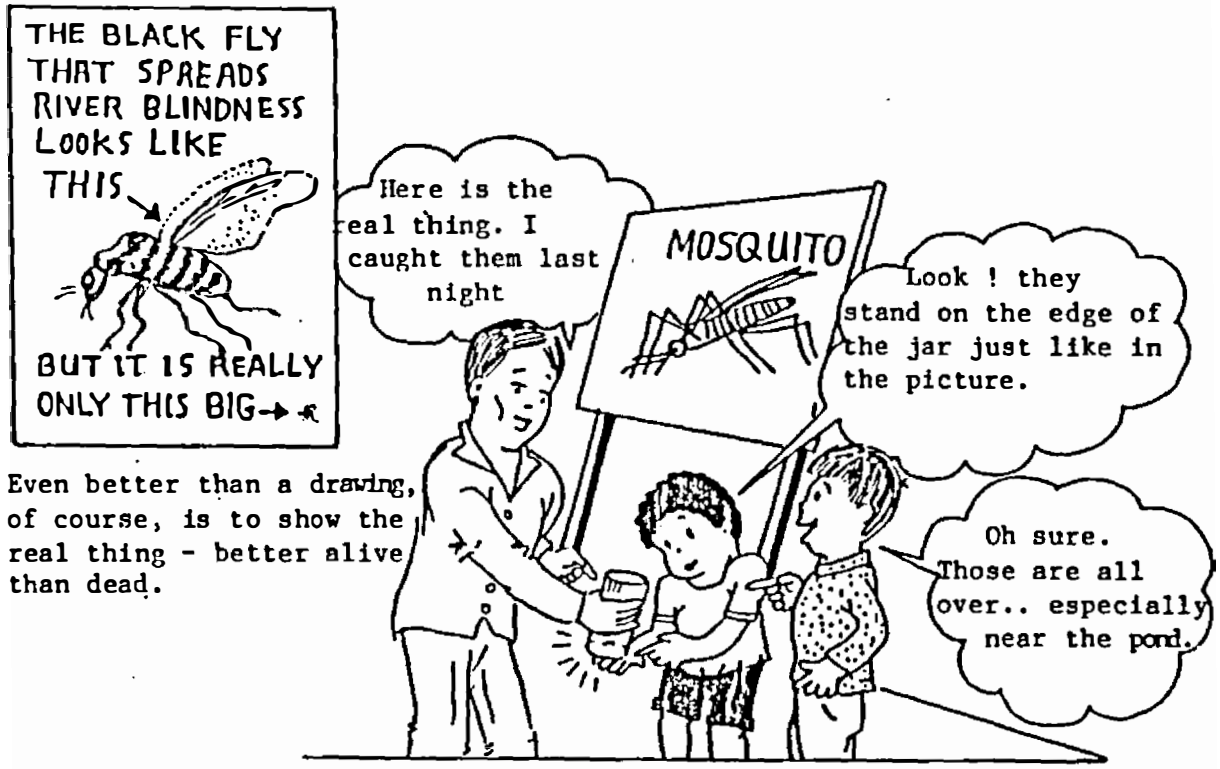
to see .....



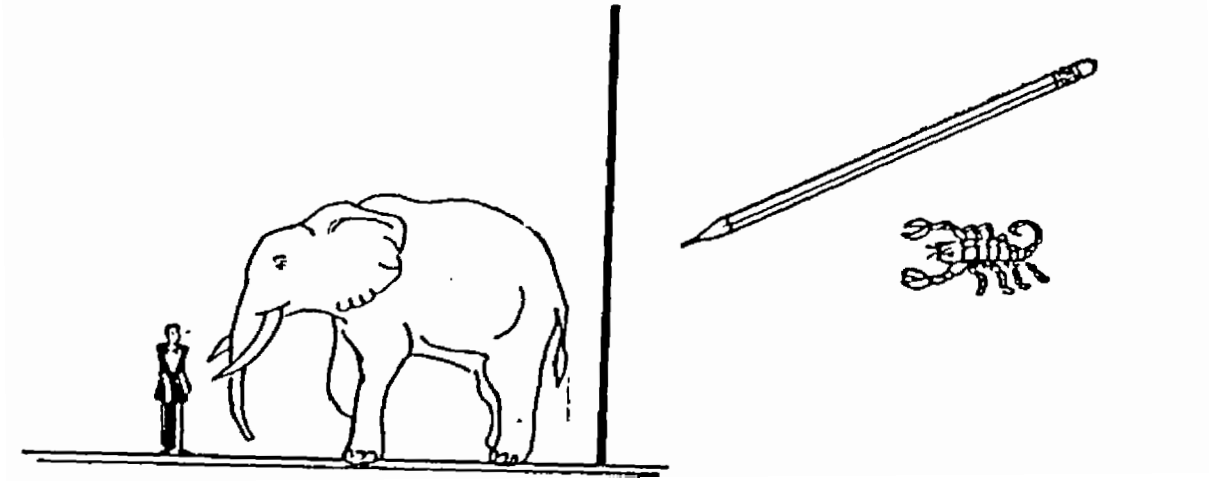
(ii) Size can be confusing

Pictures can mean different things to different people. For example, a teacher will show a large picture of a malaria mosquito to his class in the belief that this is going to help them tell it apart from other insects and mosquitos. But the pupils cannot recongize it as the mosquito they know. This one is so tiny and not nearly so big or frightening.

So, whenever oversized, bigger-than-life drawings are used it is a good idea to include a small drawing showing its actual size. Similarly, if the picture contains object of a size unknown to the pupil a pencil or something familiar can be added alongside for the pupil to compare and appreciate the real size of the object.



Even better than a drawing, of course, is to show the real thing - better alive than dead.

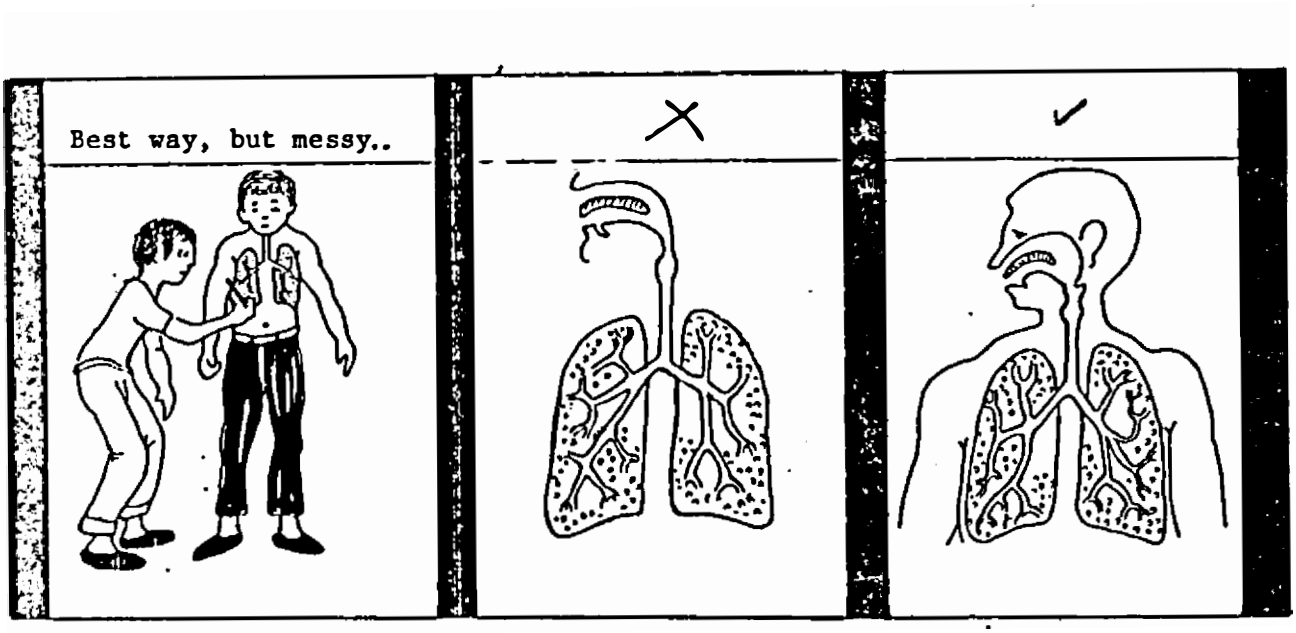


To compare unfamiliar with familiar objects for size ...

(iii) Techniques for illustrating parts of the body

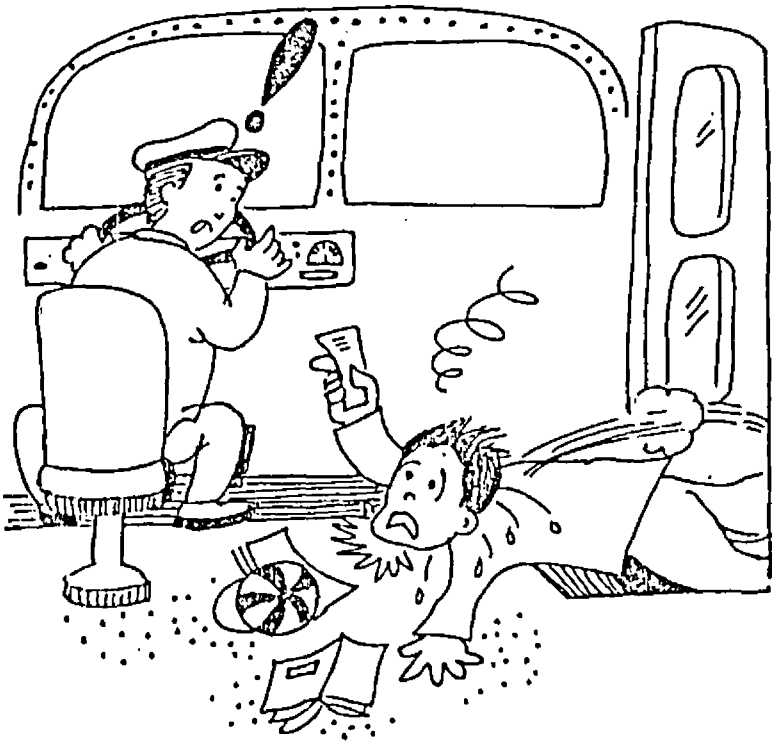
1. Be sure to include such facial feature and posture make people appear "human" and not unlikeable.

2. The best way to draw internal human organs is to draw them on a person. However, this may, sometimes be undesirable especially if it is difficult to "clean off" the drawing in good time. A sketch or an outline must be extended sufficiently to show the relationship of the organ to the rest of the body.



(iii) Touch of humour

Whenever possible the teacher should try to incorporate an element of humour in his drawings. It helps to attract both children's and adults' attention and it also makes them think. Naturally the kind of humour should be appealing to the particular group it is intended for, and free from vulgarity.



What running 50 metres to catch the bus can do to some people !

7. SCHOOL HEALTH ENVIRONMENT AND SCHOOL HEALTH SERVICES

7.1 Inter-dependence of Components of a School Health Programme

A school health programme cannot be successful by health education alone; the three other components of the programme must be simultaneously attended to :

(i) school health environment;

(ii) school health services; and

(iii) school-community relations (peras 3.7-3.11).

None of these components can be effectively dealt with in isolation from the others, and the teacher's role in all four areas is one of leadership, promotion and coordination. The other three areas provide the teacher with excellent educational opportunities and with appropriate siutations for demonstration and practice that faciliate the vital elements of reality and effectuality in the learning process. On the other hand, it is easy to see the futility of teaching a health curriculum when school health services, school environment, and home and community support are adverse or indifferent to the education provided. A teacher cannot ask his pupils to wash their hands after going to the toilet or before eating if the school has neither water nor toilets, or if the parents are not willing to direct the child do the same when he is at home. Children and parents cannot be asked to seek medical help where medical services are inaccessible or medicines,unavailable.

7.2 What Teachers Can Do

It is true that the onus of correcting such situations by no means lies on the teacher or even the individual school administration. This is a matter for intersectoral collaboration at all levels. However, much can be achieved if school teachers, as well as other education personnel, can resort to advocacy and persuasion among community and relevant government agencies. Meanwhile they are expected to :

A. Identify the deficiencies in environmental health standards in the school and immediate surroundings. These deficiencies would include areas like, the school site and school grounds including the playground, school buildings, school water supply, food sanitation, hand washing facilities and bathing facilities, toilet facilities and sewage disposal, lighting and seating arrangements.

B. Mobilize and obtain help from concenred authorities, the community (through the school health council), and voluntary agencies to develop a sanitary environment in the school.

C. Maintain the sanitary conditions of the school with regard to housekeeping, water supply, and the disposal of liquid and solid wastes.

D. Maintain sanitary and hygienic conditions in the conduct of school meals.

E. Facilitate and guide the participation of pupils in the maintenance of sanitary conditions in schools and immediate surroundings.

F. Furnish an example of healthy living for pupils to imitate.

7.2 School, home and Community Relationship

The need for mutual reinforcement of learning experiences between the school, the home and the community makes it obligatory on the part of school teachers to take the initiative in building bridges between the three. The teachers could promote these relations by facilitating the following activities :

A. Formation of parent - teacher associations for every school. This would would pave the way for a two-way communication. Parents will not only know what has been taught in schools, thus enriching their own knowledge, but have a role in determining what is to be taught. Such associations could jointly plan for school health improvement projects and mobilize resources from community.

B. Participation by teachers and pupils in community health projects-teachers could serve as members of community health committees. Cooperative action by schools with health authorities opens the way for school participation in community health work directed by the health agency.

7.3 Teachers as Health Workers

Experience has shown that, given adequate training as basic workers, teachers can go a long way towards making up for the acute shortage of medical personnel encountered in many developing countries, particularly in non-urban areas. Teachers have an advantageous position in relation to school children and their families; and with their own education and aptitude they can easily

learn to perform such tasks as to :

A. Identify and treat common ailments such as scabies, trachoma, diarrhoea as well as nutritional deficiencies such as vitamin A deficiency and iron deficiency anaemia.

B. Treat minor wounds including simple burns and injuries

C. Identify infectious illness such as mumps or flu, and initiate quarantine measures.

D. Identify children with growth failure, with the possibility of leading to recognition of chronic illness.

E. Test sight for defective vision, and hearing for hearing difficulties.

F. Establish a linkage with existing health infrastructure programmes with the object of :

- ensuring the health personnel's regular visits to the school, thus receiving a continued health education;
- establishing a referral system;
- maintaining good communication between the school and the health personnel;
- learning about objectives and strategies of community health programmes.

The following pages show samples of letters that can be sent to parents on certain occasions. It can be seen that they are aimed not only at the individual pupils' health but also at the other pupils' and their families'. Where communication by letter is not possible other means of communicating with parents may be sought, e.g., home visits, parent meetings, or verbal messages conveyed by pupils.

Date .....

Dear Parents,

I would like to inform you of the routine nursing procedure I do for your child in school every year.

1. Routine hair check for lice at the beginning of the year, then once every month.

2. Vision, height, and weight are recorded at the beginning of the year and at the end of the year.

3. Once a year hearing test for K through 4th grade students.

All findings for these tests will be recorded in the child's medical file. Parents will be notified of non-standard results. All of the above procedures are under the supervision of the school doctor.

A medical record is kept at school for emergency procedures and for general medical referral. Please fill in the medical report with the appropriate up-to-date medical history of your child and return it to the school through your child's classroom teacher.

As a reminder, please make sure to send a hand towel to school with your child every Sunday morning. Names should be on the towel. Children will take it home every Thursday to be laundered. Also, please be sure to send plenty of water or other fluids for your child to drink.

Thank you for your time,

Signed

Headmaster or School Nurse

SCHUTZ AMERICAN SCHOOL HEALTH RECORD

NAME (Last First Middle) SEX BIRTH PLACE BIRTH DATE

FATHER Occupation Birthplace

MOTHER Occupation Birthplace

GUARDIAN is: Father Mother OTHER (name and address)

ADDRESS (Street and town) HOME TEL. NO. GRADE

IN EMERGENCY, notify (Name, address and tel. no.)

FAMILY PHYSICIAN or SOURCE OF MEDICAL CARE (Name, address and tel. no.)

FAMILY DENTIST or SOURCE OF DENTAL CARE (Name, address and tel. no.)

PERTINENT FAMILY DATA (Social, Economic, etc.)

IMMUNIZATIONS AND SPECIAL TESTS

Date	Date	Date	Date
DPT	Boosters	Rubella	
DT	Boosters	Mumps	
Tetanus	Boosters	Tuberculin (specify type, results)	
Triv. Sabin Vac.	Boosters	Cholera	
Other polio vac.		Typhoid	
Measles		Others (specify)	

MEDICAL HISTORY (give dates)

Accidents	Ear Infections	Measles	Scarlet Fever
Allergy	Encephalitis	Meningitis	Strep. Throat
Chicken Pox	German measles	Mumps	Tonsillitis
Congenital Anomaly	Heart Disease	Operations	Tuberculosis
Convulsions	Hernia	Poliomyelitis	Whooping Cough
Diabetes	Kidney Disease	Rheumatic Fever	Other

PERTINENT FAMILY MEDICAL HISTORY

Date .....

Dear Mr & Mrs _____,

During the routine eye test for acuity of vision, I discovered that your child, _____, cannot see very well at a distance. The test revealed the following :

Right Eye = Left Eye =

Based on the above, I advise that you take your child to an eye specialist for further testing.

Sincerely,

Signed

Headmaster or School Nurse

Date .....

Dear Parents,

One of our kindergarten pupils has a suspected case of chickenpox. This child is isolated at home: however, other children in contact may have been exposed to the infection. A brief description of chickenpox is as follows :

Chickenpox is a communicable disease caused by a virus called Varicella. The incubation period is 14 to 21 days and it is transmitted by droplets. It usually starts by a minimal malaise, headache and fever. Rash appears in crops, mainly on the face, head and trunk. It is an irritating rash of oval shaped papules which turn into vesicles then pastules until it forms a crust.

I suggest that parents observe their children for the appearance of rash for the next three weeks. if they suspect chickenpox, it should be immediately reported to either our school doctor or the family doctor. Also, please make sure to report it to me.

Thank you.

Signed

Headmaster or School Nurse

Date .....

Pupil _____

Dear Parents,

During a routine examination of your child's scalp and hair, nits were found to be present. For the safety of the rest of the children, as well as for treatment of the hair to those who carry nits, I am providing the following information :

Head lice are transmitted by direct contact with an infected person and indirectly by contact with their personal belongings, especially clothing, combs, headgear. They may be transmitted while lice remain alive on the infected person or in his clothing, and until nits (eggs) in hair and clothing have been destroyed. The eggs of lice hatch in 3-14 days.

To help prevent lice, use hot water and soap to maintain cleanliness and launder clothing in hot water (60 degrees C for 20 minutes) or dry clean to destroy nits and lice. Inspect your child's hair for lice and nits to detect infestation early.

To treat lice infestation, wash the hair and have the child take a hot bath with soap. After the hair is thoroughly dry, apply Benzanil. Clothes and linens must be boiled or ironed before using them again. After 2 days wash the hair with soap - not shampoo - and comb it with a special comb which can be purcahsed in apharmacy. Repeat the process in one week and continue once a week until the condition is clear.

If I can provide any further assistance, please feel free to contact me,

Sincerely,

Signed

Headmaster or School Nurse

Date .....

Dear parents,

I would like to inform you that one of the family members of a pupil in Kindergarten is presently being treated for Infectious Hepatitis or H (A). Following is some specific information regarding hepatitis :

Hepatitis "A" (Infectious)

A disease caused by a virus which infects the liver.

Symptoms : 1. Early - Sudden onset of fever, nausea, weakness, abdominal discomfort, loss of appetite, headache. Occasional rash.

2. Urine turns color (reddish, goldish, topaz, brownich) and may smell funny.

3. Feces turns whitish or grayish.

4. Eyes turn yellow (the white part), and then skin may turn yellow.

Incubation Period : 15 - 30 days

Contagious Period : Greatest during the 5 to 7 days before symptoms appear. It is non-contagious one week after the onset of jaundice

Mode of Transmission : Person-to-person contact. Fecally contaminated water and food.

Comments : Immune serum Globulin may be given prohylactically to those with close personal contact.

Pleae contact your family physician for further advice

Thank you.

Signed

Headmaster or School Nurse.

REFERENCES

(Books marked (*) are also recommended for further reading)

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13. (Draft) Publications of Sudan Population Education Project, Khartoum;

14. C.E. Ewan, Teaching Skills Development Manual, University of New South Wales;

15. Primary Health Care, WHO UNCIEF, Geneva;

16. Report of the 1974 Sub-regional Seminar in Khartoum on Nutrition in Education, FAO WHO UNESCO UNICEF;

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Many things can wait.
The Child cannot.
Right now his bones are being formed,
His senses are being developed.
To him we cannot say tomorrow
HIS NAME IS TODAY !

Gabriela Mistral