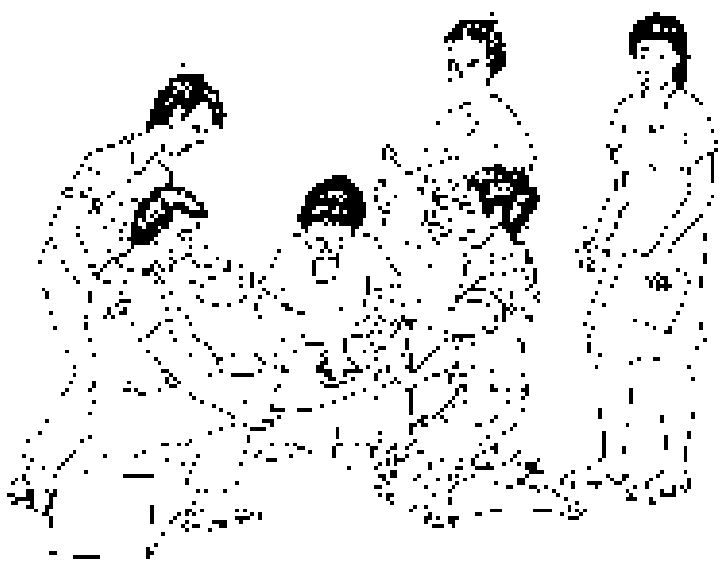
Helping Health Workers Learn

A book of methods, aids, and ideas for instructors at the village level

David Werner and Bill Bower



Illustrations by

[illegible] [illegible]
[illegible] [illegible]

Hesperian
www.hesperian.org

The Hesperian Foundation
1919 Addison Street, Suite 304
Berkeley, California 94704 U.S.A.

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This book is dedicated to the village health team of Ajoya, Mexico, from whom we have learned a great deal.

and to health workers everywhere who side with the poor.

REQUEST FOR YOUR COMMENTS, CRITICISMS, AND IDEAS:

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[illegible]

[illegible]

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WE ARE ESPECIALLY INTERESTED IN HEARING SUGGESTIONS FOR ADDITIONAL TOPICS TO INCLUDE IN FUTURE EDITIONS.

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Thank you.

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THANKS

This book was made possible by a grant from the Bernard van Leer Foundation. Many individuals contributed to the development of this book. We are grateful to all of them for their support and encouragement. Special thanks to the following people for their comments on earlier drafts of the book: [illegible]

We would also like to thank all of the people who participated in the field-testing of the book. Their comments and suggestions helped us to improve the book in many ways. We are grateful to the following people for their participation in the field-testing: [illegible]

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We would like to thank the following people for their comments on earlier drafts of the book: [illegible]

We would like to thank the following people for their participation in the field-testing of the book: [illegible]

HOW TO USE THIS BOOK

This book is mainly for health workers who have had some training and who want to learn more about how to help people in their communities. It is also for people who work in health committees and village health workers who want to learn more about how to help their communities.

This book is not a textbook. It is a reference book.

Do not try to study the whole book. Use the table of contents to find the parts that you need to study.

As you study, you will find it helpful to do the things suggested in the sections called PRACTICE.

- [illegible]
- [illegible] dark letters
- [illegible]

As you study, you will find it helpful to do the things suggested in the sections called PRACTICE.

It will also be useful to have a reference book. You will probably not be able to buy one, but you should try to borrow one. Ask your teacher, your supervisor, or a health worker in your area if you can borrow a book. If you cannot find a book, you will still be able to learn from this book, but it will be more difficult.

Some of the books you are asked to look at in the PRACTICE sections may be difficult. Do not worry if you do not understand everything in them. Read them to get the main ideas. Do not spend too much time on the PRACTICE sections.

Some of the words in this book are printed in bold, like this. These words are important. You should learn their meanings.

You should try to practise what you learn in this book. Ask your friends, your family, and other health workers to help you practise.

This book was written by many health workers in many countries. We hope that you will find it helpful. If you have any suggestions for how we can improve it, please write to us. Our address is: The Hesperian Foundation, P.O. Box 1692, Palo Alto, CA 94302, USA.

[illegible] For more suggestions on how to use this book, see the [illegible] Introduction.

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HOW TO USE THIS BOOK



By looking at the edges of the book, you can see which part you are in.

Page numbering

Language:

Social viewpoint:

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INTRODUCTION

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- Leaders whose first responsibility is to the poor. [illegible]

- An recognition that good health can only be attained through helping the poor improve the entire situation in which they live. [illegible]

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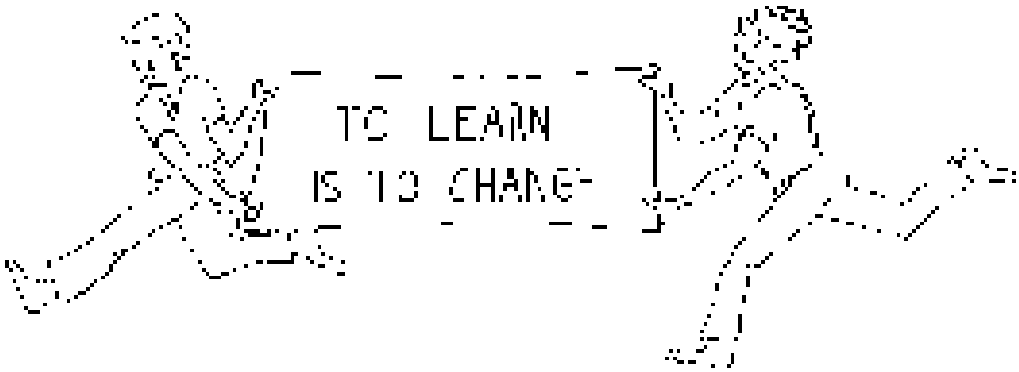
WARNING

This is not a 'recipe book' [illegible]

[illegible]

To be fully alive and meaningful, a training course cannot be either pre-packaged or 'replicable' [illegible]

A training program, like a person, ceases to be interesting when it ceases to grow or be unique!



[illegible]

We ask you to consider—and urge you to think and question—everything we say.

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from ***Where There Is No Doctor,*** p. 114

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WHY THIS BOOK IS SO POLITICAL

[illegible]

[illegible]

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[illegible]

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[illegible] (page 27)

[illegible]

[illegible]

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PART ONE

APPROACHES AND PLANS

In Part One, we look broadly at some basic approaches to learning and study, and at how to plan learning programs for community health workers.

In the first chapter, Chapter 1, we begin by looking at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning.

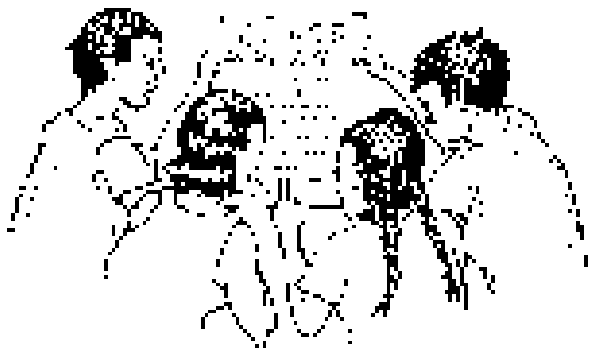
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In Chapter 3, we [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning.

Chapters 5, 6, 7, and 8 [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning.

Chapter 9 [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning.

In Chapter 10, [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning. We also look at [illegible] and how to [illegible] learning.

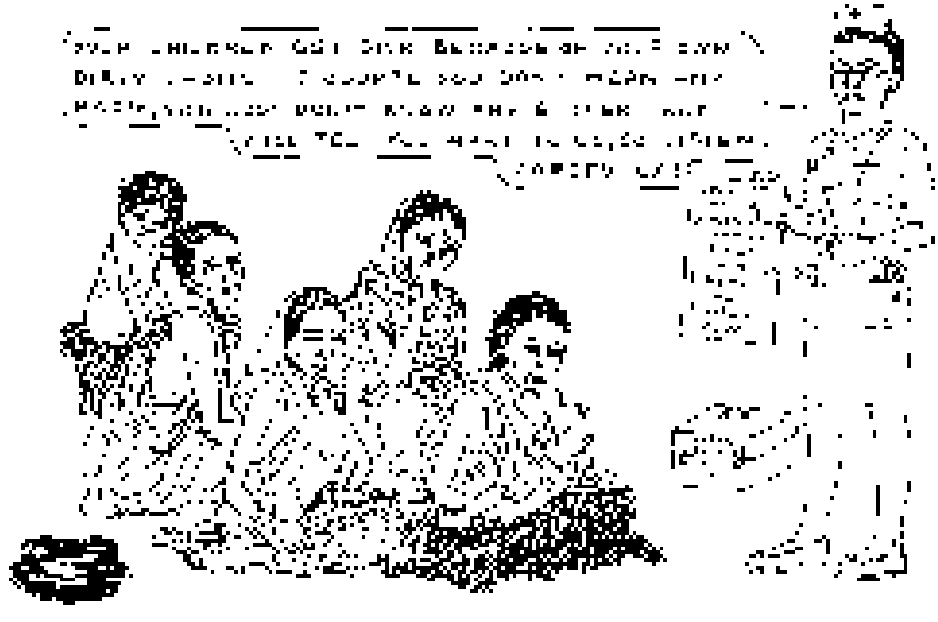


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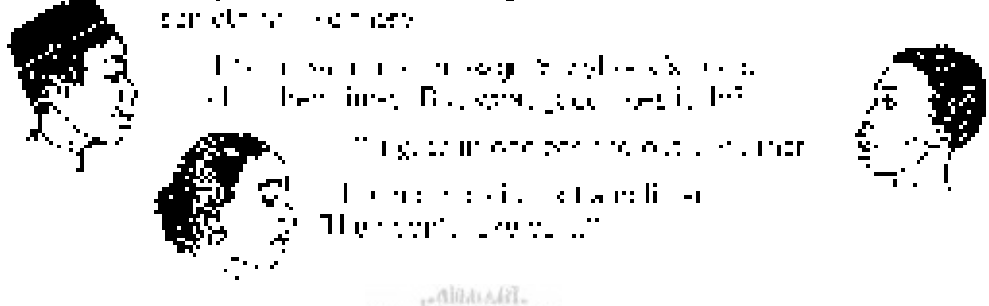
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CHAPTER 1

Looking at Learning and Teaching



What effect does this kind of teaching have on people?



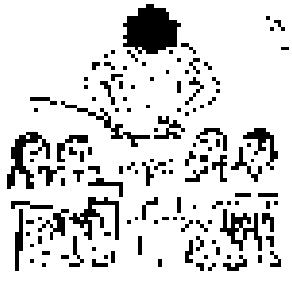
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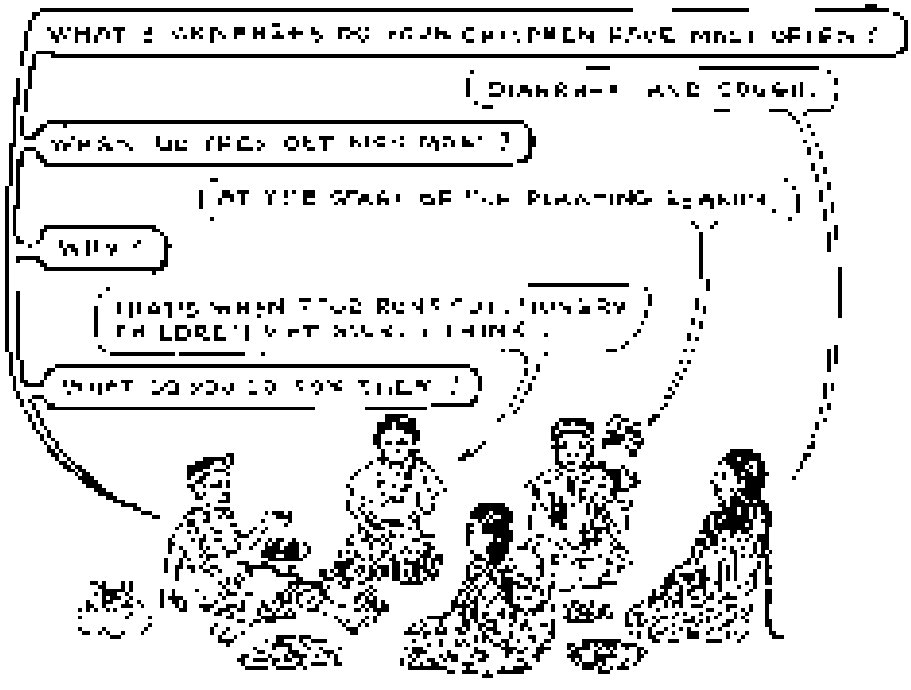


"Change is the only constant in life."

Helping Health Workers Learn (2005)

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Now consider another example. Here is a picture-type card that can be used to help mothers learn about child health. The picture tells a story and helps the health worker ask questions like these:



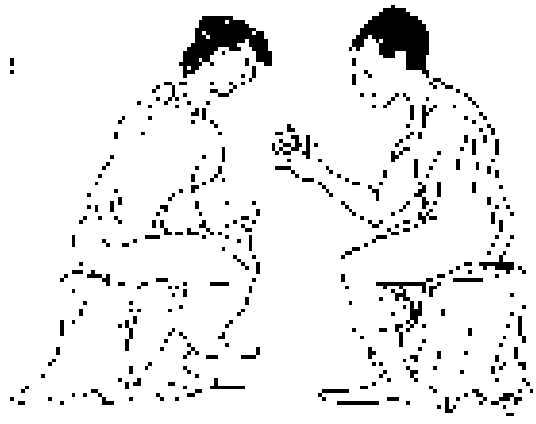
What effect does this kind of teaching have on people? It shows that the health worker is respecting what the mothers already know and is willing to learn from them. It makes them feel that they are important and that their knowledge is valuable. It makes them want to learn more.





Some people who are used to traditional methods of teaching may feel that this is not the right way to teach. They may say that the mothers have been given information, so they should remember it. But people learn best when they are actively involved in the learning process. They will remember what they have discovered for themselves much better than what they have been told.

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DIRECTING HEALTH EDUCATION TOWARD THOSE WHOSE NEEDS ARE GREATEST

People usually teach in the way they themselves were taught. Unless something at their training or learning happens to change the way they view things and do things. This is true for [illegible] and traditional healers as well as for [illegible] and other professionals.

[illegible] usually, health workers [illegible] because [illegible] they [illegible] those [illegible] greatest [illegible] They [illegible] [illegible] [illegible]

THE TEACHING ROLE OF HEALTH WORKERS

[illegible] have health workers discuss the range of opportunities they will have for sharing and exchanging ideas in their communities. [illegible]

OPPORTUNITIES FOR SHARING AND EXCHANGING IDEAS WITH PEOPLE IN THEIR VILLAGES

Some health workers can look for ways to . . .













[illegible]

[illegible] Ask your students what they like stationary ways of learning in their villages.

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

We health workers need to adapt our teaching to people's traditional ways of learning—ways they are already used to and enjoy.

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THE ROLE OF HEALTH WORKER INSTRUCTORS

[illegible] the methods we use and the way we relate to our students.

• The methods we use. [illegible] Health workers will be more able to help others learn by doing if they, themselves, learn by doing.

• How we relate. [illegible]

[illegible]

[illegible]

[illegible]

Your role as instructor is [illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
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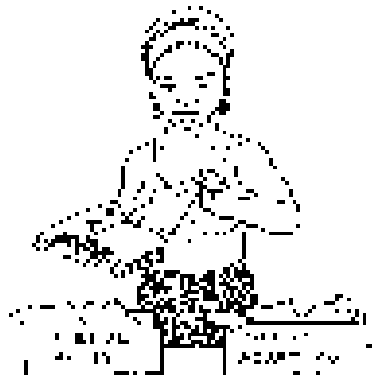
[illegible]

Go to the people
Live among them
Learn from them
Plan with them
Serve them
Begin with what they have
Build on what they know



But of the best leaders
when their task is
accomplished,
their work is done,
The people all remark:
"We have done it ourselves."

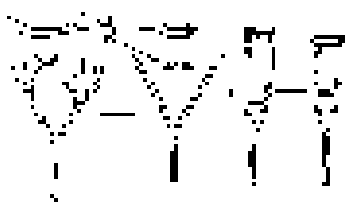
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BEGINNING WITH YOUR OWN TRUE STORY

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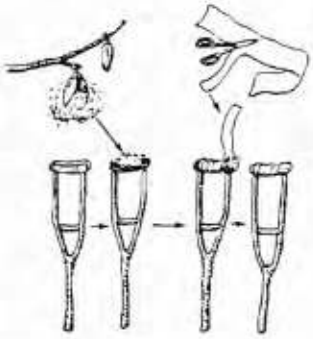
Activity 1.2 HELPING ADULTS OF NOT KNOWING HOW





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"I have an idea," said Pepe's father. He went across the clearing to a ***pochote***, or wild kapok tree, and picked several of the large, ripe fruits. He gathered the downy cotton from the pods, and put a soft cushion of kapok onto the top crosspiece of each crutch. Then he wrapped the kapok in place with strips of cloth. Pepe tried the crutches again and found them comfortable.



"Gosh, Dad, you really fixed them great!" cried the boy, smiling at his father with pride. "Look how well I can walk now!" He bounded about the dusty patio on his new crutches.

"I'm proud of you, son!" said his father, smiling too.

As the health worker was saddling his mule to leave, the whole family came to say good-bye.



"I can't thank you enough," said the father. "It's so wonderful to see my son able to walk upright. I don't know why I never thought of making crutches before . . ."

"It's I who must thank you," said the health worker. "You have taught me a great deal."

As the health worker rode down the trail he smiled to himself. "How foolish of me," he thought, "not to have asked the father's advice in the first place. He knows the trees better than I do. And he is a better craftsman.

"But how fortunate it is that the crutches that I made broke. The idea for making the crutches was mine, and the father felt bad for not having thought of it himself. When my crutches broke, he made much better ones. That made us equal again!"

So the health worker learned many things from the father of the crippled boy—things that he had never learned in college. He learned what kind of wood is best for making crutches. But he also learned how important it is to use the skills and knowledge of the local people—important because a better job can be done, and because it helps maintain people's dignity. People feel more equal when each learns from the other.

It was a lesson the health worker will always remember. I know. I was the health worker.

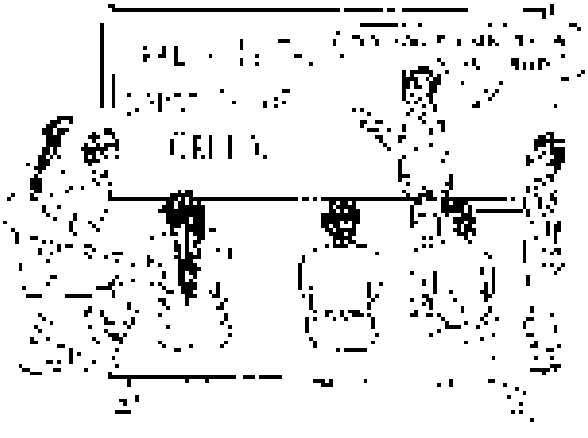
David Werner

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IDEAS FOR A DISCUSSION ABOUT SHARING AND SELF RELIANCE







START A DISCUSSION

A PUZZLE TO GET PEOPLE THINKING IN NEW WAYS

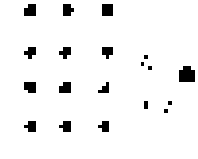


New approaches to health care require new approaches to teaching and learning.

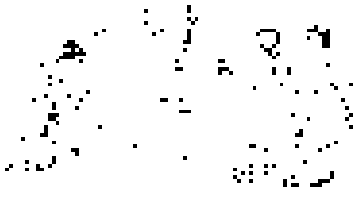




they must go beyond the limits they set for themselves



CRITICAL STUDY OF TEACHING METHODS AS PART OF HEALTH WORKER TRAINING



PRACTICE



UNDERSTANDING

IDEAS FOR DISCUSSION ABOUT THE PURPOSE OF SCHOOLING

Have most schools changed since you were a child? In what ways?



Many people think that the primary purpose of education should be to help persons gain the knowledge, skills, and awareness necessary to meet life's needs.

[illegible]

[illegible] you [illegible] your [illegible] [illegible] [illegible] people [illegible] most people in your village or community? [illegible] [illegible] [illegible]

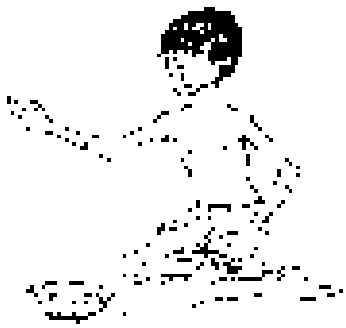
Examples of questions to get people thinking and talking about the purposes of schooling:

- [illegible]

- [illegible]

- [illegible]

- [illegible]



In what ways do our schools help children to [illegible]

- [illegible]

- [illegible]

- [illegible]

- [illegible]

- [illegible]

- [illegible]

- [illegible]

[illegible]

[illegible]

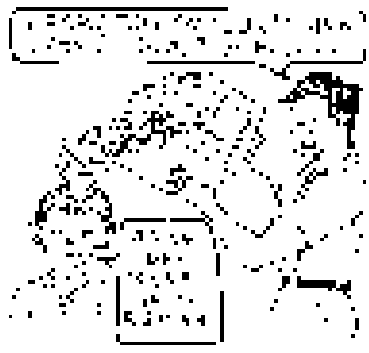
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Comparing basic formal and non-formal education



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DOES YOUR TEACHING RESIST CHANGE, OR ENCOURAGE IT?



[illegible]

[illegible] authoritarian [illegible] [illegible] [illegible]

ROLE PLAYS THAT HELP PEOPLE EXPLORE TWO KINDS OF TEACHING







Two fictional characters, THE BOSSY TEACHER and the LEARNER-CENTERED TEACHER, are introduced in this role play.

Suggestions to the instructor:

- Before the session, write the names of the two characters on two pieces of paper and put them in a hat.
- When it is time to begin the role play, ask two students to come to the front. Ask them to draw a piece of paper from the hat. Tell them to read the name of the character they have drawn, but not to tell anyone else what it is.
- Explain that each student will play the character whose name he or she drew. Tell them that they will teach the same health topic in two very different ways. Then give each student a minute to think about how the character he or she drew would teach the topic. Tell them to think about what the character would say and do, and how each character would feel about the other character.
- Ask the two students to begin. Tell them to stop after about 5 minutes. Then ask the rest of the class to discuss the following questions:
  - How did the two characters differ in the way they taught the topic?
  - Which character was more helpful to the learners? Why?
  - Which character would you rather be? Why?
- Ask the two students to sit down. Then ask the class to discuss the following questions:
  - Which character do you think is more common in your country?
  - Which character do you think is more common in your own teaching?
  - What can you do to be more like the learner-centered teacher?

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The first role play: THE BOSSY TEACHER



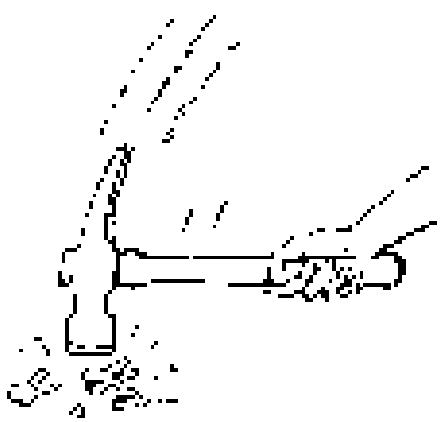
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The second role play: THE GOOD GROUP LEADER as facilitator

[illegible]

Suggestions to the group leader:

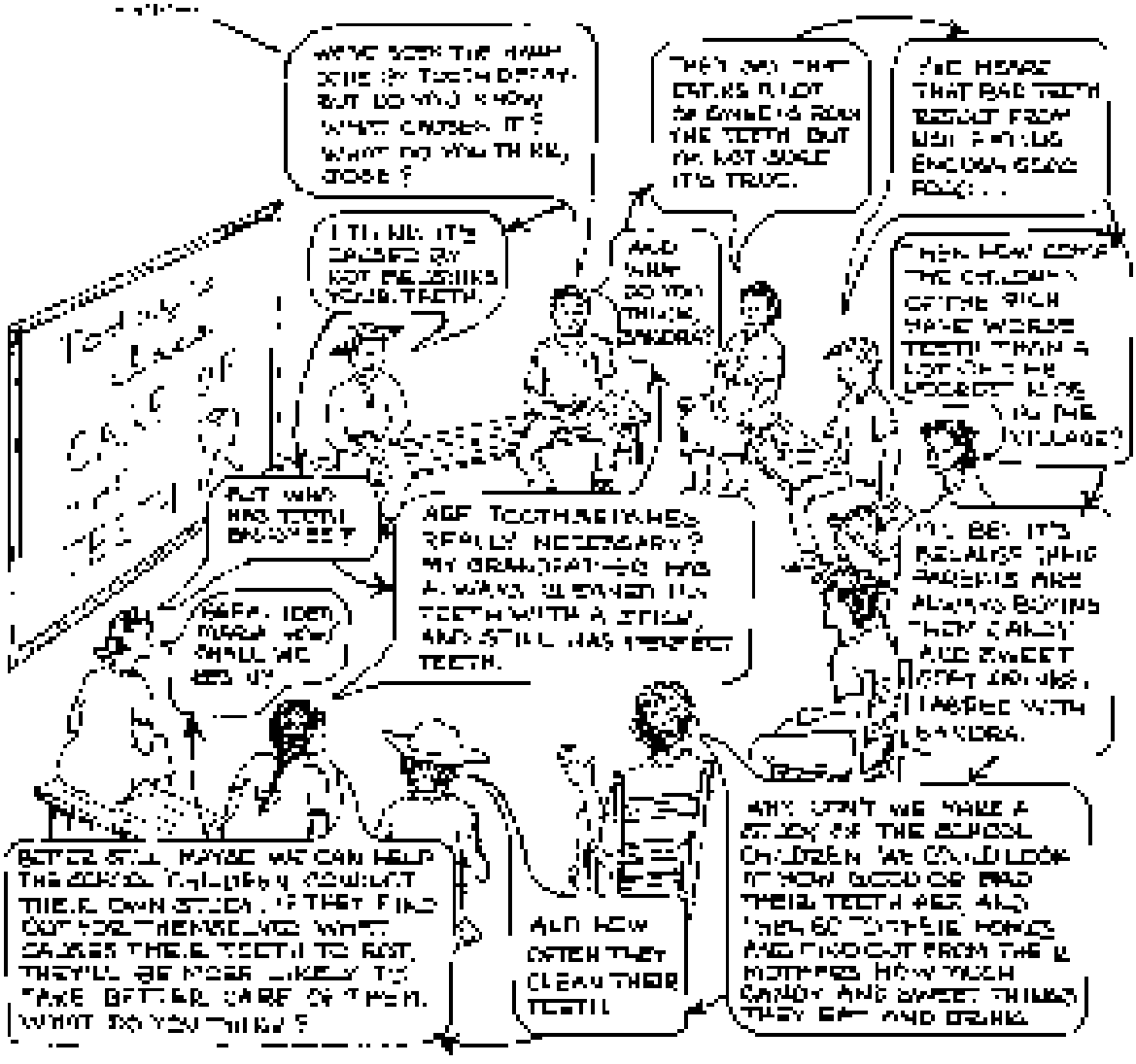
- [illegible]
- [illegible]
- Ask probing questions to help the students understand [illegible]
- Ask a lot of questions. Encourage students to [illegible]
- Emphasize the most useful ideas and information [illegible]
- Use teaching aids that are available locally and [illegible]
- Do not expect [illegible]
- [illegible]
- Encourages students to reason what they have seen and learned to find needs and problems [illegible]



[illegible]

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The second role play: THE GOOD CHOLP LEADER

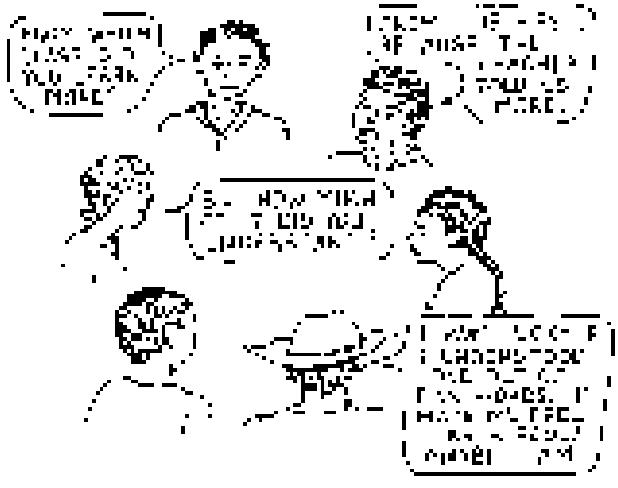


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Group discussion following the two role plays

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]



[illegible]

"[illegible]

"[illegible]

"[illegible]

"[illegible]

"[illegible]

"[illegible]

"[illegible]

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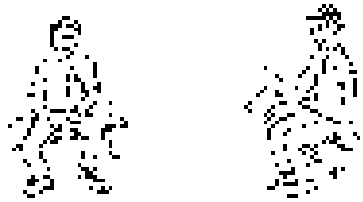
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- [illegible]
- [illegible]
- [illegible]
- [illegible]



- [illegible]
- [illegible]
- [illegible]



- [illegible]

When you ask questions, you can help the students to look critically at their own questions. Do not be too quick, let them find their own answers, even if they are different from yours. This is how you will show that you

[illegible] you must still be ready to [illegible] people — [illegible] Your attitude will encourage [illegible] to ask questions. Be ready to [illegible] questions. Be ready to [illegible]

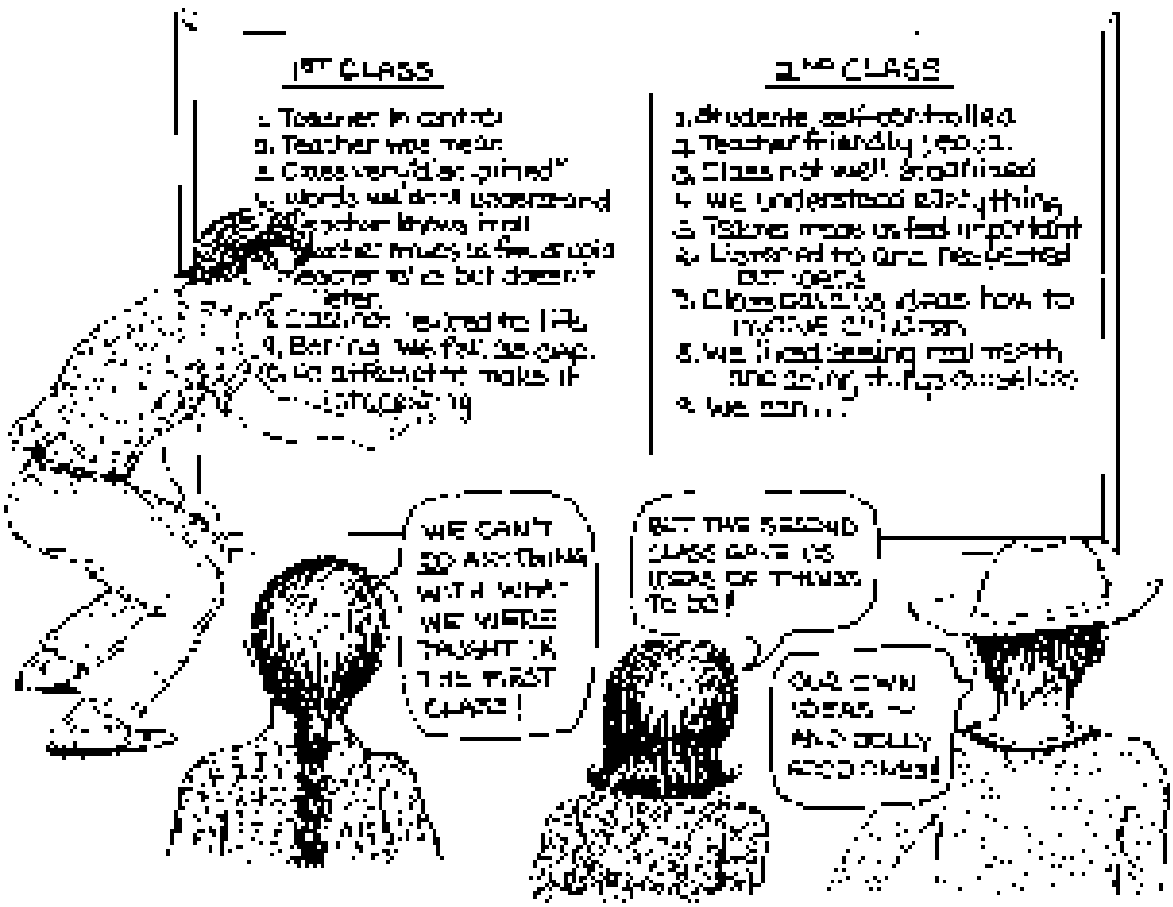
[illegible] you must [illegible] jump over a puddle, or you [illegible] like [illegible] do not push them. Your attitude [illegible] to [illegible] you will [illegible] [illegible] You will be [illegible] opportunities [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] your example will say far more than your words. Be serious, be relaxed.



People will notice the kindness or they will [illegible]

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Analysis of the two role plays



As you read the following, pay special attention to the ways in which the role plays illustrate principles of adult learning.

"The role plays clearly show that participatory methods are not just a matter of technique. They are based on a philosophy of education that values the learner and the learning process."

"Have you ever been in a class like the first one? Did you enjoy it? Did you learn much? Why not?"

"Have you ever been in a class like the second one? Did you enjoy it? Did you learn much? Why?"

Adapted for www.hesperian.org

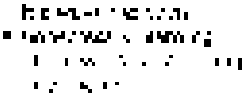
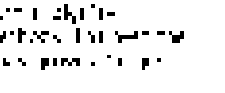
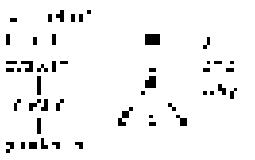
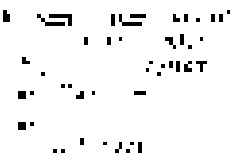
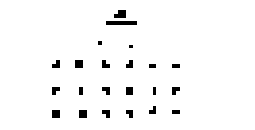
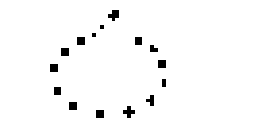
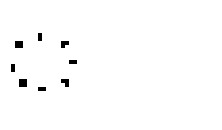
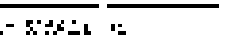
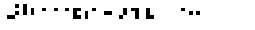
[illegible] EDUCATION



[illegible]

	CONVENTIONAL	PROGRESSIVE	LIBERATING
Purpose	to CONTROL	to GROW	to TRANSFORM
Aim	[illegible]	[illegible]	[illegible]
Method	[illegible]	[illegible]	[illegible]
Learner focus	CONTROL the [illegible]	[illegible]	[illegible]
Content	AUTHORITARIAN [illegible]	[illegible]	[illegible] CONFRONTATIVE [illegible]
Power structure and the curriculum	[illegible]	[illegible]	SUBVERSIVE [illegible]
Use of media and technology	Didactic [illegible]	[illegible]	[illegible]
Assessment	[illegible]	[illegible]	[illegible]
Teacher role	[illegible]	[illegible]	[illegible]
Teaching methods	[illegible]	[illegible]	[illegible]
Teacher role	[illegible]	[illegible]	[illegible]

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	TRADITIONAL	PROBLEM-POSING	LEARNER-CENTRED
Organization of the learning environment			
Relationship between teacher and learner			
Activities			
Learning process			
Value of learner experience			
Knowledge			
Motivation			
Assessment			
Evaluation			
Role of mistakes			

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APPROPRIATE AND INAPPROPRIATE TEACHING: TWO STORIES

[illegible] to help [illegible] teaching [illegible] teaching [illegible] Teaching [illegible] skills or procedures than to pass on facts. The stories are amazing but [illegible] will be [illegible] [illegible] [illegible]

STORY







"The D and V Blues"

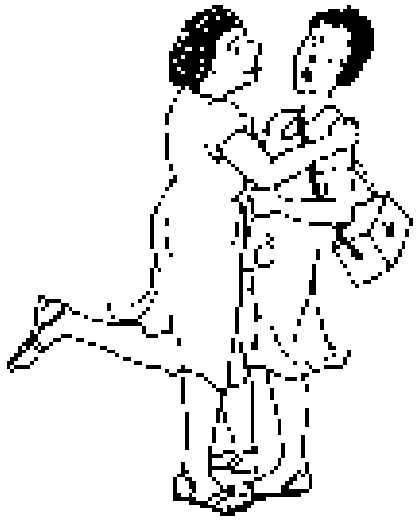








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she hugged the person whose
child was in most need

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> To be a good teacher of health workers, you don't need to know a great deal about medicine, about home building, or about weighing babies. These things you can learn together with your students. What you do need to know about is people, how they feel, how they relate to each other, and how they learn.

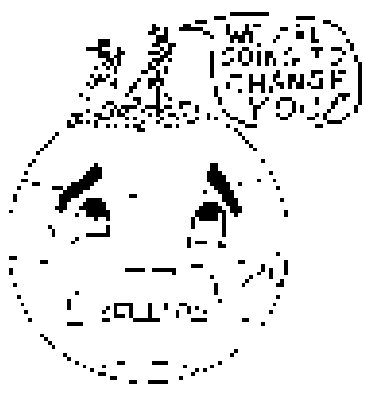
ON CHANGING HABITS AND ATTITUDES

Many health programmes assume that the principal goal of health education is to change people's habits and attitudes.

Unfortunately, such a goal can be misleading. It focuses attention on what people do wrong, rather than building on what they do right. It is based on the determination to overcome the [illegible] and [illegible] of individuals, but it ignores the social, political and economic factors which contribute to ill health, and which may make it impossible for individuals to act on their knowledge.

A people-centred approach to health education takes the opposite point of view. It recognizes that the problems of the poor result not from any personal failure, but from the way society is organized. It therefore aims to help people to understand the forces which affect their lives, and to develop the confidence and skills to overcome the conditions that cause poverty and ill health.

THE AIMS OF HEALTH EDUCATION

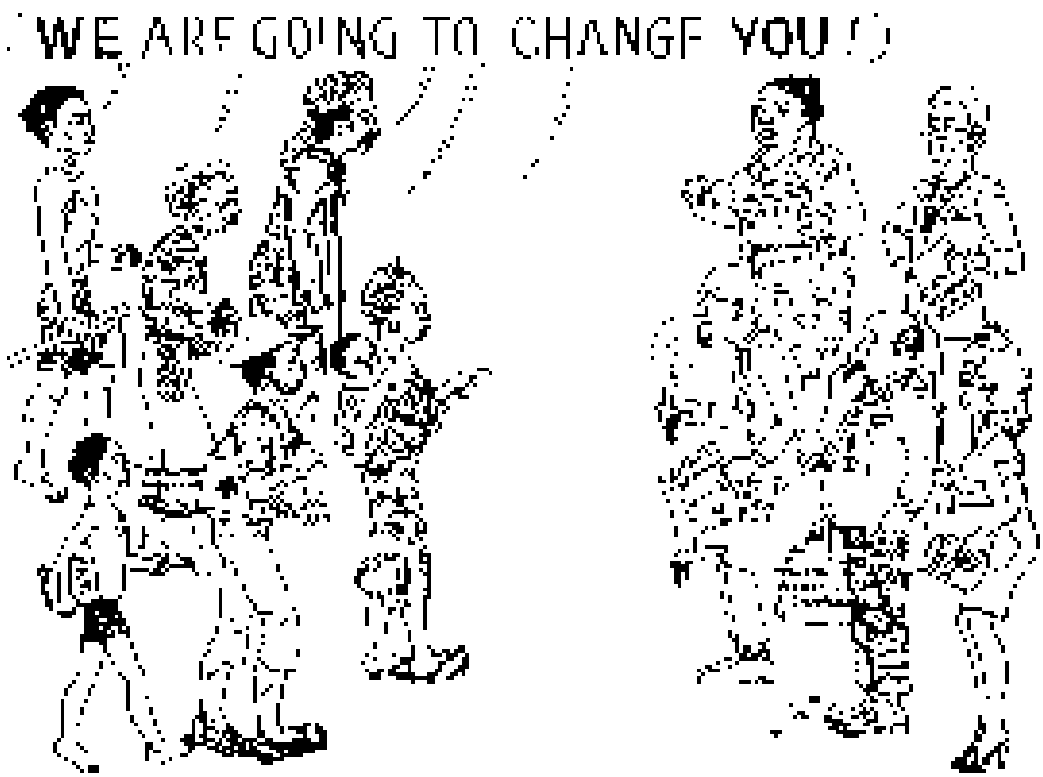
BEHAVIOUR CHANGE	SOCIAL CHANGE
	
To persuade individuals to change their attitudes and behaviour so that they will adapt themselves to their environment.	To educate individuals to understand the forces which affect their lives, and to help them to work together to change their environment.

Changing people's behaviour is not easy, and there is no proven formula for changing attitudes and habits. Behaviour change is a complex process, which depends on many factors, including the individual's knowledge, beliefs, attitudes, skills, and the influence of family, friends and community. Health education can help people to change their behaviour, but it is only one of many factors which are necessary if people are to change their lifestyles.

An individual's behaviour is usually determined partly by their knowledge and beliefs, and partly by the social and economic factors which affect their lives. Health education needs to focus on helping people learn how to change their situation.

As people learn more about the things which affect their health, they may change their behaviour. Their attitudes may change. But real, long-term change will come more slowly from the process of education.

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CHAPTER 2

Selecting Health Workers, Instructors, and Advisers

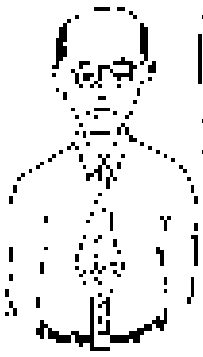
WHO MAKE THE BEST HEALTH WORKERS?

SHOULD HEALTH WORKERS BE FROM THE VILLAGE OR COMMUNITY WHERE THEY WORK?

Many health programs, both large and small, agree that it is important for health workers to be from the communities where they work. This is because ...

TWO EXPLANATIONS FOR WHY IT IS BETTER FOR HEALTH WORKERS BE FROM THE COMMUNITIES WHERE THEY WORK

The local health worker knows the community well.



Although the health worker may not have had much education, he or she knows the community well. Because people trust and listen to him or her, the health worker can ...

The local health worker is more likely to stay in the community.



Because the health worker is from the community, he or she is more likely to stay and work there. Many health workers must live away from their families and friends in order to do their work. ...

The health worker begins ... Many programs prefer to have health workers from the communities where they work. Many health workers ... Health workers ... the community ...

Some people in the community may not like the health worker because he or she is from the community. They may think that he or she is not as well educated as other people in the community. Most people ... people in the community ... health worker.

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Some American trainers of health workers in developing countries have found that they can learn a lot from the people they work with. They have learned things that they could not have learned in any other way. Trainers should always be ready to learn from the people they work with.

Sometimes people who have had only a little training as health workers in their own villages can do more than people who have had a lot of training. Sometimes people who have had a lot of training in a hospital or clinic are not willing to work in villages. Sometimes people who have had a lot of training in a hospital or clinic are not able to work in villages.

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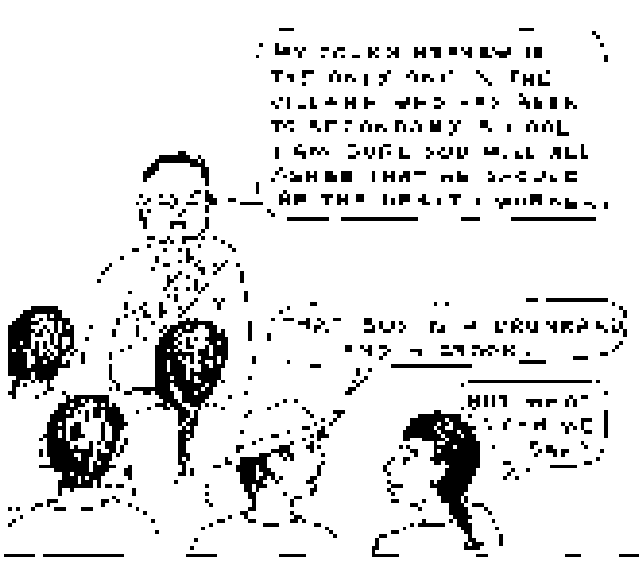
Sometimes people who have had only a little training as health workers in their own villages can do more than people who have had a lot of training in a hospital or clinic. Sometimes people who have had a lot of training in a hospital or clinic are not willing to work in villages. Sometimes people who have had a lot of training in a hospital or clinic are not able to work in villages.

WHO SELECTS HEALTH WORKERS AND HOW?

Many programs for training health workers start with a plan to train people from the community who already have some skills. They may also be selected by the community. These are the reasons:

- It is very important that the people who are selected for training are those who will be able to work well in the community.
- The selection process should help to make sure that the people who are selected for training are those who will be able to work well in the community.
- A health worker should be selected by the community and should be responsible to the community.

Problems with selection by the community



Sometimes people who have had only a little training as health workers in their own villages can do more than people who have had a lot of training in a hospital or clinic. Sometimes people who have had a lot of training in a hospital or clinic are not willing to work in villages. Sometimes people who have had a lot of training in a hospital or clinic are not able to work in villages.

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Another problem: Some [illegible] agencies [illegible] [illegible] [illegible]

Encouraging participation

Activities that encourage participation

- Games
- Role-plays
- Group discussions
- Brainstorming sessions
- Small group discussions followed by reports to the whole group
- Case studies followed by discussions
- Practical activities followed by discussions
- Surveys followed by discussions
- Demonstrations followed by practice
- Songs
- Quizzes
- Competitions
- Exhibitions
- Field visits
- Simulations

SUGGESTIONS FROM PARTICIPANTS

.

Participation is the process by which learners are actively involved in learning. Participation is not just a matter of getting learners to do things. It is also a matter of getting learners to think about what they are doing and why they are doing it. Participation helps learners to develop confidence in their own abilities and to take responsibility for their own learning.

Participation is not a matter of using a few games or other techniques in the classroom. It is a matter of creating a learning environment in which learners feel free to participate actively in the learning process. Learners should be encouraged to ask questions, to express their opinions, to share their experiences and to make suggestions. They should be encouraged to help each other learn. They should be encouraged to take responsibility for their own learning.



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Joint selection by the community and program leaders

Some programs feel the best selection of health workers results from combining **the community's knowledge** of its people with **the program leaders' experience.** The village is asked to pick 3 or 4 'candidates'. From these, the instructors choose the one they think most suited—perhaps after testing their skills and attitudes.

HANDICAPPED PERSONS AS HEALTH WORKERS

Some programs require that health workers be in "excellent physical health." Clearly, health workers should be free of contagious diseases such as untreated tuberculosis, and healthy enough to handle their responsibilities.

We have found, however, that **some of the best health workers are persons with serious physical handicaps;** polio, for instance, or an amputated arm or leg. Unable to do hard physical labor, they may find more time for health work and greater satisfaction in doing it. Because of their own problems, they also have more understanding for others who are ill or handicapped. In some ways, their weakness becomes their strength. As health workers serving their community, they set an example for others who are handicapped.



Handicapped persons often make excellent health workers. Here a young man, himself crippled by juvenile arthritis, repairs braces for a child with polio. (Mexico—Project Piaxtla)

WHO MAKE BETTER HEALTH WORKERS—MEN OR WOMEN?

Some programs train only men as health workers. Others only women. Others train both.

Reasons often given for selecting <u>women</u> as health workers:

- Women and children make up ¾ of the population. Their health needs are especially great. And women usually prefer health workers who are women.
- Women have more experience in caring for children, and may be more tender.





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- Women usually stay closer to the village, and so are more available when needed.
- Women often are more exploited and abused than men. Therefore their sympathies are more likely to lie with those who have less power and greater need. A health program in India states: "Women and children are the more vulnerable groups in the rural area, therefore a woman is best able to motivate and bring about change."*



Women health workers in Bangladesh ride bicycles, which only the men used to do. This is helping women gain more equal rights.

- "With women there is less fear of misuse or malpractice," states the same program from India. In many areas, women tend to be more responsible, and they drink less. They may also be more willing to work for the people, not the money.

Reasons often given for selecting <u>men</u> as health workers:



- Men often can move about more safely and freely than women. They can go alone or at night to a distant house or village to attend an emergency.
- Much of the work to improve health involves farming, water systems, latrine building, and other activities for which the help of men is needed. Men can perhaps be better led by a male leader.
- Where part of the health worker's job is to work toward social change, men are more likely to take action and to organize the people than are women. (This is not necessarily true. It is interesting to note, however, that in some countries where human rights are often violated, government-run health programs train mostly women health workers. In those same countries, community-based programs working for land rights and social change often train mostly men health workers.)



Some programs happen to train mostly men, others mostly women. Usually this is **not** because they feel one sex makes better health workers. In some places there are difficulties in recruiting either men or women. Men (especially young men) may be too 'proud' to consider training for 'nursing' work—especially if on a volunteer basis. In some areas, unmarried women may not be permitted to leave home to attend a training program. And married women may be unable to leave their children and their work, or their husbands may not let them.

Experience shows that **both women and men can make good health workers.** Often men are able to relate better to the health needs of men, and women to the needs of women and children. Some health programs resolve this difference by training both a man and a woman (sometimes a married couple) from each village.

*From ***Moving Closer to the Rural Poor,*** by the Mobile Orientation and Training Team, Indian Social Institute, New Delhi.

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YOUNGER OR OLDER HEALTH WORKERS– WHICH WORK OUT BEST?



Although most health programs train health workers who are quite young, many find that **somewhat older or middle-aged persons often work out better.** Young people sometimes have more open minds (and may be easier to recruit), but they have more difficulty in winning people's confidence and cooperation. Also, younger persons may be less likely to stay in the village. Some programs find that unmarried girls are likely to get married and move away. Other programs find that young men often move to the cities or to migrant farm-working camps.

Older persons are usually more likely to remain in their communities, and to work with great dedication and responsibility. Also, people are more likely to respect and listen to them. But they may be more fixed, or even rigid, in their ideas. This can be both a strength and a problem.

In the experience of many programs, the most reliable age group is from about 25 to 40. When health workers are younger or older than that, more difficulties seem to arise. There are, of course, many exceptions. In Ajoya, Mexico, the present leaders of the program began as 'junior health workers' when they were 13 to 16 years old.

EDUCATIONAL LEVEL

Capable health workers have been trained from every educational level, from persons who cannot read to those with university or medical degrees. Each level presents special strengths and special problems.

Persons who cannot read and write often have unusually well-developed memories–sometimes far better than those of us who depend on writing things down. But to train health workers who cannot read and write calls for somewhat different educational methods. Few instructors have been taught these methods, but they can learn them with the help of the students.

In most programs, the average education level of community health workers is from 3 to 6 years of primary school. Yet some programs make 6 years of primary school a minimum requirement. Others require completion of secondary school.

Education requirements sometimes give rise to problems. For example, in Guatemala, a government training program for 'health technicians' in the highland Indian communities started with two requirements: 1) Applicants must speak a native Indian language as well as Spanish. 2) They must have completed secondary school. However, it turned out that very few native language speakers had finished secondary school. One of the two requirements had to be dropped.

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

> **Persons with only a few years of schooling often make more reliable, more skilled community health workers than those who have had more formal education.**

[illegible]

TRADITIONAL HEALERS AND MIDWIVES AS HEALTH WORKERS



[illegible]

Advantages to training traditional healers as health workers:

- [illegible]
- [illegible]
- [illegible]
- [illegible]

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Difficulties in training traditional healers as health workers:

Traditional healers often are **very set in their ways.** Like modern medicine, traditional medicine includes many practices that are helpful, others that are useless, and some that are harmful. Traditional healers, like many modern doctors, may be reluctant to examine critically the practices they have always followed. They may be unwilling to omit or change harmful but profitable practices. (These may include the misuse or overuse of certain modern medicines, sometimes combined with herbal medicines.)



This 'herb doctor' was chosen by his village to train as a health worker. His art of healing adds much to the science of health care. Today, he combines aspects of modern and folk medicine. (Mexico)

A common difficulty with traditional healers relates to their approach to problem solving. **Most traditional healers rely, to a large extent, on the psychological 'power of suggestion'.** This is a very important part of the healing process as they know it. The traditional healer convinces the sick person and his family that he or she knows immediately just what the illness is, what caused it, and how to treat it. This immediate and absolute certainty is a key to traditional healing.

But the science of modern medicine calls for just the opposite approach. **The scientific healer begins with doubt, not certainty.** He starts by asking questions, collecting related information, and systematically considering and testing possibilities (see Ch. 17).

It is often difficult for persons used to traditional healing to learn the more scientific approach. As established healers, they may find it especially difficult to ask for advice or suggestions, or to admit when they have trouble diagnosing an illness.

An instructor who is unaware of all this, may treat these persons as if they were ignorant or dishonest. This makes it more difficult for both to admit their doubts or mistakes. In our own experience, however, we have found that when an instructor understands and appreciates the local forms of healing, most misunderstandings with traditional healers can be avoided. When this is so . . .

Traditional healers can become some of the most capable and dedicated primary care workers.

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PERSONAL QUALITIES, ATTITUDES, AND CONCERNS

Of the many different characteristics, experiences, educational and personal skills that might be considered when selecting a person for training, the most important are those that reveal the kind of person he or she is. These essential qualities are usually revealed in the person's life, in the way he or she relates to other people, and in the kinds of concerns and values that motivate his or her actions. Because these qualities are so important, they should be carefully considered during the selection process. Even though they are difficult to measure, they should be given more weight than academic qualifications or previous experience when selecting a person for training.

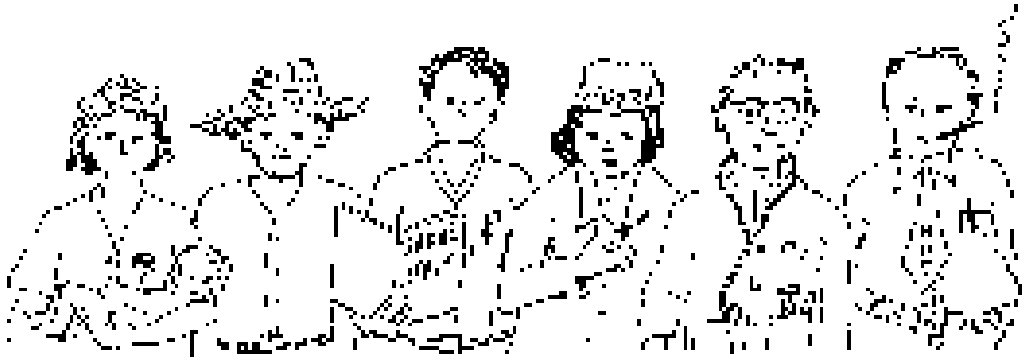
> Perhaps the most important quality to look for when selecting a community health worker is the person's concern for social justice.
>
> Does he treat other people as his equals?
>
> Is his first concern for those in greatest need?



This cartoon, by Hugh D'Andrade for the World Council of Churches, illustrates the personal qualities that are important in those who work in community health programs and the type of attitudes they should not have.

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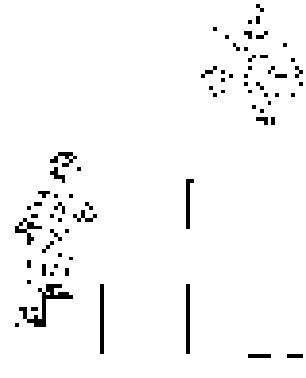
WHO MAKE THE BEST TEACHERS OF VILLAGE HEALTH WORKERS?



[illegible] **Instructors provide the example or 'role model' for teaching and learning** [illegible]

[illegible]

THE EDUCATION GAP



[illegible]

[illegible]

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Many health workers do not work in health centres or hospitals. They work in:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

- [illegible]
- [illegible]
- [illegible]

Some health workers are trained to work in certain specialized areas of health care. Here are some examples of common specialized health workers:



Doctors. [illegible] to examine patients, diagnose illnesses and injuries, and prescribe treatments. They can also perform surgical operations. Doctors usually work in hospitals or health centres, but some work in private practice. Doctors usually have to study for many years before they can practise medicine. Some doctors specialize in one area of medicine, such as surgery, obstetrics, or paediatrics. [illegible]



Nurses. [illegible] nurses usually work in hospitals or health centres. Some nurses work in private practice. They usually have to study for several years before they can practise nursing. Some nurses specialize in one area of nursing, such as midwifery, paediatrics, or surgical nursing. Some nurses work in villages or in health centres. [illegible]



Medical assistants. [illegible] to assist doctors and nurses in their work. They usually work in hospitals or health centres. They usually have to study for a few years before they can practise. Some medical assistants specialize in one area of medicine, such as surgery, obstetrics, or paediatrics. [illegible]

Some health workers are trained to work in other areas of health care. For example, some health workers are trained to work in health education. They teach people how to prevent illness and how to improve their health. Some health workers are trained to work in health administration. They help to plan and manage health services. Some health workers are trained to work in medical research. They help to find out more about the causes of illness and how to prevent and treat illness. Some health workers are trained to work in medical engineering. They help to repair and maintain medical equipment.

Many health workers do not work in health centres or hospitals. They work in:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

- [illegible]
- [illegible]
- [illegible]

Some health workers are trained to work in certain specialized areas of health care. Here are some examples of common specialized health workers:

Doctors. [illegible] to examine patients, diagnose illnesses and injuries, and prescribe treatments. They can also perform surgical operations. Doctors usually work in hospitals or health centres, but some work in private practice. Doctors usually have to study for many years before they can practise medicine. Some doctors specialize in one area of medicine, such as surgery, obstetrics, or paediatrics. [illegible]

Nurses. [illegible] nurses usually work in hospitals or health centres. Some nurses work in private practice. They usually have to study for several years before they can practise nursing. Some nurses specialize in one area of nursing, such as midwifery, paediatrics, or surgical nursing. Some nurses work in villages or in health centres. [illegible]

Medical assistants. [illegible] to assist doctors and nurses in their work. They usually work in hospitals or health centres. They usually have to study for a few years before they can practise. Some medical assistants specialize in one area of medicine, such as surgery, obstetrics, or paediatrics. [illegible]

Some health workers are trained to work in other areas of health care. For example, some health workers are trained to work in health education. They teach people how to prevent illness and how to improve their health. Some health workers are trained to work in health administration. They help to plan and manage health services. Some health workers are trained to work in medical research. They help to find out more about the causes of illness and how to prevent and treat illness. Some health workers are trained to work in medical engineering. They help to repair and maintain medical equipment.

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Bridging the education gap



1. Admit openly to your students that the gap exists and that it is not only your responsibility to bridge it. Invite your students to discuss and look for ways to bridge it.

2. Do not assume that you understand in a personal way the life, language, customs, and needs of your students and their communities. Learn about them, with their help, in their community. Be open to learning from them. Find out what kinds of health workers the community needs and wants.

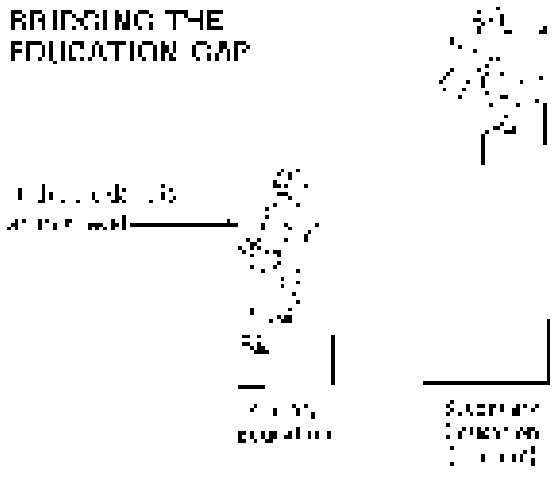
3. Many health workers are taught that doctors are the most important members of the health team. They may not be the main teacher. Your aim should be to make sure that all health workers will be able to learn from each other, including doctors. Teaching by nurses and health workers can be just as effective as teaching by doctors, and is often more appropriate.

4. Adult learning is different from children's learning. Always begin with the knowledge and skills the health workers already have, and help them build on these. You can use the examples in this book to show your group how to do this. Make them responsible for their own learning. Help them to identify their own learning needs. Encourage them to ask questions. Be ready to admit when you do not know the answer. Help them to find out for themselves.

5. Most important! Make yourself as unnecessary as possible, as soon as possible. Look for ways to share your work with others, and to help them take over your responsibilities. Always use the learning that takes place in your group to help them to become more self-reliant. Encourage them to solve problems as much as possible by themselves. Help them to find out for themselves. Do not be the source of knowledge and answers for them.

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BRIDGING THE EDUCATION GAP



CLOSING THE GAP



You are successful when, over time, you work toward making yourself as unnecessary as possible, as soon as possible.

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Closing the education gap: community persons as instructors



When there is a severe lack of qualified teachers, schools and health centers may have difficulty finding enough instructors. They may decide to train community persons as instructors who:

- live in the same communities as the health workers in training
- speak the local language
- have the same cultural and social background as the trainees (same religion, mother tongue)
- have had many years of practical experience in their jobs (they may have had less formal education than the trainees, but they have had more experience at solving health problems at the community level)
- know how to speak and listen to people in a way that is respectful

It is important that instructors be culturally acceptable to the students. Do they understand enough about the knowledge and skills of health workers in training to be able to select, adapt, or teach appropriate materials? Are they able to communicate with the students in a way that is respectful of their culture? Training of local persons to be instructors may be needed. But in the long run, this training will help to prepare local people to take over most or all of the instruction. The more outstanding and experienced health workers are often the best ones for the job.

CAN LOCAL PERSONS BECOME EFFECTIVE INSTRUCTORS OF HEALTH WORKERS?

Health programs have now been operating for a number of years in many countries. Experience has shown that:



Experienced village health workers with appropriate preparation, back-up, and friendly criticism from the learning group—can make excellent instructors.



Just as with other trainers, the challenge is to find those who will be open to new ideas, attitudes, methods, and materials, and to encourage them to be good instructors.

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STRENGTHS AND WEAKNESSES OF WORKSHOP INSTRUCTIONS

A story:



Strengths and weaknesses of workshop instructions

Some workshop instructions are too wordy. Too much information is given. Participants cannot remember all the instructions. They get confused. They forget what they are supposed to do.

Some workshop instructions are too short. They do not give enough information. Participants do not know what they are supposed to do. They get confused. They forget what they are supposed to do.

Some workshop instructions are too long. They do not give enough information. Participants do not know what they are supposed to do. They get confused. They forget what they are supposed to do.

Some workshop instructions are too short. They do not give enough information. Participants do not know what they are supposed to do. They get confused. They forget what they are supposed to do.

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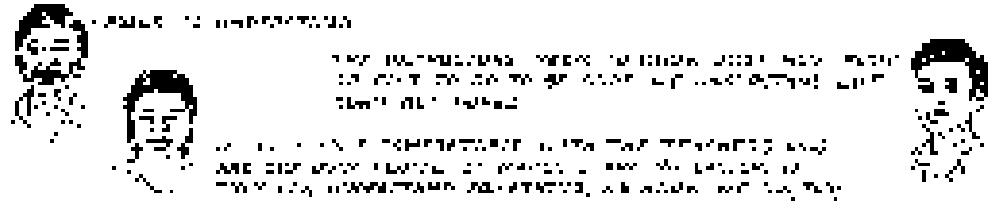


Some workshop instructions are too short. They do not give enough information. Participants do not know what they are supposed to do. They get confused. They forget what they are supposed to do.

Some workshop instructions are too long. They do not give enough information. Participants do not know what they are supposed to do. They get confused. They forget what they are supposed to do.

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'TRAINING ORGANIZERS' OR 'BACK UP PERSONS'

Supportive back up by someone can be so important for instructors in health workers. It is hard for anyone to stand alone and be confident and sure of what they are doing. We all can benefit when someone with more experience, or a different perspective, observes our teaching and makes helpful suggestions.

The person who provides this sort of support and encouragement is sometimes called a back up person, "assistant", or training organizer. Since the most important job is to help the instructor, this training organizer should not take an active role in the class. Instead, he or she should watch and listen carefully and then talk with the instructor.

"The role of the training organizer in a health worker training program is sometimes misunderstood. Here is how I see it:

"The training organizer's job is to help the instructor by watching and listening carefully and then reviewing the lesson with the teacher afterwards, using questions such as:

- Did the message get across clearly?
- Did the trainees have enough opportunity to participate?
- Were visual aids used effectively?
- Were there ways that the trainees' skills and knowledge could be applied in their work?

"The training organizer will review your plans before you try them out, and will observe your teaching."



Village health workers know much more than most outsiders. Trainers may learn as much as they teach. Training organizers can help trainers by sharing their experience and knowledge. But it is easy for the organizer to forget the background and concerns of the trainer. Trainers and organizers will sometimes disagree.

Advise, don't boss!

Emphasize the secondary role of the observer, trainer assistant. Don't be a boss. Avoid criticizing or embarrassing the trainer in front of the group. Wait to see the outside person to begin giving himself out to see as a friend. Organizing programs that help each other, sharing, cooperating, and helping each other is different from competing and winning. Trainers may learn to take over the role of training organizers. In this way the outside person's job is to help the trainer to become more confident and skilled.

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CHAPTER 3

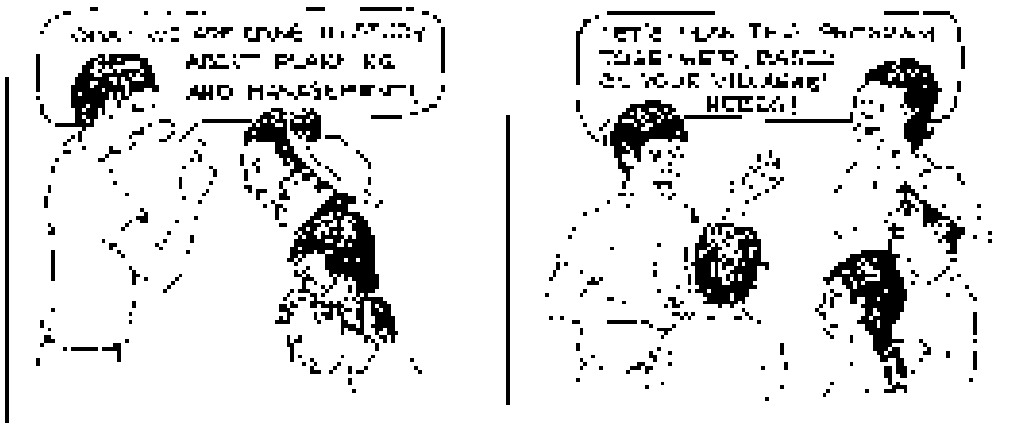
Planning a Training Program

[illegible] [illegible] [illegible] [

THE IMPORTANCE OF HAVING STUDENTS TAKE PART IN THE PLANNING

[illegible] plan effectively [illegible] analyze and organize what needs to be done [illegible] skills are especially important [illegible] work with students to become leaders, workers, and organizers within their communities.

[illegible] does not mean that students should be involved in all decisions about planning and management. It does, however, mean that [illegible] including the student group in the planning process.



[illegible] in the planning process will help them learn how to plan and manage their own activities.

There are several good reasons for [illegible] to participate in the planning process. Participation:

- [illegible] the planning process the students learn firsthand about analyzing, planning, and organizing volunteer activities.
- Students become more deeply involved [illegible] planning process.
- [illegible] activities and [illegible] more casual manner [illegible] than [illegible] when [illegible] and [illegible] are [illegible] and [illegible] are [illegible] and [illegible] with [illegible].
- Students can help adapt the [illegible] planning process, [illegible] and [illegible] to [illegible] needs. [illegible] and planning [illegible] more relevant [illegible] and [illegible] as well as [illegible].
- [illegible] and shared responsibility [illegible] to [illegible] and [illegible] and fairer distribution of control.

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A COMMON PROBLEM: PLANNING THINGS BACKWARDS

- [illegible]
- [illegible]
- [illegible]



[illegible]

[illegible]

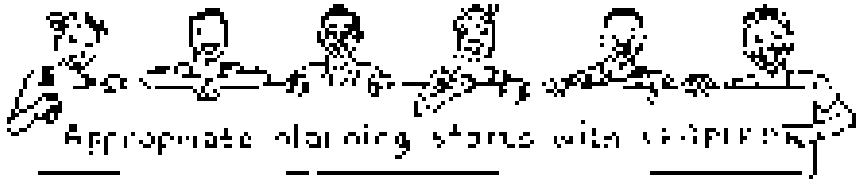
[illegible]

[illegible]

1st: [illegible]

2nd: [illegible]

3rd: [illegible]



Appropriate planning starts with [illegible]

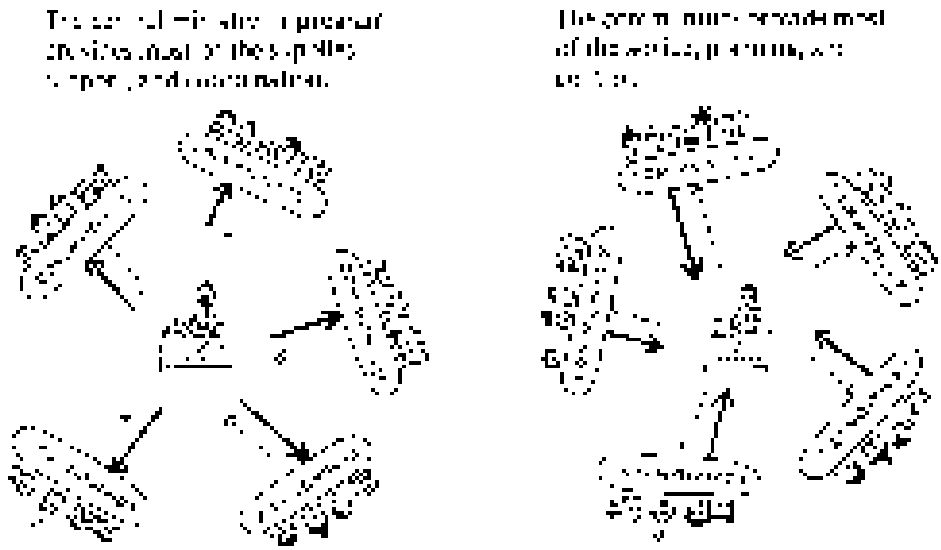
[illegible]

- [illegible]
- [illegible]

[illegible]

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A DECENTRALIZED APPROACH TO PLANNING



which groups become large, or their members are unable to participate fully, the process is dominated by a few persons, and control is centralized.

Planning and control has more chance of being appropriate, flexible, and responsive to human needs when it takes place in groups that are small enough for everyone to know each other.

DECIDING HOW MUCH TO PLAN IN ADVANCE AND HOW MUCH TO PLAN DURING THE COURSE

[illegible] is applied to [illegible] planning [illegible] course [illegible] by [illegible]. This [illegible] course [illegible] to be planned [illegible] needs, [illegible] capabilities.

[illegible] course [illegible] questions about why, when, where, with whom, and for whom the learning [illegible]. Participants [illegible] preparations [illegible].

[illegible] SESSION PLANNING [illegible]

Section A: [illegible]

Section B: [illegible]

Section C: [illegible]



Note: [illegible]

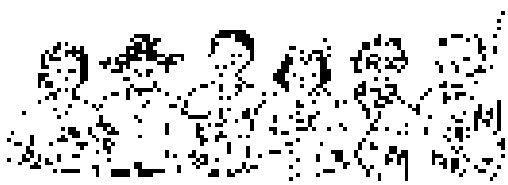
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IMPORTANT CONSIDERATIONS FOR OVERALL COURSE PLANNING

A. Planning to be done before the training course begins

FIRST CONSIDERATIONS—PURPOSES AND QUESTIONS

- Who has asked for this training course? What is their purpose in asking for it?
- Who will be responsible for organizing the course? Who will be in charge?
- Is it clear what the purpose of the training is? Is it clear who will be trained, what they will be trained to do, and why they need training?
- Are there enough people with the right skills and experience to be trainers? Do they have enough time to prepare and run the course? Do they need any help?
- Will the people who are going to be trained have enough time to attend the course?



2. OTHER ORGANIZATIONS AND PEOPLE

Other organizations that may be interested in the training course

- Government health departments
- Other organizations that provide training in health or related subjects
- Health organizations of other countries
- Organizations that provide money for training courses
- Organizations that provide equipment for training courses
- Organizations that provide books and other learning materials
- Organizations that provide transport for trainers and trainees
- Organizations that provide accommodation for trainers and trainees

3. EARLY DECISIONS—What? When? How many? Where?

- Should all the trainees be brought together for the training course, or should the training be given in several groups in different places?

- Selection of trainees and trainers
  - Who will select the trainees? What criteria will be used to select them? Will there be written applications?
  - Who will select the trainers? Is there enough time to select them carefully?
  - Do the trainers have the necessary skills and experience? Do they have enough time to prepare and run the course? Do they need any help?



- Location
  - What facilities will be needed? Are they available? Will they be affordable?
  - Will there be enough space for the trainees? Is the location suitable for the trainees? Is it easy for them to get there?
  - Is the location suitable for the trainers? Is it easy for them to get there?

- Numbers (How many trainees will there be? How many trainers will there be? Will there be enough trainers for the number of trainees? Will there be enough trainees to make the course worthwhile?)

- Timing
  - How much time will be needed for the course?
  - When will it be held?
    (Consider the best time for the trainees, the trainers, and the organizers.)
  - Will the training be suitable for the season? Will the trainees be busy with other work at that time? Will they be able to attend the course? Will the trainers be busy with other work at that time? Will they be able to run the course?
  - Will there be enough time to prepare the course properly?

- Funding
  - How much money will be needed? Is there enough money? Will it be available when it is needed?
  - Will the trainees have to pay for the course? Will they be able to afford it?
  - Will the trainees be able to attend the course if they have to pay for it themselves? Will their employers pay for them to attend the course? Will they be able to pay for their own transport and accommodation?
  - How much will the trainers be paid? Will they be paid for their preparation time as well as for the time they spend running the course?

- Follow-up and supervision
  - Will the trainees be supervised after the course? Will their supervisors be told what they should do to help the trainees put their training into practice?
  - Will the trainees be supported after the course? Will they be told where they can get help if they need it?
  - Will the trainers be supervised after the course? Will they be told what they should do to help the trainees put their training into practice?

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4 ANALYSIS OF TEACHING METHODS

- [illegible]
- [illegible]
- [illegible]



8. PLANNING APPROPRIATE TEACHING/LEARNING ACTIVITIES AND AIDS

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]



9. [illegible]

- [illegible]
- [illegible]
- [illegible]

10. [illegible]

- [illegible]
- [illegible]

11. [illegible]

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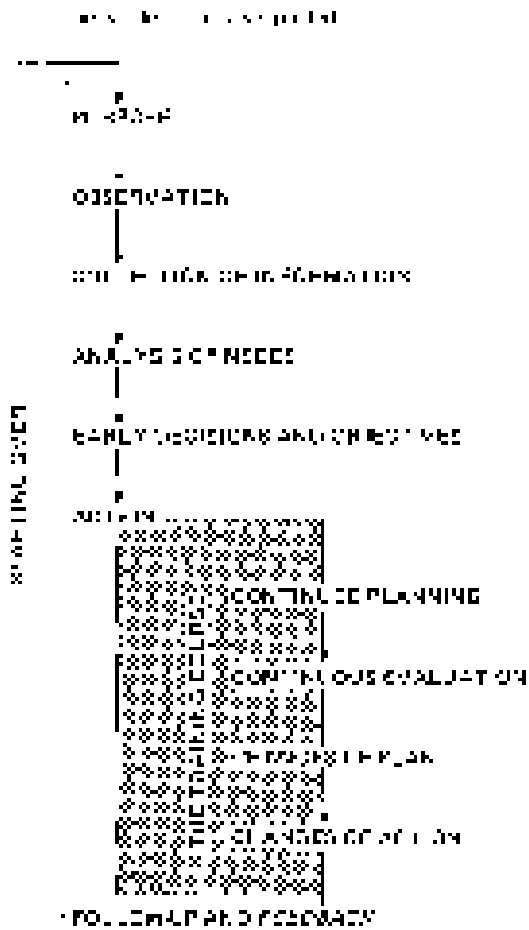
12. [illegible]

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15. [illegible]

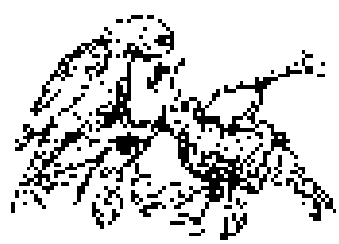


16. [illegible]


OBSERVATION
ANALYSIS OF NEEDS
EARLY DECISIONS AND OBJECTIVES
CONTINUOUS EVALUATION

C. [illegible]

17. [illegible]



EARLY DECISIONS

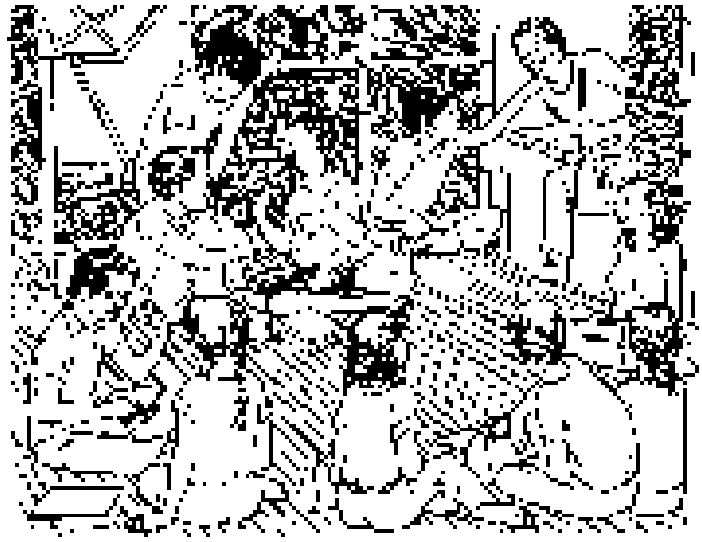
Location of training

[illegible] village health workers are best trained in a village. This [illegible] village health workers can practice skills in problem-solving by working under supervision in the village where they will work.

[illegible] village health workers can be trained in a village health center. Students can live with their families and practice skills in the village. But the health center must be near enough to the village for students to travel back and forth easily. A small community-based health center is usually far more appropriate for training village health workers than a large clinic or hospital. See page 2-8 for more information about choosing a training center.

[illegible] training can be done in a village, it is usually more convenient and less expensive to train village health workers in a health center. See page 3-10 for more information about training in a village.

[illegible] village health workers can be trained in a village, in a health center, or in a hospital. Each place has its advantages and disadvantages. Choose the place that is best for your program.



[illegible] village health workers should be trained in a village. This is the best way to prepare them to work in their own villages. They learn how to solve problems in the village where they will work.

In this training, village health workers learn how to use their skills in the village where they will work. They learn how to solve problems in the village where they will work.

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Numbers



[illegible] [illegible] [illegible] [

Funding

Most training programs are expensive, but there are many ways of reducing the cost of training. The more you can reduce the cost of training, the more people you can train to support your program. As a general rule, the more modest the funding, the more appropriate the training.

The struggle to maintain and improve the standard of training can be a costly learning experience for many involved in training programs. It is easy for the program sponsor to be overly generous, paying for expensive training and travel.

For example, a non-governmental training program in the state of Veracruz, Mexico, uses Le Journal wall newspaper. The idea originated in Indonesia and has spread to Latin America and other countries. The basic concept is to use a large wall newspaper to display health messages and stimulate discussion. Many newspapers are produced, each on a different topic. Most newspapers are produced by local people, using materials found locally. Some newspapers are produced by health workers and others by community members.



A wall newspaper is a very effective way to share information with people who have little formal education. Pictures and drawings are used to tell stories. Words are kept to a minimum. Each newspaper is usually produced by a group of people, rather than by one person. This helps to spread the workload and encourages participation. Many people can contribute ideas, help with the drawings, and help to put the newspaper together. Most newspapers are produced in a public place, such as a village square or a busy street corner, where many people will see them. Some newspapers are produced in a private place, such as a health post or a school, where only a few people will see them.

Outside funding often means outside control. Therefore, it is usually wise to allow no more than half the funding for a health or development activity to come from outside the community. Local contributions can be in cash or in kind. In-kind contributions are the value of the goods or services that the community provides for the program. For example, the community may provide the labor to build a health post, or it may provide food for training participants.

In Pisté, Yucatán, Mexico, the community agreed to provide the land, the building materials, and the labor to build a health post. They also agreed to provide the salary for a community health worker. The community health worker would be selected by the community and would be responsible to the community. The village would provide food for training participants. The health post would be owned and maintained by the community.

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MAKING A ROUGH PLAN OF COURSE CONTENT



CONSIDER TOPICS AND SKILLS
AS WELL AS THE PERIODS

SUGGESTED STEPS FOR PLANNING THE COURSE CONTENT

1. **List the main problems** that health workers and local people should be able to deal with after the course.
2. **Discuss and determine which problems are most important** to the people you are training for.
3. **Decide which problems should be included and which should be emphasized** in the course. (Use the time available for the course as a guide. Do not try to teach too much. Concentrate on the problems that are most important for the health workers.)
4. **List the areas of knowledge and the skills health workers will need** in order to be able to solve the main problems. Consider how much time will be needed to give practice in the skills.
5. **Divide the course into periods** and consider how much time may be needed for each topic or activity.
6. **Try to use a good mix** to balance discussion-type learning (lectures) with learning by doing (practice). Also look at the balance between theory and practical work. Health workers learn best by doing.
7. **Make up a rough course plan**, by writing down the topics or skills to be covered in the order in which they should be presented. Do not try to plan details too much at this stage. Be prepared to change the plan as you go along.
8. **Prepare detailed plans** for at least the first few days.

In the rest of this chapter, we will look more closely at each of these steps. Now we will look at the first step.

- In the next section we will help you to list the main problems.
- Then we will look at how to help the instructors and students discuss the course content in order to decide which problems to include and which to emphasize.
- After that we will look at how to list the knowledge and skills health workers will need in order to solve the problems.

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Step 1. Looking at and listing needs

[illegible] a group of health workers for whatever[illegible] plans a course of study or action [illegible] it is to help them learn to deal with the [illegible] problems.

Ask each person to specify one of the problems and needs, both big and small, that [illegible] in the district or the area in which they [illegible] people.

Ask questions that call for concrete answers, so that people discuss problems [illegible] can be solved.

LESS APPROPRIATE question	MORE APPROPRIATE question
What are the worst problems of people in your village?	*What is the worst problem your family had this year?*

Although the names of the problems encourage people to mention other problems [illegible] are not [illegible] to the [illegible]



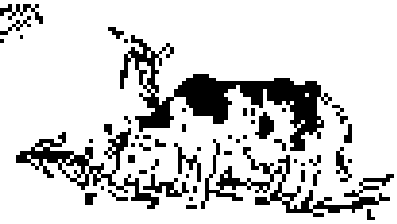
"Our children are tired."

"[illegible] is not [illegible]"



"We do not have enough land to grow our food."

"My neighbour [illegible] does not listen to my opinions."



Some [illegible] will [illegible] people discuss [illegible] they [illegible] [illegible] disciplines [illegible] health workers [illegible] the same [illegible] In these [illegible] during [illegible] sessions, they ask people what they feel to be their [illegible] problems and needs. [illegible] they encourage [illegible] to [illegible] training and planning from the start.



Talk to people about their problems and needs from the very start of training.

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Step 2. Considering the relative importance of the different problems the group has listed

[illegible]

[illegible] how common and how serious they feel each problem is. Then [illegible]

PROBLEM	How common	How serious	Relative importance
[illegible]	+ + – –	– + + +	4
[illegible]	– – +	+	6
Child [illegible]	+ + – +	– + +	2
Skin [illegible]	+ + – + +	+	5
[illegible]	–	+ + +	4
[illegible]	– – –	+ – –	6
[illegible]	– + – + +	– +	3
[illegible]	– +	+ – + +	3
[illegible]	+ – –	– + – +	
Cholera [illegible]	+ – +	– – – +	
Food is [illegible]	+ + +	+ – – +	
[illegible]	+	+ + + +	
Women [illegible]	+ +	+ + –	
[illegible]	+ +	– – + +	
Worms	+ +	+ – –	
[illegible]	+ – – – +	+	



– not very common (or not serious)
+ [illegible] common (or serious)
+ + [illegible] common (or serious)
+ + + very common (or very serious)
+ + + + extremely common (or very serious)

[illegible] both how common and how serious it is. Then, [illegible] relative importance in the community. [illegible]

Ask the group which [illegible] important. [illegible] Then, [illegible] Then, [illegible] Finally, [illegible]

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A good way to make a picture is to draw the main thing you want to show. Then add other things that help to explain the picture. Here are some examples:

1. Use **COMMON** things that people in your community know.
2. Use **SERIOUS** things that many people in your community think are important.
3. Use **CONTAGIOUS** things that spread from one person to another.
4. Use **DRAMATIC** things that make people pay attention.

Here are some pictures that you could draw to help people learn about germs. Each picture has a message that tells you what to say about it.

SKULL = for SERIOUS.



big germs
EXTREMELY serious
sickness

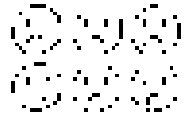


medium germs
VERY serious



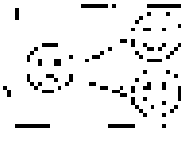
small germs
SERIOUS

SAD FACES



= for COMMON. There are some germs in your body. Most of the time they do not make you sick.

FACES with – medicine



= for VIRUS. Germs that spread from one person to another.

CURVED ARROW



= for GERM. Germs that make you sick.

These pictures are from a set of cards called **Germ Cards** (see page 11.12). They have the pictures on one side and the message on the other side.

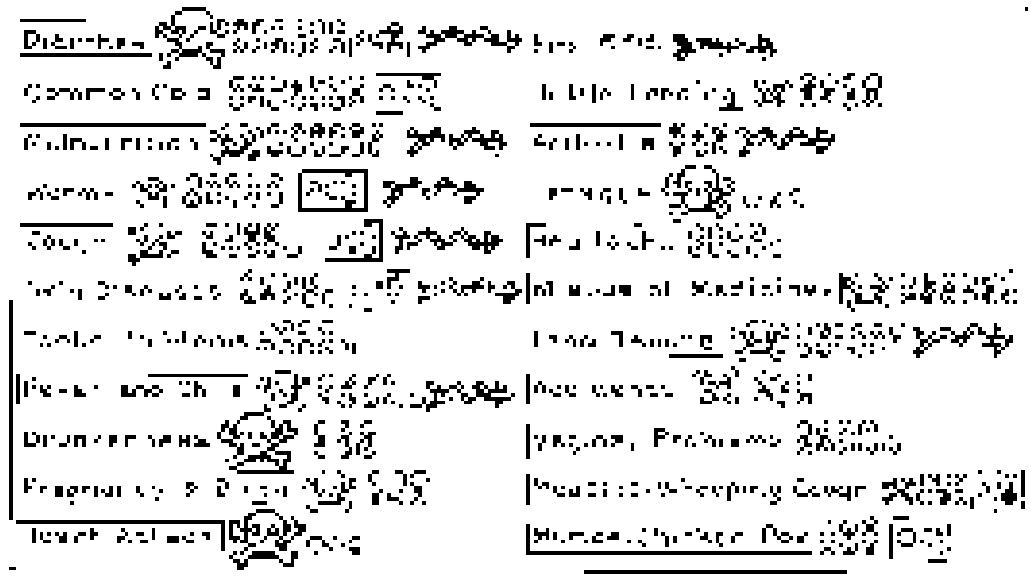


Germ Cards
Set of 15
Illustrations in color
On heavy paper

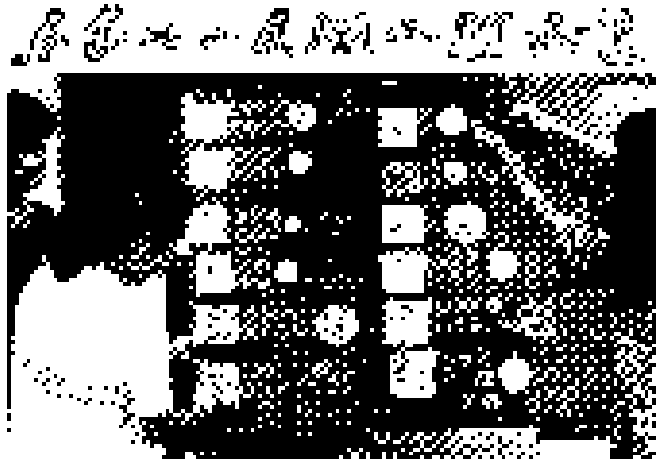
You can find out more about Germ Cards on page 11.12.

Here are some examples of other pictures you can draw. Each picture has a message that tells you what to say about it. Use your own ideas to make more pictures.

www.hesperian.org



For those who cannot read:



Step 3. Determining priorities for what to cover in the course

After listing all the relative importance or priority of each illness, injury or problem found in the community, you and the health workers need to consider how much emphasis or priority should be given to each illness or problem in the course.

To determine what can again make a chart such as the one below. Write down the most common health problems, such as:

- Are you ready to compromise about the problem?
- How much does it affect children and adults?
- What is the cost of treatment and the availability of medicines?
- How much would community members be likely to pay to solve the problem, if necessary?

Next, your answers with placebo (1) ... (2) ... (3) ... (4) ... (5) ... (6) ... (7) ... (8) ... (9) ... (10) ... (11) ... (12) ... (13) ... (14) ... (15) ... (16) ... (17) ... (18) ... (19) ... (20) ... (21) ... (22) ... (23) ... (24) ... (25) ... (26) ... (27) ... (28) ... (29) ... (30) ... (31) ... (32) ... (33) ... (34) ... (35) ... (36) ... (37) ... (38) ... (39) ... (40) ... (41) ... (42) ... (43) ... (44) ... (45) ... (46) ... (47) ... (48) ... (49) ... (50) ... (51) ... (52) ... (53) ... (54) ... (55) ... (56) ... (57) ... (58) ... (59) ... (60) ... (61) ... (62) ... (63) ... (64) ... (65) ... (66) ... (67) ... (68) ... (69) ... (70) ... (71) ... (72) ... (73) ... (74) ... (75) ... (76) ... (77) ... (78) ... (79) ... (80) ... (81) ... (82) ... (83) ... (84) ... (85) ... (86) ... (87) ... (88) ... (89) ... (90) ... (91) ... (92) ... (93) ... (94) ... (95) ... (96) ... (97) ... (98) ... (99) ... (100) ... (101) ... (102) ... (103) ... (104) ... (105) ... (106) ... (107) ... 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Step 4 Listing appropriate areas of study

After you have identified the health problems your health workers need to solve, you can list the possible areas of study that they will need to learn.

What skills, knowledge, and practice will health workers need to help people solve these problems?

[illegible] skills and knowledge they will need to learn. It can be helpful to analyse work tasks. Analysis might begin by looking at skills in both curative and preventive health care. For example, [illegible] you might ask: What skills in curative care will health workers need? What skills in preventive care will they need? Then you might ask: What skills in health education will they need? Some programs include skills in working with the community and in management.

One of the most important areas of study for health workers concerns the way people relate to each other. [illegible] and discussing [illegible] can be used. Learning [illegible] skills for [illegible] learning [illegible] Some of these [illegible] Communication [illegible] Working [illegible] Teaching [illegible]

Curriculum planners [illegible] Philippines [illegible] method of listing [illegible] has been [illegible] study of what [illegible] people [illegible]



Drawing by Lena S. Kanstrup, Kenya. From Where There Is No Doctor, a village health care handbook published by the Hesperian Foundation.

Based on the [illegible] health problems, list all the different areas of learning or [illegible] that [illegible] These [illegible] Then [illegible] arrange these subjects in sensible groups or "areas of study". [illegible]

- [illegible]
- [illegible]
- [illegible]

On the next page [illegible] a blank worksheet for planning the content of a training course. [illegible] Before [illegible] Then [illegible] study areas for [illegible] Then [illegible] short [illegible] training [illegible]

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Step 5. Consider how much time to allow for each area of study

[illegible] can be completed [illegible]

- First, figure out the total number of hours of study you have available [illegible] Of course, you will not be able to study all day, every day. Be realistic about how much time you have available. [illegible] Keep in mind that you will need some time for breaks, meals, sleeping, and other activities.

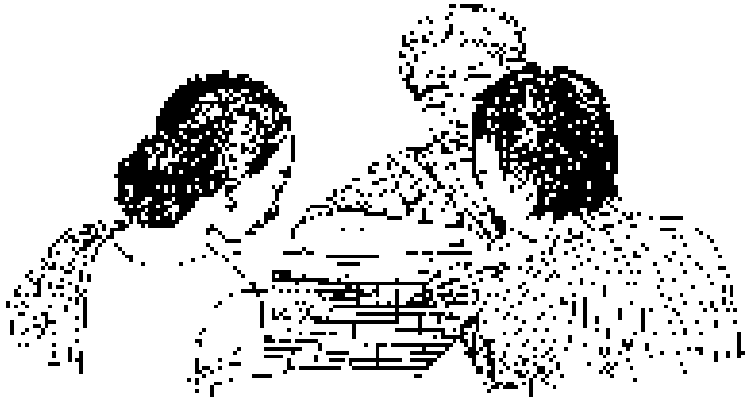
- Then, in each subject area, ESTIMATE how many hours you will need to study. Be sure to allow enough time for each subject. Some subjects will require more study time than others.

- Other people will be relying on you to meet your responsibilities, and you will be relying on others to do their parts. Be sure to allow enough time for unexpected delays. This is why you should not plan to study every hour you have available. Be sure to allow some time for relaxing, visiting with friends, and other activities.

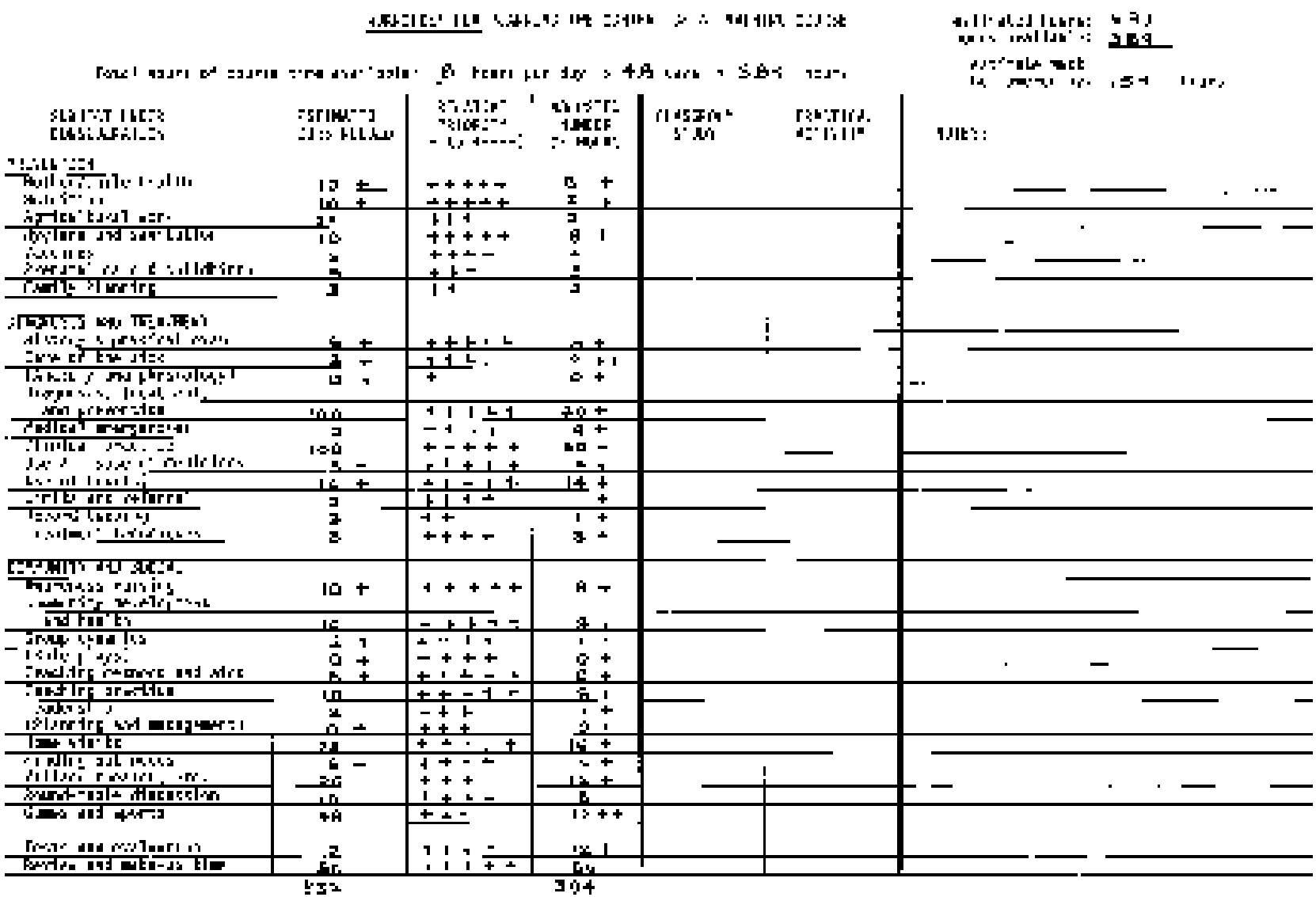
- If you have a family, be sure to discuss your study plan with them. Ask for their support and help. Be sure to allow enough time for family activities.

Note: Be realistic about how much you can learn in the time you have available. Many students [illegible] can be overwhelmed by trying to learn too much in too little time. [illegible] Subjects that require memorization can be learned [illegible]

Some subjects can be learned by doing, rather than by studying. For example, to learn how to [illegible] related subjects. For example, to learn how to measure blood pressure and temperature, you should practice doing these things with people who are ill. [illegible] Practice is also important for learning how to [illegible]



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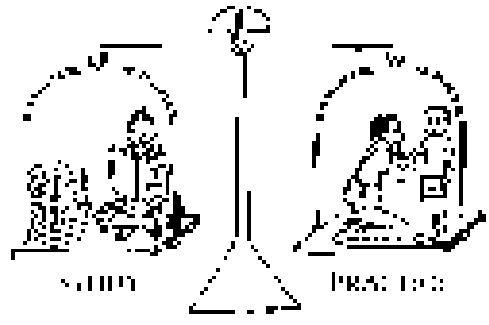


Helping Health Workers Learn (2005)

Step 6. Balancing the course content

A training course needs a balanced content and learning method.

- Try for a balance between prevention, curative, and community or social aspects of health care. Add up the hours you spend on these. Does this balance seem appropriate in terms of the problems and needs of the community? Adjust the hours if necessary.
- Balance discussion-type learning (classwork) with learning by doing (practice), physical work, and play.

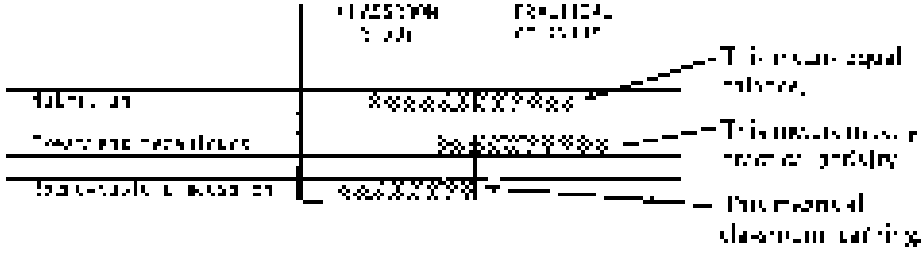


More and more people now realize that the best way of learning is by doing. Practice sessions are the best place to learn how to solve problems in the community, and this is where participants will learn by their mistakes. Some of the skills necessary for solving real health problems in the community cannot be taught in the classroom.

Many health workers are very good at the practical skills of their work. They are often very skilled at dealing with people. However, some of these skills—especially those needed for working with groups—do not come naturally. It takes practice to learn how to keep meetings on track, to help people to speak up, to encourage participation, and to help groups to make decisions. Some of the skills involved in your work may be difficult to teach. Role-playing can help participants to learn these skills. It can also help them to see how they can overcome problems in their work. Practice sessions make the training more interesting and more effective.

Learning by doing is very important in physical work. Many health workers work with children.

To work out how much time you should spend on each subject, you can use the same worksheet as before. Or you can use a different one. Here is an example. You may want to change it to suit your own training.

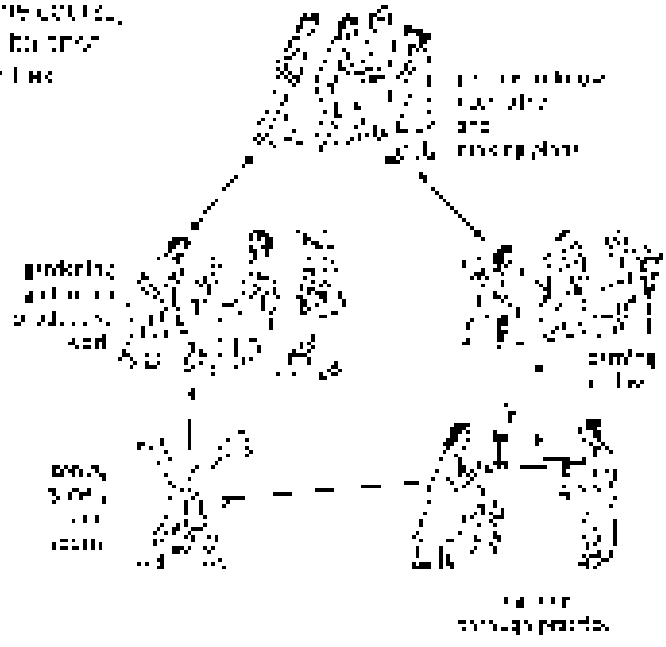


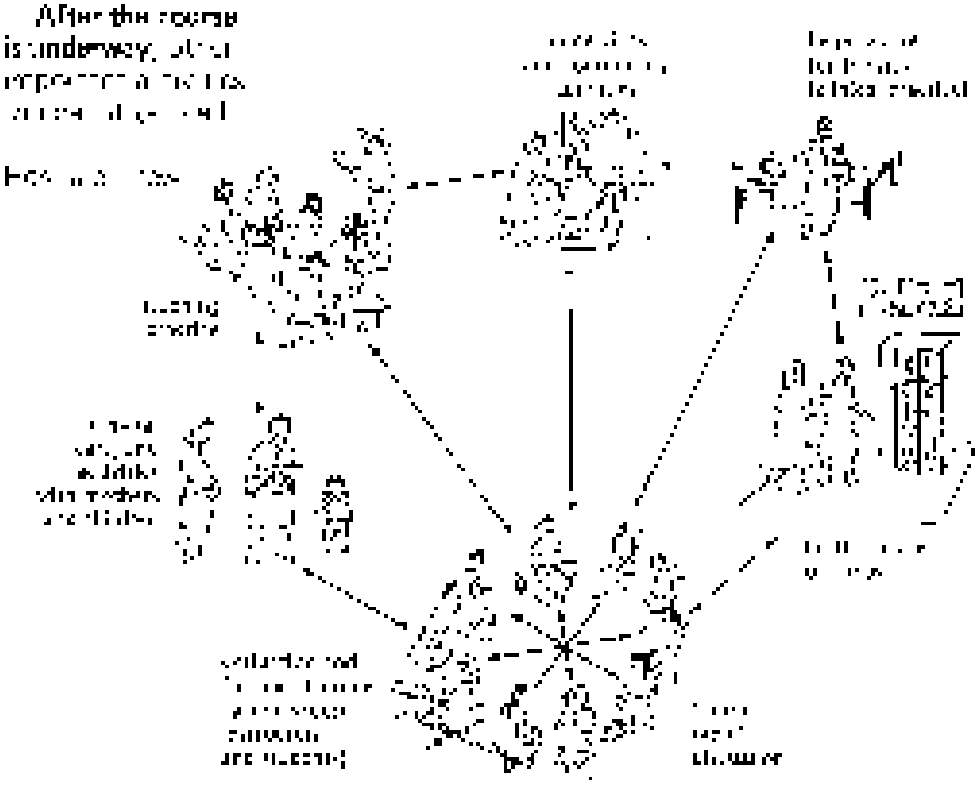
After planning each subject, look at the overall balance. If you need more time, is there a session you can shorten? Can you find more learning activities that take place outside the classroom?

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PLANNING A BALANCE OF LEARNING ACTIVITIES





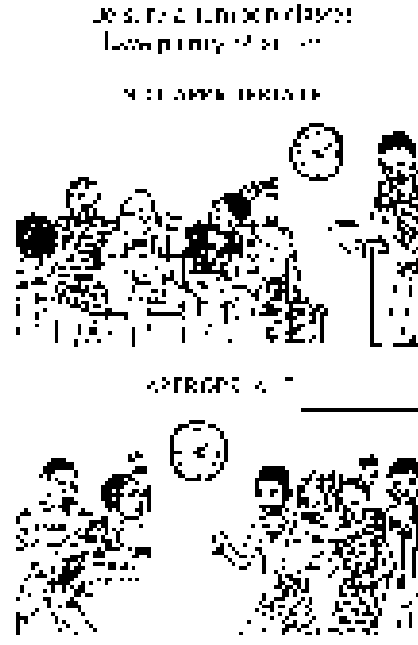
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Step 7. Preparing a timetable and making the weekly schedules

Once you have a number for the course is decided, you can work out the dates and begin to make a week-by-week schedule. To help you in preparing a timetable, you might like to use the form on page 5-28 or draw a table of your own. The larger the class numbers, the more details can be given in each. You can make a single copy of the schedule, then have it duplicated by a suitable method to use. Following the blank weekly schedule, you will find a completed one to look at. This is only a suggestion and you may find a different way better.

The first thing to do is to think about how to get the most out of the days of the course, according to the best rhythm of life in the community. Most people usually wake up, wash, eat breakfast, and then start their daily activities. Then they have a midday meal, rest for a while, and go back to work for the afternoon. In the evening, they relax with their family and friends, and go to bed. This is the normal pattern of life in most communities, but it may be different in some places. You will have to find out what is usual in your area.

Now remember which subjects should be taught when. Here are some ideas based on what we have just said.



Which time of day is best for what?

- Early morning and, before the day's activities begin, the evening are good times for practical work.
- The morning is a very good time for classroom work. Students are usually alert and keen to learn at this hour.
- The afternoon is often a quiet hour. This is a good time for active discussions, role-playing, and subjects like music or handicrafts that students enjoy.
- Evenings are best for private study, for preparing short talks, and for marking work. Some of these activities may be busy all day.

Every day? Or once or twice a week?

- Some subjects, such as arithmetic and practical medicine, need practice. So they must be taught every day. Some other subjects are best taught once or twice a week — such as those that give information about the students' community.
- Do not try to teach too much in one day. Students need time to study.
- Don't fill every day with lessons. Leave at least one afternoon free, or half a day, for some couple of evenings each week, or one whole day every month.

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At the beginning of the training course? Or near the end?

- Knowledge and skills needed to examine, care for, and give advice to people who are sick should be covered at the beginning of the course. See page 8-5.
- Teaching in the community and putting on village theater shows are good activities for later in the course, when students have more knowledge and self-confidence. But be sure to plan and practice for these well in advance.



Before the course begins (or shortly after, so as to include student suggestions), **make rough weekly plans for the whole course.** This helps ensure that you allow time for everything you intend to include. It is easy to run out of time before all the important material has been covered!

When making an early plan of the whole course, you do not need to fill in many details. Later, during the course, the instructors can meet with the student planning committee (see p. 4-14) each week to prepare a more detailed plan for the following week. Be sure you schedule a regular time for this planning, too.

An important suggestion: MAKE YOUR TIMETABLE FLEXIBLE

It often happens that some classes or subjects take longer than planned. Others are poorly or even wrongly taught, or prove especially difficult for students to understand. Such classes may need to be repeated. For this reason, it is wise to leave plenty of extra time for review: about 1 or 2 hours of 'open' time each week, plus several unplanned days at the end of the course.

This open time also allows you to adjust the schedule when classes are missed or postponed. Especially if training takes place in a real-life setting (like a village), **medical emergencies and other unplanned learning opportunities are bound to come up.**

For example, during a training course in Ajoya, Mexico, a class was interrupted when news arrived that a man had broken his leg on a mountain trail. The students and instructor carried the man to the health center on a stretcher, set the broken bone, and put a cast on his leg (see photo).

The interrupted class was given later. This was easy to manage because extra time had been allowed in the schedule.



Do not be afraid to change your plans.

Step 8. Preparing detailed plans for the first few days of the course

This will be discussed in the next chapter.

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WEEKLY PLANNING SHEET -- HEALTH WORKER'S TRAINING COURSE

WEEK NUMBER _____ DATES _____ to _____, _____

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
7:00-							
8:00-							
9:00-							
10:00-							
11:00-							
12:00-							
1:00-							
2:00-							
3:00-							
4:00-							
5:00-							
6:00-							
7:00-							
8:00-							

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Helping Health Workers Learn (2005)

WEEKLY PLANNING SHEET -- HEALTH WORKER'S TRAINING COURSE

NUEVA CLINIC
Nueva, Senalda
MEXICO

WEEK NUMBER 2 DATES January 25 to January 31 , 1978.

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
7:00-	WORK IN THE VEGETABLE GARDEN						
8:00-	BREAKFAST CREATIVE THINKING Discipline and Observation	BREAKFAST CREATIVE THINKING Causes and Treatment of Malnutrition	BREAKFAST CREATIVE THINKING Women's Issues	BREAKFAST CREATIVE THINKING Infant Malnutrition	BREAKFAST MEDICAL TEST	BREAKFAST Meet Rest of Community Clinic	BREAKFAST
9:00-	Use of Water Well Role and Training of Health Workers	Use of Latrines (WHO) Family Planning	Use of Medicines How to Treat Most Common Illnesses	Use of the Book (WHO)		HOUSEHOLD VISITS (Nursing Students Assist Health Workers on Rounds)	
10:00-	PRACTICE IN CLINICAL HEALTH CARE (MEDICAL AND DENTAL)						
11:00-							
12:00-	Personal Hygiene Nutrition and Food Sanitation Methods	Review Observations Objectives and Goals Medical History	Review Observations Goals of Medical Clinic Introduction to Physical Exam	Review Observations Vital Signs	Review Observations CREATIVE THINKING VITAL SIGNS		
1:00-	LUNCH	LUNCH	LUNCH	LUNCH	LUNCH Meeting to Discuss Observations from Survey Review of Test and Village Situation	LUNCH	LUNCH
2:00-							
3:00-	Community Health Education Preventive Medicine Treatment of Diarrhea	Community Health Education Preventive Medicine Treatment of Malnutrition	Preventive Medicine Treatment of Diarrhea Malnutrition	Preventive Medicine Treatment of Diarrhea and Malnutrition		Continue Working Problems and Purpose with School Children	
4:00-	Community Organization	Health Education Infectious Diseases Family Planning	Clinical Assistant Practice Problems	Goals in Education Plan Activities with School Children	Open Discussion		
5:00							
6:00-	DINNER	DINNER	DINNER	DINNER	DINNER	DINNER	DINNER
7:00-	Review Medical Problems Observed		All Day Saturday Meeting Report, Critique Each Workshop	Students Write Evaluation of the Course	Medical Meeting Each Week Throughout Course		
8:00-							
9:00-							

Helping Health Workers Learn (2005)

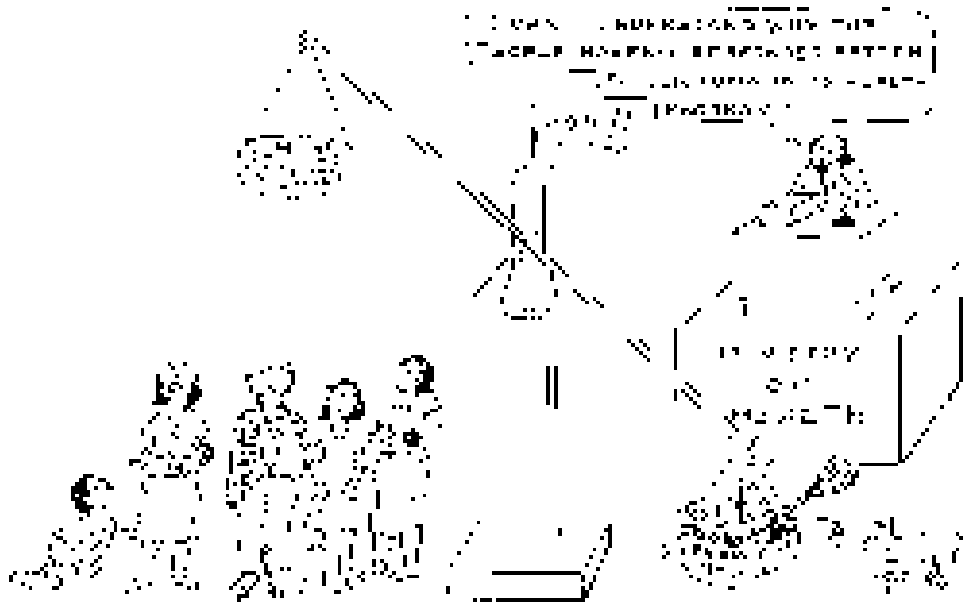
HOW MUCH CURATIVE MEDICINE SHOULD A TRAINING PROGRAM INCLUDE?

If health workers are to win people's confidence and cooperation, they need to START WHERE THE PEOPLE ARE AND BUILD ON THAT.

[illegible] may be more important than curing. But people don't [illegible] health. [illegible] people's [illegible] and [illegible] of common health problems.

[illegible] curative care [illegible] preventive care. [illegible]

In a community-based program, curative care cannot be separated from prevention. The first work is the second.



A HEALTH BALANCED BETWEEN PREVENTIVE AND CURATIVE METHODS MUST BE THE GOAL OF EVERY HEALTH PROGRAM.

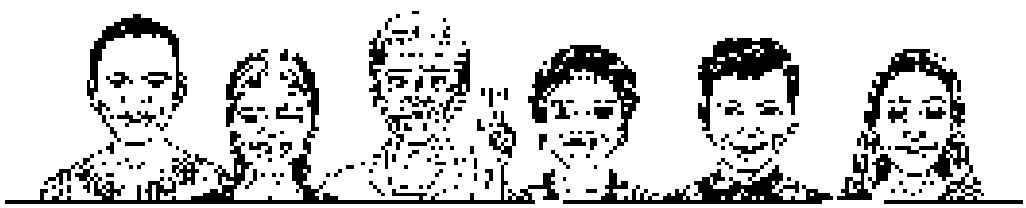
[illegible] curative [illegible] [illegible] [illegible]

[illegible]

[illegible]

1. Using [illegible] problem-solving [illegible]
2. History taking and physical examination [illegible]
3. Practice in using a handbook for [illegible], and how to prepare [illegible] common problems
4. Learning to recognize one's own limits, and how to refer [illegible] problems to other health workers

[illegible] village health workers can, in 2 months of practical training, start to effectively attend 80 to 90% of the sick people they see. [illegible] they can begin [illegible] and how to refer [illegible] to the nearest place of help. [illegible]



WHAT MAKES EFFECTIVE HEALTH WORKERS?

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]

[illegible]

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CHAPTER 4

Getting Off to a Good Start

BE PREPARED—EVEN WHEN YOU ART NOT

The [illegible] and training programs are [illegible] the [illegible] by the instructors and the students. It is important to have as much as possible ready ahead of time, including:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible] by the [illegible] [illegible] [illegible]

CHECKLISTS

To help you [illegible] and plan [illegible] you may want to make [illegible]

[illegible]

[illegible]

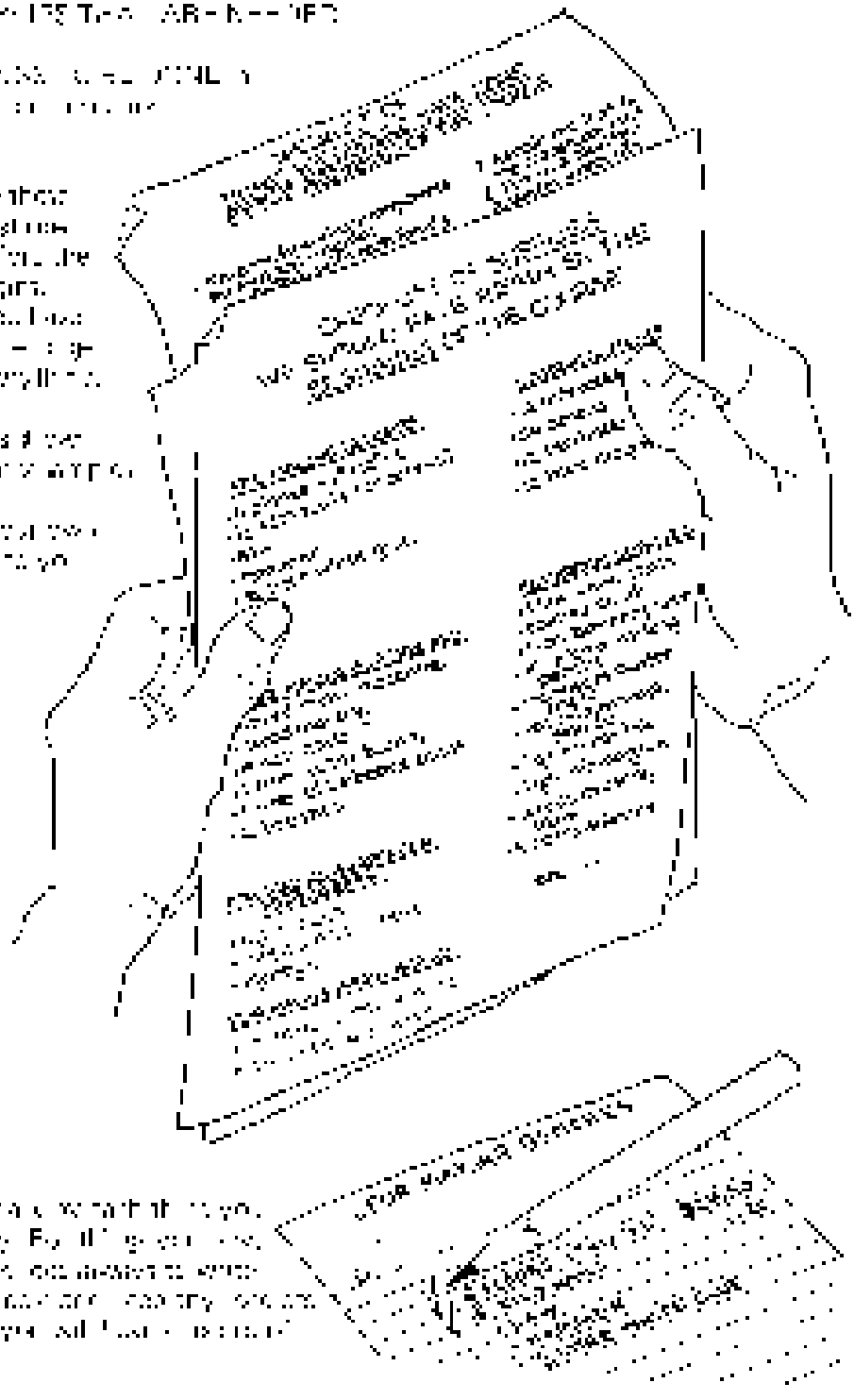
[illegible] month [illegible]

[illegible]

[illegible]

[illegible]

[illegible] account [illegible]



[illegible] [illegible]

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A POSSIBLE TIMETABLE FOR THE FIRST WEEK

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CLASSES AND ACTIVITIES IN THE FIRST FEW DAYS

The first few days of a course are the most important time for getting to know the students and helping them get to know each other. Begin to know your students.

Getting to know each other in a friendly, open way is perhaps the most important thing that can happen in these first days. There are many ways to help this to happen. (See Section 2 of the key, page 616.)

Do not waste the first few days in talking. Remember that most students come to learn specific skills. They may not yet know that the art of learning and of participating in group work is one of the most valuable skills you can help them to develop. The sooner you get them working at the skills they have come to learn, the sooner they will begin to learn how to learn.

Remember, of course, good instruction is not to start by teaching how to teach. Start with what people want to learn and the best ways to learn it.

Begin teaching practical skills right away.

Taking student interest into account



THE BIGGEST PROBLEM IN HEALTH WORK IS THAT PEOPLE DON'T KNOW THEY'RE SICK.

Only when the whole community becomes aware of the need for preventive action is the health worker likely to make prevention his first concern.

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Finding the right place to start

Wherever possible, start where the students' interests lie. But be selective. Try to direct their interests toward meeting important community needs.

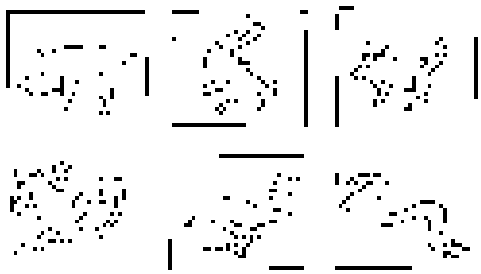
[illegible] interests [illegible] [illegible] [illegible]

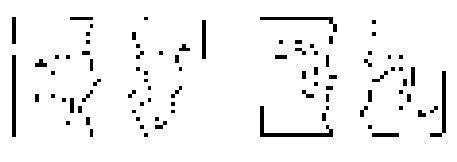
BREAKING THE ICE

Make a game out of it. Use your imagination. Be creative. Have fun.

Make sure everyone knows each other's names.

1 MAKING GOOD INTRODUCTIONS







2. MERRY GO ROUND OF TRAINING







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SPIN THE BOTTLE



[illegible]

[illegible]

[illegible]





[illegible]

Silly? A waste of time? Yes, but . . .

[illegible]

A friend who was working on a new water supply project in a village told me that she was "wasting time" talking with the women in the village about their lives and their children. She was trying to establish a relationship with them so that they would feel free to tell her what they thought she should do. She was learning from the women.

Getting to know people, getting to like and trust them, learning about their lives and their children, their work and their hopes and fears, is not a waste of time. It is the way people work and live and learn and learn together.

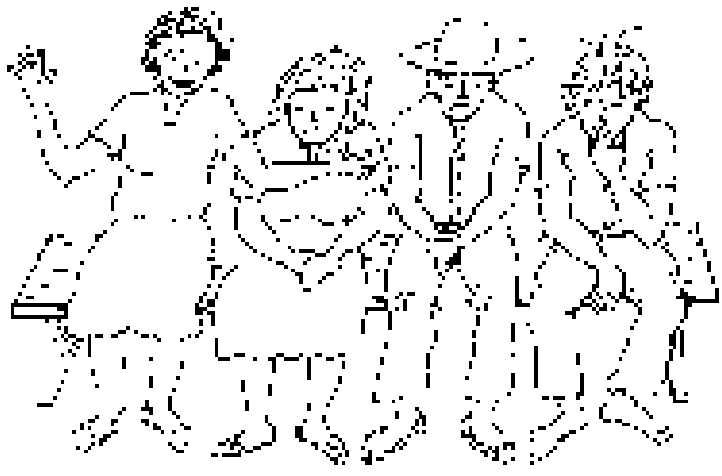
[illegible]



To "waste time" getting to know and like each other may save time later.

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THE WORKINGS OF A GROUP (group dynamics)



YOUR GROUP DYNAMICS
ONE PERSON TALKS TOO MUCH
ONE PERSON TALKS TOO LITTLE

Almost any group of people from different villages or communities has a leader. Sometimes it is a man or woman who has been chosen or elected by the group. Sometimes it is someone who has just taken charge.

Whatever the situation, a good leader knows that some people talk too much and others too little. A good group leader looks for ways to help those who are silent to speak out. At the same time, he helps those who are quick to speak more important it is to give others a chance.

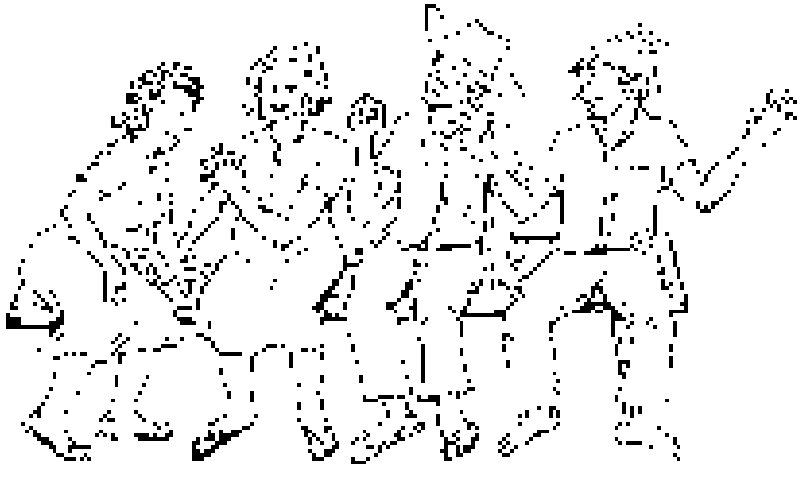
Although [illegible] groups [illegible] [illegible] [illegible] [illegible] [illegible] others, [illegible] [illegible] [illegible] [illegible] [illegible]

...group leader, you facilitate by making your leadership helpful to...

- ...
- ...
- ...
- ...
- ...
- ...
- ...
- ...

...

GOOD GROUP DYNAMICS: EVERYONE INVOLVED



TEACHING GROUP DYNAMICS

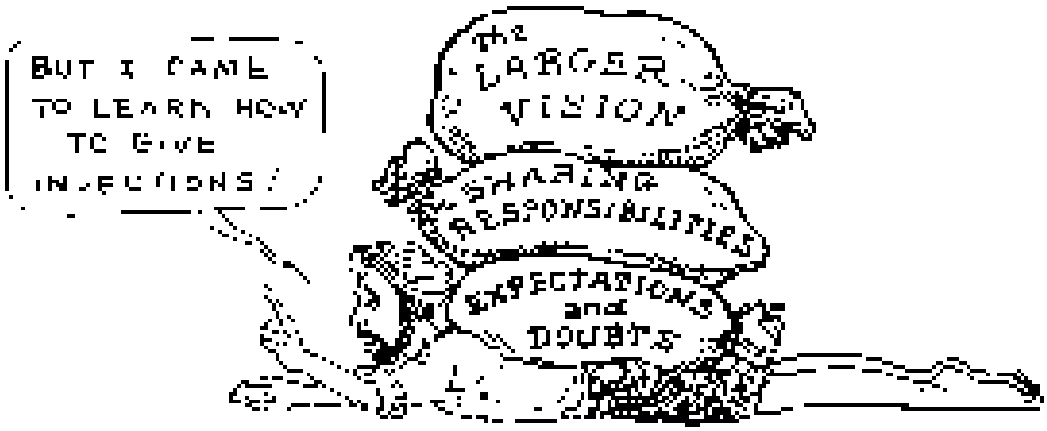
...

IMPORTANT THINGS TO START DISCUSSING IN THE FIRST FEW DAYS

- Hopes and doubts [illegible]
- Sharing of responsibilities and planning [illegible]
- What are the characteristics of a good health worker? [illegible]
- [illegible] of health, illness, and being human
- [illegible] and the larger vision [illegible]
- Precautions, warnings, and protecting [illegible]
- Students' experiences [illegible]
- Need for guidance [illegible]

CAUTION: A [illegible] the first few days [illegible] feelings, [illegible] may be [illegible] to the feelings, fears, and needs of each member of the group.

[illegible]



[illegible]

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Hunches and doubts

When you are preparing to lead a training session, you should think about the kinds of things people in the group may be feeling as they begin the course. Some questions you could ask are:

- "What do you hope to learn from this course?"
- "What kinds of things, or parts of this subject, do you feel unsure about?"

Giving people a chance to express their hopes and doubts at the beginning of the course helps them:

- learn to speak in front of each other, which is important because they will need to do this often during the course;
- think about their own ideas and experiences, which is important because they will learn more if they can relate what they learn to their own lives;
- help you, the instructor, find out what you need to do to make sure that the course meets their needs.

All of these things help people to learn well. They will also help you to be a better instructor.

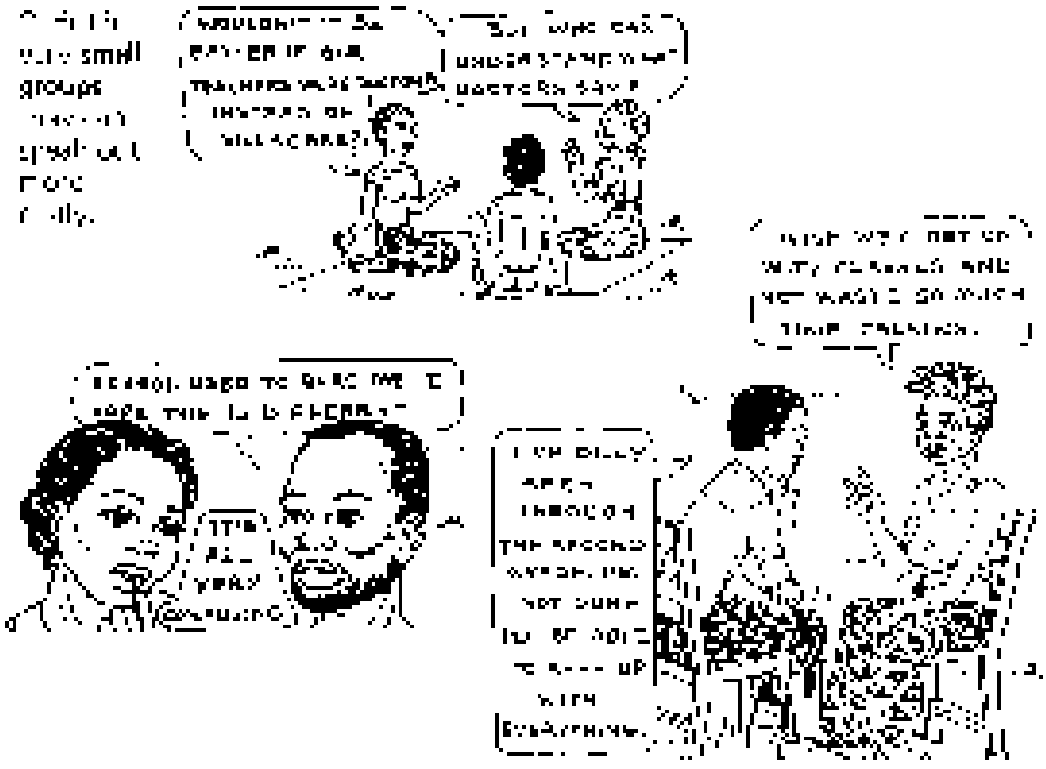
Some of the things people say may make you feel uncomfortable. Do not worry about this.

But you may find that a group of people are not saying much at all. You may have to help them to express their hopes and doubts. You can do this by asking questions, and by telling them that you want to hear what they think. You could also tell them about some of the things that other groups have said.

GETTING PEOPLE TO EXPRESS THEIR DOUBTS
(You do not need to use exactly these words.)



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STUDENT COMMITTEES

[illegible]

[illegible]

[illegible]

PLANNING COMMITTEE [illegible]

CLEANUP COMMITTEE [illegible]

RECREATION COMMITTEE [illegible]

[illegible]



[illegible]

EVALUATION COMMITTEE [illegible]

RECORD KEEPING COMMITTEE [illegible]

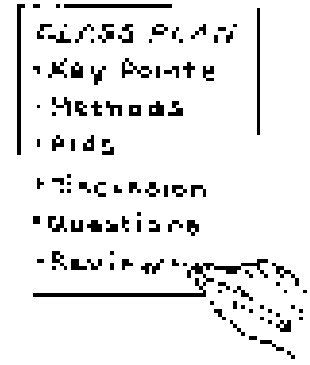
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CHAPTER 5

Planning a Class

TWO APPROACHES: CLOSED AND OPEN



1. The first class plan is closed. It is the kind of plan that is commonly used in schools. It is very specific in stating exactly what the content of the class will be and how the class will be conducted.

Notice that the closed plan tells the teacher what to do. It does not encourage the teacher to think about the students or the situation. It is not flexible. It does not invite the teacher to change the class to meet the needs of the students. The students play a passive role. They are expected to listen and learn.

2. The second class plan is open. It is quite different. It tells the teacher the general purpose of the class. It suggests some activities that might help to achieve that purpose. But it does not tell the teacher exactly what to do. It encourages the teacher to think about the students and the situation. It helps the teacher to make decisions about how to conduct the class. It encourages the students to participate actively in learning.

An open class plan usually includes the following:

- a statement of the general purpose of the class
- a description of the kinds of students who will be in the class
- a statement of what the students already know about the subject of the class

Like the closed plan, the open plan includes a list of the equipment needed. It may also include a list of key points to be covered. But it does not usually include a detailed description of how the class will be conducted. It does not tell the teacher exactly what to say or do. It does not tell the students exactly what to say or do.

The open plan includes suggestions for activities that might help to achieve the purpose of the class. It suggests questions that might be asked. It suggests ways of finding out what the students already know. It suggests ways of finding out what they have learned. But it does not tell the teacher exactly what to do. It leaves the teacher free to choose the activities that seem most appropriate for the students and the situation.

The open approach is designed for classes that will meet

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[illegible] EXAMPLE OF A CLASS PLAN
[illegible]

TOPIC #: [illegible]

Symptoms and treatment of conjunctivitis

GOAL: To enable [illegible] to recognize the symptoms of [illegible] and how it can be treated.

OBJECTIVES: At the end of this lesson, [illegible] will be able to:

1. Name symptoms of conjunctivitis, which are: [illegible] and swollen eyelids, slight itching red or discharge from the eye. Going up the ascending, eyelids are [illegible]

2. To avoid serious complications, it is advisable to seek medical attention. Before going, you should wash your eyes with [illegible] water after bathing it to remove [illegible] will help to wash the eye medicine you are given will be more effective.

3. [illegible] conjunctivitis is completely cured, you should wash your eyes three times a day with salt water.

VISUAL AIDS:
- Child with conjunctivitis [illegible], poster with a [illegible].
- [illegible]
- Picture showing child [illegible]
- A clean piece of cloth.
- [illegible]
- Soap.

METHODOLOGY:
- Has your child a [illegible] conjunctivitis?

- What do your eyes look like when you have conjunctivitis?

Show [illegible]

- Look at [illegible]. What is wrong with him?

If you [illegible], what should you do?

Show poster of woman washing her child's eyes and [illegible] to help her do it in a health [illegible]

- How should you wash his eyes?

[illegible] Peace Corps Publication [illegible]

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SECOND EXAMPLE OF A LESSON PLAN
For using the evaluation of change approach

Subject: [illegible] Level: [illegible] Time: [illegible]

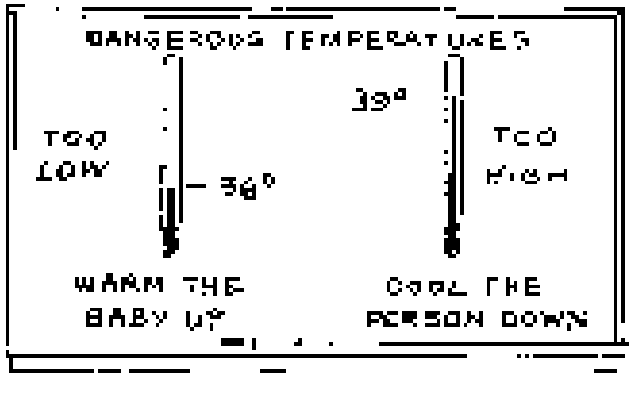
Topic: [illegible] Materials: [illegible]

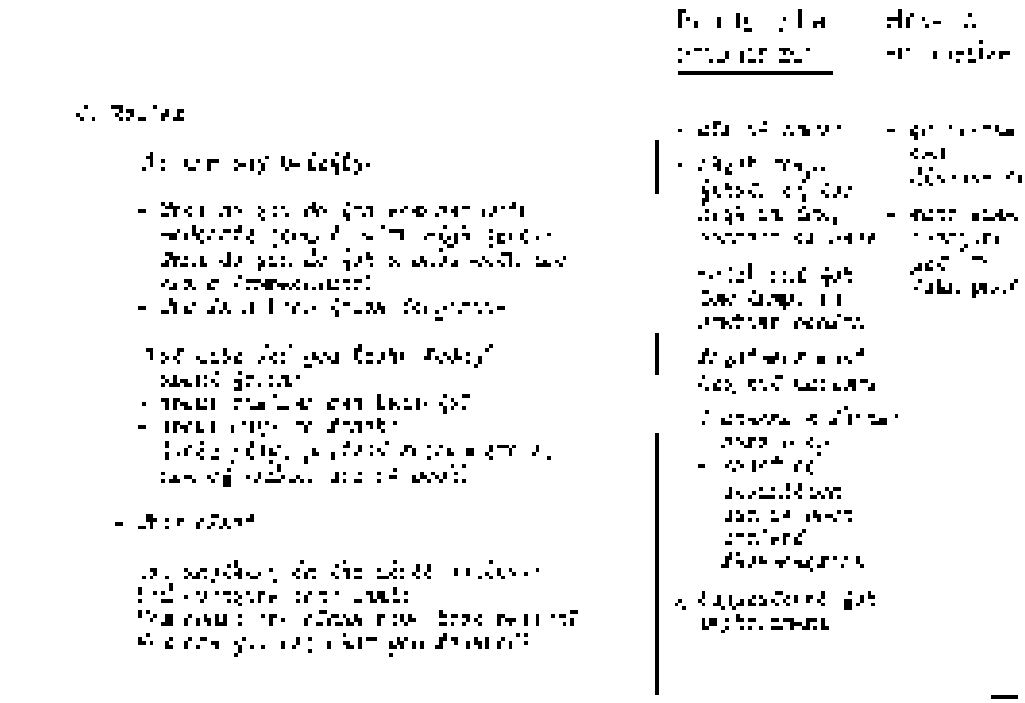
Main ideas, information or skills you will include	Teaching methods	Helpful aids or preparation needed	Pages in book
1. [illegible]	• questions and answers	• blackboard or paper • pencil • [illegible]	[illegible], p. 51
2. [illegible]	• [illegible] • [illegible]	• [illegible] • [illegible] • [illegible] • [illegible], [illegible], [illegible]	[illegible]
3. [illegible]		[illegible]	51, 52

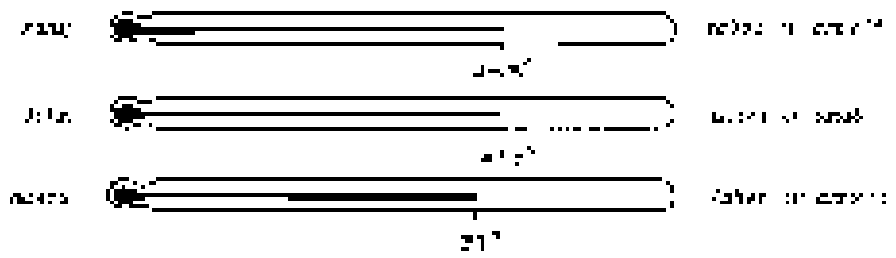
Introduction

[illegible] [illegible], [illegible], [illegible], [illegible], [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

Time	What you will do	Points to be emphasized	How to emphasize
10 minutes	• Review the [illegible] of [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]


DANGEROUS TEMPERATURES
TOO LOW
96°
99°
TOO HIGH
WARM THE BABY UP
COOL THE PERSON DOWN





1.
2.
3.
4.
5.
6.
7.

Note on this class plan:

This class plan is for a class of 30 students. It is planned for a total of 3 hours, but it could be taught in 2 hours if you omit the optional activity. You could also teach it in 4 hours if you add more practice time. To save time, you can write abbreviations on the board instead of writing out the whole word. For example, you can write "ID" for diseases of the ear, "RP" for respiratory problems, etc.

During the first hour, the main points of the lesson are presented. In the second hour, students practise what they have learned. In the third hour, the main points are summarized, students practise more and a test is given. Students who do not pass the test can be given extra help.

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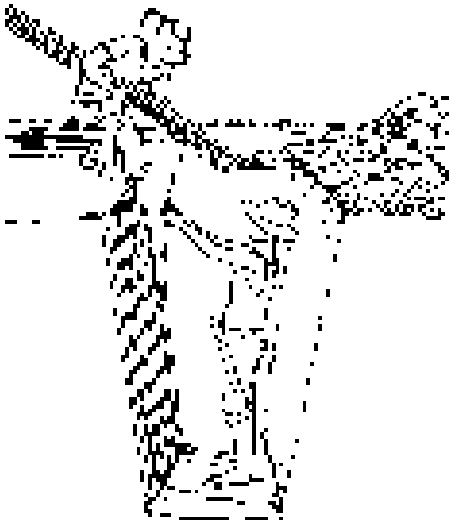
TASK ANALYSIS—Finding out what is needed to do a job effectively

Story: [illegible] [illegible] [illegible]

Observing a person doing a task can help you to complete. Some of the most important things you may learn are:

- [illegible] can be very helpful to actually watching them just to find out how they do it.
- [illegible] to ask questions to find out why they do things the way they do.
- [illegible] especially if you have difficulty [illegible]

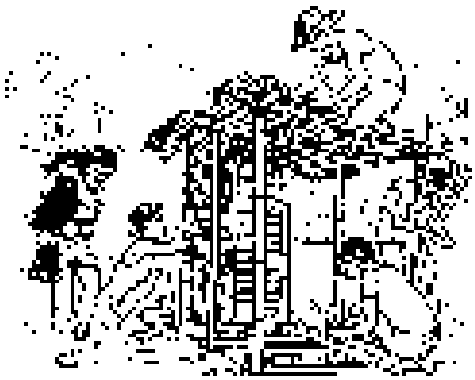




The first process is called task analysis.*

Task analysis is a method for looking at each part or task of a person's job and writing down exactly what is done. This description is then analyzed to find out what students need to learn in order to do the job well.

[illegible] is a way to find out what [illegible] is. It is [illegible] job in three steps. Each of these steps consists of actions, decisions, or communications. [illegible]



[illegible] to ask questions to find out why they do things the way they do. [illegible]

Consider: Often a thorough task analysis can be helpful. It may be necessary to break a task down into very small steps. For example, [illegible] and how to wash your hands, you would have to break down the task into the following steps:

---

*These descriptions are [illegible]

The following is an example of how a teacher might plan a lesson on the topic of "Mental Health" for a class of community health workers.

ASK A QUESTION		
Step 1: Identify the Task	**Step 2: Knowledge and Skills Needed**	**Step 3: Teach It**
1. Find out how much the students already know about the topic.	Ability to assess students' knowledge	Tell them the lesson's objectives and why it is important to learn about the topic
2. Decide what to teach (subject to guidelines in the curriculum)	Knowledge of the topic	Identify the most important points to be covered
3. Plan how to present the lesson (choose appropriate teaching methods)	Knowledge of how children learn	Plan classroom activities, prepare materials, and arrange the classroom
4. Decide what the students should learn	Knowledge of the topic	Introduce discussions with the students and lead them
5. Find out what is needed	Ability to use resources and materials available in the community	Talk with community members
6. Plan how to test the students' knowledge	Knowledge of how to test children's knowledge, and how to use the results to help them learn	Give students tests, mark them, and discuss the results with them
7. Encourage people to ask questions and to think about what they have learned	Knowledge of the subject and how to encourage discussion	Lead the discussion, and ask questions

The following information will help you to plan your training. Then, you can use it to teach others.

- Identify what you want to teach
- Decide what you want to achieve
- Find out what you need to know before you begin
- Plan how to present the lesson
- Plan how to test what you have taught
- Plan how to help students learn from their mistakes

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AIMING TEACHING AT WHAT IS MOST IMPORTANT

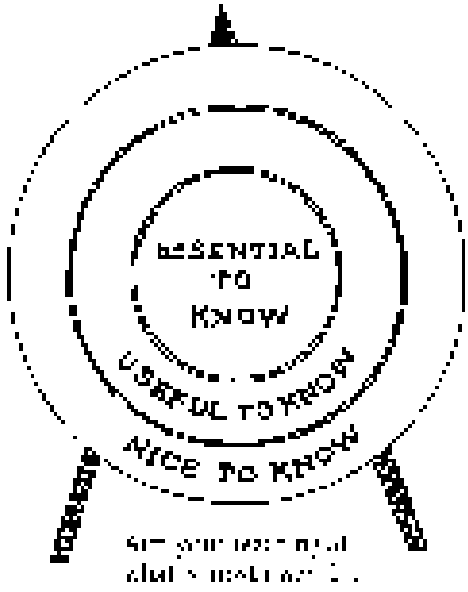
Many health workers spend much of their teaching time trying to teach everything they know about a topic.

- Some students do not need to learn as much as their teacher does.
- Some students forget most of what they are taught. They need to learn only the most important things well.
- Students should learn how to find information when they need it. They should learn how to use the information they have to solve problems.

When teaching, it is easy to decide what is most important, and what is not. Many things that a health worker knows are interesting, but not necessary for the job. Some things are important for doctors to know, but not for health workers. Some things are important for health workers to know, but not for community health workers.

A way to decide what is most important is to think about what people need to know, in order to do their work well. There are three levels:

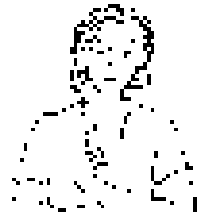
- essential to know,
- useful to know,
- nice to know.



Your aim is to make sure that people learn what is essential. If time is limited, you need not aim to teach what is useful. You need not aim to teach what is nice to know. This is less important.

Students can learn the essential and useful knowledge in many different ways. They learn from all their experiences. They learn from information and skills

ESTIMATING TEACHING



- What do I need to teach?
- How much time do I have? How much time should people spend learning this? How much time will it take to learn it well?
- Can some of the teaching be done by people who are not health workers? Can some of the teaching be done by health workers who are not teachers?

For more on essential knowledge, see page B-11.

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STARTING WITH WHAT IS ALREADY FAMILIAR TO STUDENTS

Health learning must relate to life. Go to the health workers' village and see what they already know about the problems they face in their daily lives. Try to start with your students' own knowledge or experience—and build on that.

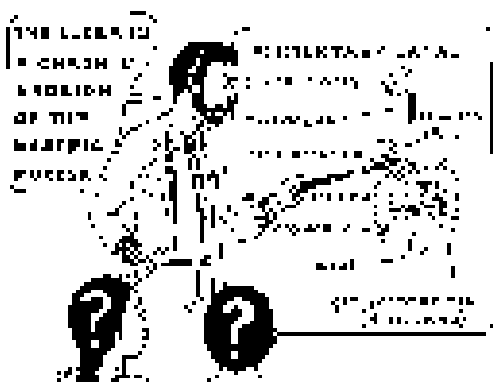
STARTING WITH LIFE, NOT WITH ANATOMY

Many health problems are caused by poor organization of work or problems occurring in other parts of the body, rather than by problems in the community. For all these reasons, it is usually not necessary to study physiology, or details of the body and how they work.

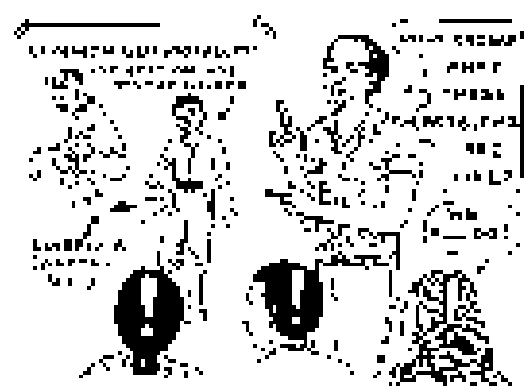
This approach is sometimes called "discovery learning".

It can start by studying people's problems in the community and then looking at the parts of the body that are involved. Then it moves on to study how the body works.

It makes more sense to students, to start with something they already know and then go on to learn what they have already begun to discover. Only then should basic theory or information be added. It is then much more relevant and easier to understand.



Less appropriate



More appropriate

So starting with anatomy and physiology is usually not an introduction to a subject in words. The purpose of a health worker is to solve health problems, not learn anatomy. Of course, there is no harm in learning about the body as a first step, but it is not necessary to spend months studying it. Instead, it is better to move gradually from what is familiar to the unfamiliar, to build on the knowledge and understanding already there.

One of the most important skills that a health worker and trainer needs to learn is to...

Discuss health problems in clear, simple language that everyone understands.

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[illegible]

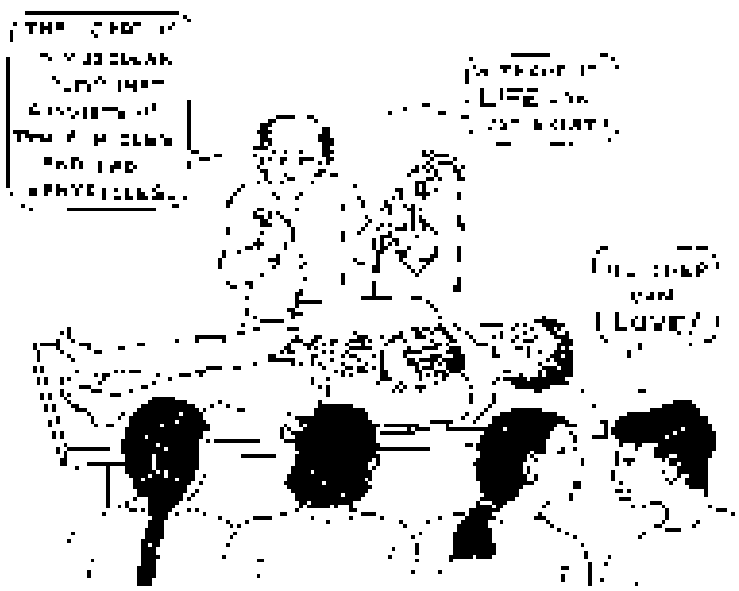
- [illegible]
- [illegible]
- [illegible]

[illegible]

[illegible]

> **Organize the study of different diseases according to their place in the community, not their place in the body.**

[illegible] **Health problems begin in the community as much as in the body.** [illegible]



TWO WAYS OF LOOKING AT HEALTH
[illegible]

[illegible]

> **Start with community, not anatomy!**

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INTERESTING AND USEFUL WAYS OF TEACHING 'ANATOMY'

[illegible] (see page 213).

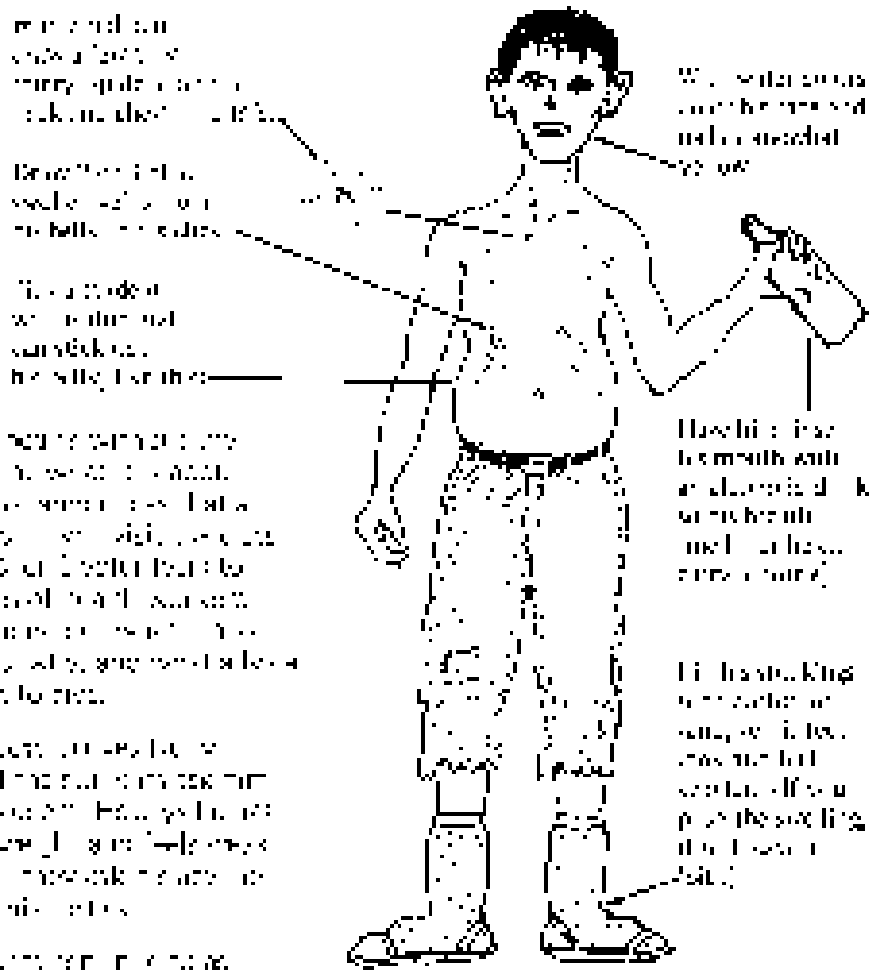
[illegible] [illegible] [illegible] [

EXAMPLE OF ANATOMY BEING USED TO HELP EXPLAIN CULTURAL HEALTH PROBLEMS (RATHER THAN BEING TAUGHT SEPARATELY)

Topic: [illegible]

Objective: [illegible]

[illegible]

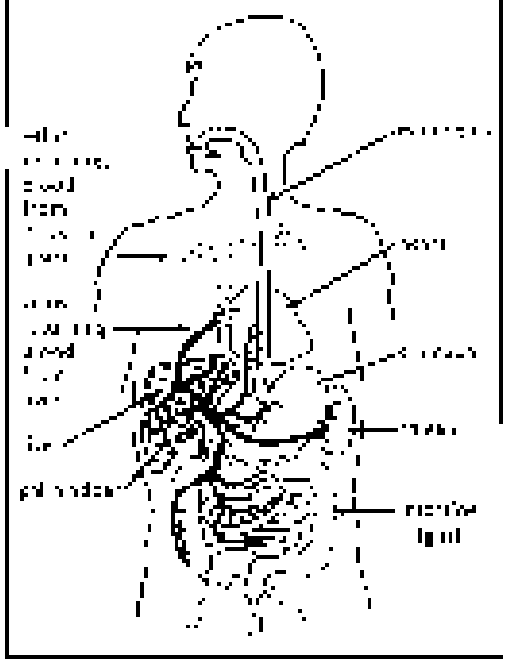


[illegible]

[illegible]

[illegible]

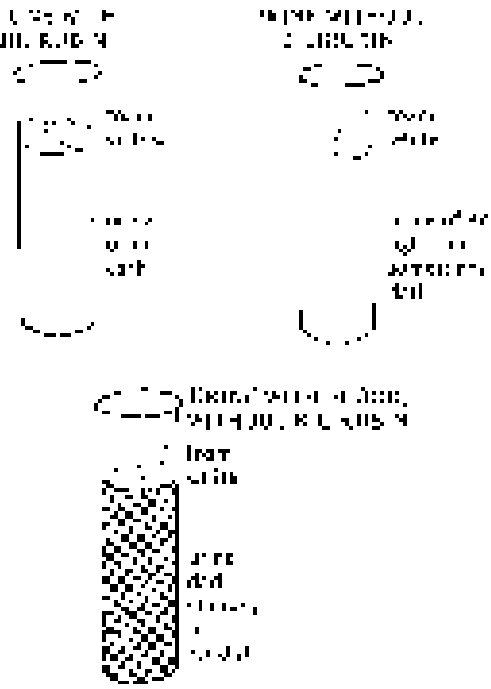
A poster with a picture of a person's body can help health workers talk to people about their problems

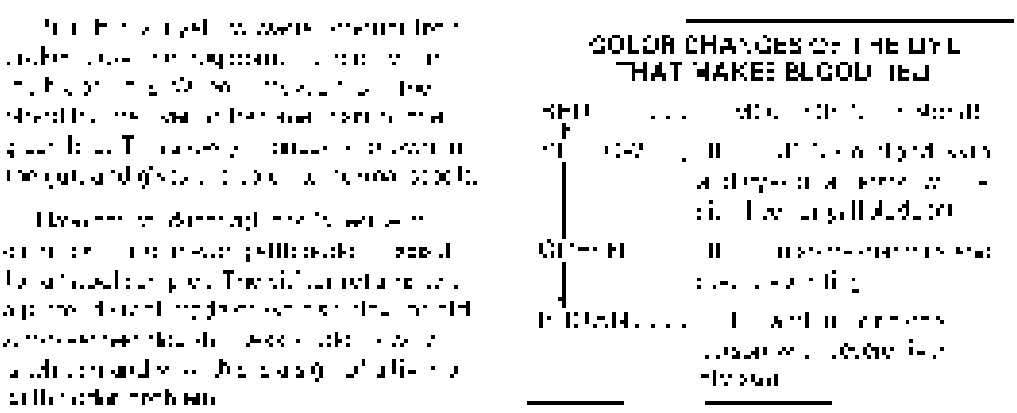


Some of these games can be played in small groups. Others are played with a partner. Some games require a lot of space, while others can be played in a small area. Some games require special equipment, while others require only a few simple items. Some games are played for a short time, while others can last for hours. Some games are played indoors, while others are played outdoors. Some games are played by children, while others are played by adults. Some games are played for fun, while others are played for competition. Some games are played for exercise, while others are played for relaxation. Some games are played for learning, while others are played for entertainment. Some games are played for social interaction, while others are played for individual enjoyment. Some games are played for physical development, while others are played for mental development. Some games are played for emotional development, while others are played for spiritual development. Some games are played for cultural development, while others are played for historical development. Some games are played for environmental development, while others are played for economic development. Some games are played for political development, while others are played for legal development. Some games are played for medical development, while others are played for scientific development. Some games are played for technological development, while others are played for artistic development. Some games are played for musical development, while others are played for literary development. Some games are played for philosophical development, while others are played for religious development. Some games are played for moral development, while others are played for ethical development. Some games are played for aesthetic development, while others are played for creative development. Some games are played for intellectual development, while others are played for practical development. Some games are played for theoretical development, while others are played for applied development. Some games are played for abstract development, while others are played for concrete development. Some games are played for general development, while others are played for specific development. Some games are played for overall development, while others are played for partial development. Some games are played for complete development, while others are played for incomplete development. Some games are played for perfect development, while others are played for imperfect development. Some games are played for ideal development, while others are played for real development. Some games are played for natural development, while others are played for artificial development. Some games are played for organic development, while others are played for inorganic development. Some games are played for living development, while others are played for non-living development. 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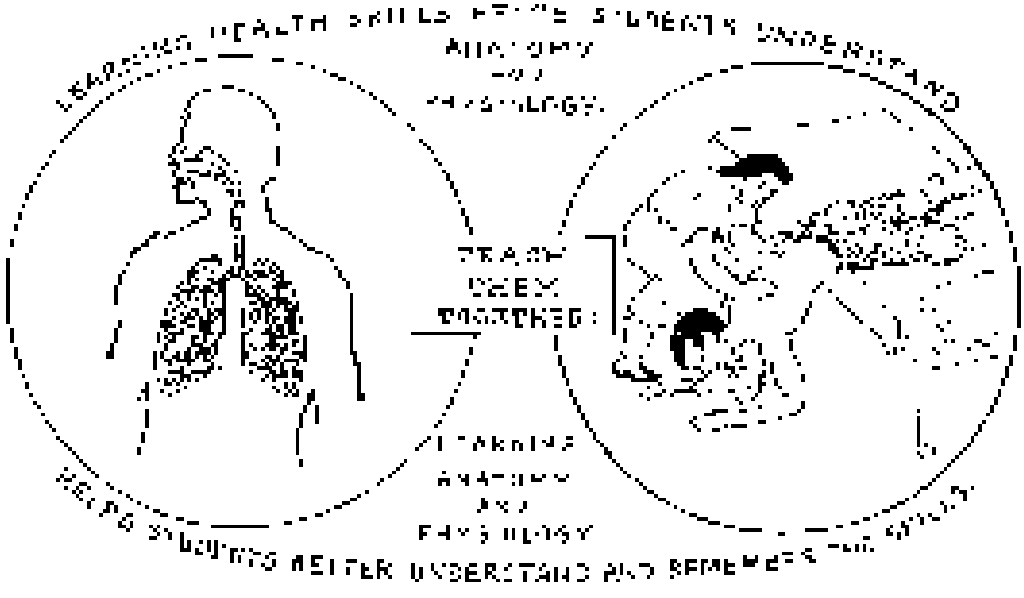




Health Education

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[illegible]	21.17



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PRACTICE TEACHING

Practice makes perfect. In order to learn how to practice teaching, you must actually try out what you have learned. Only then will you be able to see what you do well and what you need to improve. Trying out your teaching skills in front of your fellow health workers is a good way to prepare yourself for practising with the students in your class.

Practising skills is also important for health workers who are not teachers. During training sessions health workers can use practising skills in role plays.

STEPS IN PLANNING A PRACTICE TEACHING SESSION

1. Choose a topic for instruction and decide on the objectives (Unit 7).
2. Select your teaching methods and prepare the lesson plan (Unit 11).
3. Prepare your learning aids (see Unit 12, Figure 5).
4. Practise your lesson (Unit 6.3) to be sure you can keep to your time limit.
5. Perform your lesson in front of the teaching group (Unit 7).
6. Take part in a feedback session (Unit 7).
7. Revise your lesson plan and practise teaching the lesson in your group (Unit 6.3).
8. Teach your lesson in the community (see Unit 7, Figure 1).

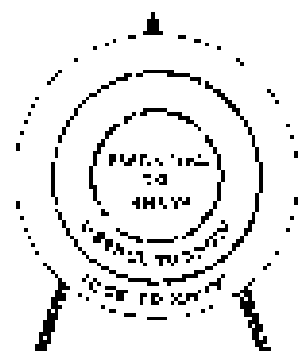
At all stages of this teaching practice you need to ask your fellow students and your teacher to help you. Ask them to give you suggestions for improving your lesson plan.



Practising your teaching skills is very important. You can learn many things from your mistakes. You will not be able to do your job well if you do not practise your teaching skills. Practising your skills will help you to be a confident teacher. You will also learn how to improve your teaching skills.

Practising your teaching skills is also important for health workers who are not teachers. During training sessions health workers can use practising skills in role plays. Role plays are a good way to prepare yourself for talking with people in the community.

Practising your skills is very important. However, you must also remember that you need to be sure that you are teaching the right things. You must be sure that you are teaching what your students need to learn.



REMEMBER:
PRACTISE TEACHING AT WORK IS MOST IMPORTANT.

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CHAPTER 6

Learning and Working with the Community



[illegible]

How nice it would be if all health workers could be trained in the community where they will work and could learn about the community and its health problems at the same time as they learn skills.

Health workers need to develop a range of knowledge, attitudes and skills to work effectively with communities. Learning in the community helps them to:

- **Good role models:** Students need to see the example of experienced health workers who are respected members of the community. They need to see how they can provide health services in a way that encourages people to participate in improving their own health. They need to see how health workers relate to the wider social and political issues.
- **Practice doing community work:** Health workers learn by doing. They need practice working with people, not just with books or equipment. They need to learn through practice how to work in partnership with communities, how to identify community problems, how to work effectively with groups of villagers, how to plan and evaluate community health programmes and how to use community resources.

Community health workers need to learn skills, knowledge and attitudes that will help them to be effective in their work. Learning in the community helps them to learn these skills. Learning to do skills in the community is essential preparation for the work they will do after they finish their training.

Teachers and health programme officers should encourage students to spend time in communities and learn about the people they will work with.

> **Learning in and from the community is essential preparation for community work.**

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MAKING COMMUNITY EXPERIENCE A PART OF TRAINING

Some [illegible] can be [illegible] by the [illegible] to help [illegible] training [illegible] work [illegible] during [illegible] school.

1. Locating the training center in a village or community similar to those where the health workers will be working. [illegible]

[illegible] the [illegible], but [illegible] [illegible] in [illegible] [illegible] [illegible]

Learning by doing. The students are involved in a wide variety of activities, both in the classroom and in the community. Many of these activities are similar to those that health workers carry out in their daily jobs. They may involve helping families to solve health problems that they have identified during home visits. Other activities might be carried out in the community, such as a survey, that students plan in the classroom. Through all these activities, the students get to know the people and the communities where they will work. They begin to feel responsible for the health of these families and communities. **The content of the training course is planned by the students and instructors together, according to the needs and problems that they see during these home visits.**

Applying what they learn. Participatory methods are used to help students learn how to apply what they learn in practical ways. For example, they may practise how to talk with people in the community about health problems, how to plan and carry out a survey, how to work in a group, how to plan and carry out health education activities, and how to keep records. Role-playing can be used to help students learn how to deal with difficult situations that they may meet in their work.

1. Having student health workers carry out activities in local communities during their training. This is one of the most important features of the training. It helps students to:

- Identify the most important health problems in the community. Students learn how to carry out simple surveys to find out about health problems in the community. They learn how to collect information, for example, about the number of children who have had diarrhoea in the last two weeks, the number of children who have been immunized against measles, the number of pregnant women who have received tetanus toxoid injections, and so on.
- Understand the factors in the community, particularly social and cultural factors, that affect people's health behaviour. For example, students learn how to find out why some children with diarrhoea are not given enough to drink, why some pregnant women do not receive tetanus toxoid injections, and why some people do not use latrines.
- Work out ways of solving health problems in the community. Students learn how to plan activities that are appropriate for the community and that can be carried out with the resources available.
- Gain confidence in their ability to work with people in the community. Students learn how to talk with people about health problems, how to help people to identify problems and how to help people to find solutions to problems.
- Develop skills in working with others. Students learn how to work in a group, how to plan and carry out activities, and how to keep records.
- Learn by doing. Students learn by carrying out activities in the community and by reflecting on their experiences.

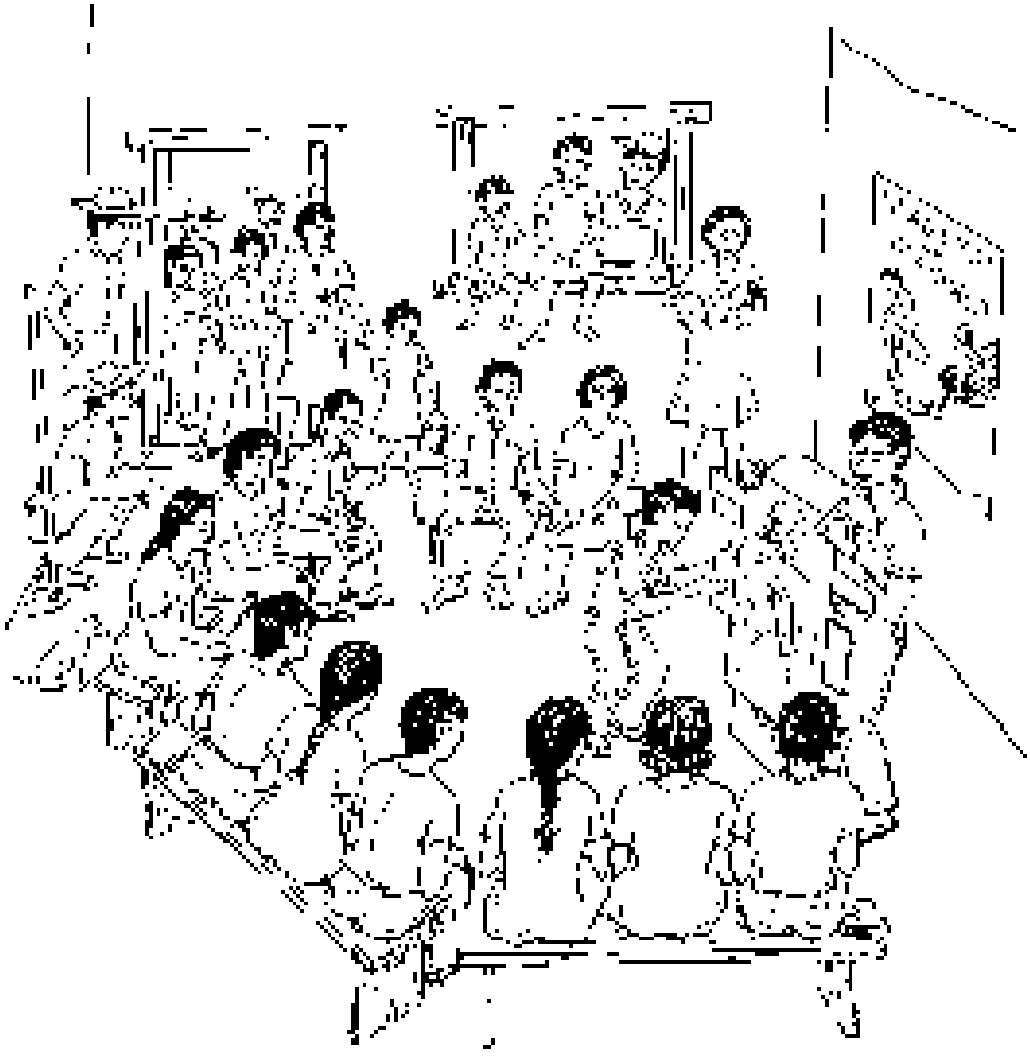


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Welcoming community participation in the training course. People from the village or neighbourhood can contribute actively to the training course, for example by telling stories, leading songs, and giving practical help.

Other possibilities

- **Open door policy.** With a little flexibility, it is usually possible to allow people from the community to attend certain sessions of the training course. For example, they could be invited to attend sessions on health education, community organization, the use of materials, and the role of the health worker. Visitors can also be invited to attend sessions that are open to the public, such as those on first aid, hygiene, or the prevention of infectious diseases.



[illegible]

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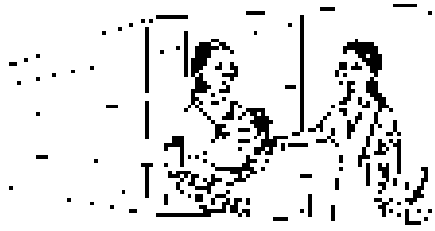
- Inviting traditional healers, herb doctors, midwives, and other persons from the community to take part in [illegible]



- Inviting mothers and children from the community to help with role plays and other activities. [illegible]

- Inviting members of the community to slide shows or filmstrip presentations. [illegible]





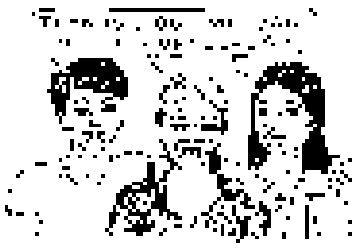
- Use of clear, simple language, teaching aids, and methods that everyone can understand. [illegible]



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LEARNING FROM, WITH, AND ABOUT THE COMMUNITY

The principle purpose of a community-based training course is to help health workers learn more effectively from the community, with the community, and about the community. In other words, it is to help people learn how to meet their own and each other's health needs more effectively.



NEEDS

- ...
- ...
- ...

SOCIAL FACTORS



- ...
- ...
- ...
- ...
- ...
- ...

RESOURCES



- ...
- ...
- ...
- ...
- ...
- ...

The course should help health workers to find out more about the community, but it should also help them to use what they already know about the community. For example, health workers usually have a good understanding of the needs and resources of their own village.

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For local health workers and their communities,



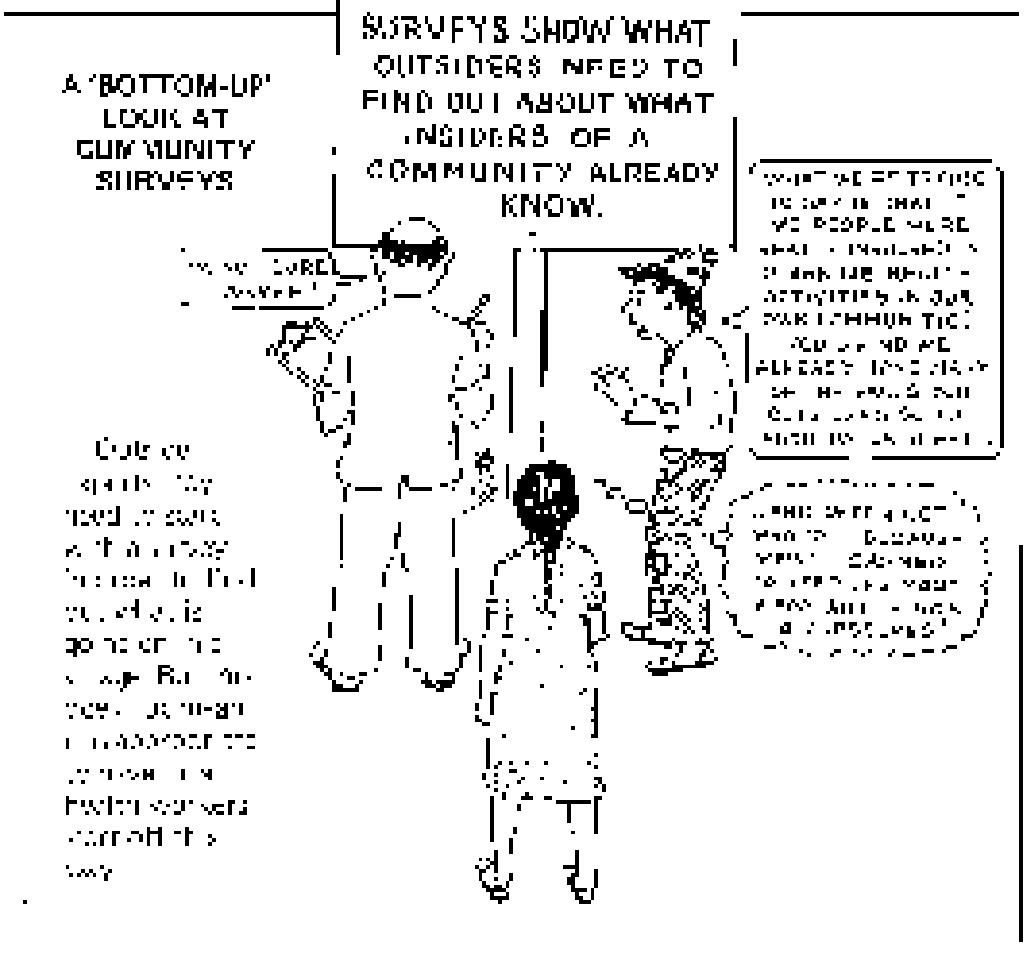
People in a local community already have many of the knowledge and skills they need to solve their health problems, perhaps, but these are rarely combined in a way that leads to action. Therefore:

- Bring the community together to share what they know about their health and how it can be improved.
- Help them work out how best to use their knowledge and skills to improve their health and well-being.

The process of bringing people together in a community group is called community diagnosis. Community analysis, participatory appraisal, or rapid rural appraisal are other names for it. Some of these terms are used for slightly different versions of the same idea.

Community diagnosis: what does it serve?

Community diagnosis is a way of helping people to [illegible] their own health problems. It is a way of helping them to [illegible] and to [illegible] the health problems that they themselves identify



When does information gathering make sense?

Although standardized community surveys are a common mistake [illegible] when a health worker and the people in the community [illegible]

- [illegible] (see p. 259)
- [illegible] (see p. 294)
- [illegible] For example, [illegible] (see p. 259)

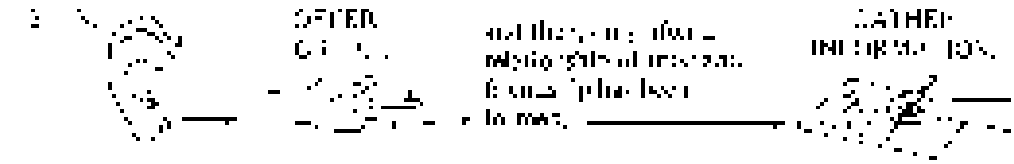
[illegible] Chapter 3, and

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Suggestions for gathering community information

There are no set rules or one right approach for gathering information in a community. However, several possible ideas are listed below. Choose the ones that you think will work best in your situation.

Some people should be consulted before you start. But do not start by taking a survey. Instead, contact someone you know well and ask for advice and information about how to approach the people in the community.



2. Instead of a survey, find out what problems people feel are most important. Learn what ideas they have for solving them.

3. Ask only for information that makes sense. Before you start, be sure you understand why the information is needed. For example, do not ask about income unless you are sure it is relevant.

4. Involve local people in gathering the information. Be sure that men and women of all ages are represented. Try to include people from different religious and ethnic groups, castes, and classes.

5. When contacting people, try to avoid taking along written questionnaires. Asking questions may make people suspicious. It may also prevent you from listening carefully to what they say. Instead, write down only the most important information after each visit.

6. Be careful not to raise false hopes. Many people in communities have had experience with outsiders who promised help but never returned. Be honest about what you can and cannot do. Please do not promise things you cannot do.

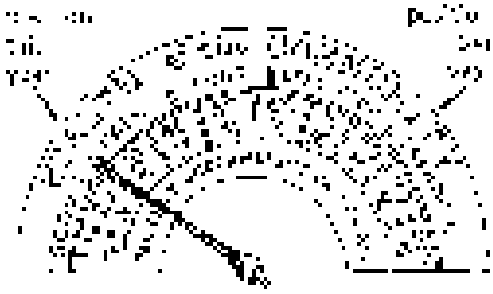
7. Observe as much as possible. You can learn much by watching how people live and work. Ask questions to help you understand what you see.

8. Go slowly when giving people advice. Be sure that you understand their situation before you offer suggestions. Remember that you are a guest in their community. You will gain more respect and influence by living and working quietly as a friend and helper.

Note: Many of the suggestions listed above may not be relevant in your area. However, some of them may help you to gather information about the health problems in your community. For example, a study of the [illegible] in Bangladesh showed that [illegible] deaths. For example, a study of the [illegible] in Bangladesh showed that [illegible] deaths between 6 and 18 months were [illegible]

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Health indicators



[illegible] are key factors or [illegible] level of health [illegible] usually [illegible] can be measured and shown [illegible] Most people [illegible] by [illegible] and [illegible] [illegible] [illegible]

COMMUNITY DYNAMICS AND PARTICIPATION

[illegible] to be aware of the [illegible] of [illegible] and [illegible] to understand the community power structure: [illegible] [illegible] [illegible]

What is participation?



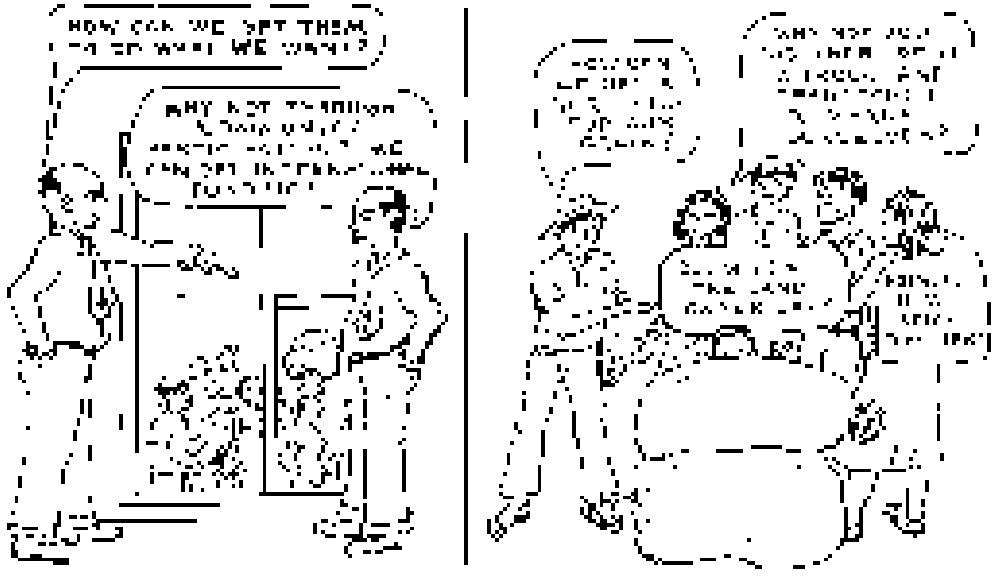
[illegible] people's participation in health.

[illegible] participation is seen as a way to improve the delivery of standard services. By forming local committees and encouraging people to help with services can be extended [illegible] more effectively.

[illegible] participation is seen as a process in which the poor work together to overcome problems and gain more control over their health [illegible]

[illegible] participation [illegible] people's participation [illegible] all levels of society. It recognizes that common interests and the power of community organization [illegible] the poor and [illegible] authorities, possible [illegible]

[illegible] participation [illegible] conflicts of interest [illegible] community. It recognizes that [illegible] people's health [illegible] the value of people's organizations and the importance of collective action [illegible] problems. Such [illegible] [illegible] power and [illegible] [illegible] [illegible]



Do you think the people in the pictures are doing the right thing? Why or why not?

Do you think the people in the pictures are doing the right thing? Why or why not?

Do you think the people in the pictures are doing the right thing? Why or why not?

Often it is easy to observe (even from photos or films) whether community participation is controlled by those on top or by the poor.

Look at the two photos below and ask yourself:

- Who is taking the lead?
- In what ways does that person look similar to or different from the rest of the people?
- Are the poor taking part actively or passively? (Are they working, having discussions, or just listening?)
- How do the building materials used for the project compare with those used for the people's homes?



(Photo: D. Derias/WHO.)

In an Iranian village, a health worker gives instructions on how to cover a well to protect water from contamination.



(Photo: Salgado/Christian Aid.)

Families do weekend work in a low-cost housing reconstruction project at Sakerty, on the fringe of Guatemala City.

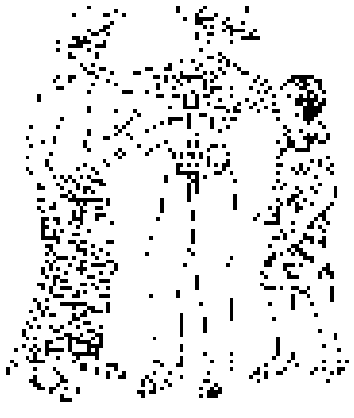
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LOOKING AT COMMUNITY LEADERSHIP



- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]





[illegible]

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Learning to identify and work with leaders of the group

You can also start by involving the group of health workers in the task of identifying local leaders in the community and getting their views about who they include unofficial 'opinion leaders' as well as official leaders.

The group can consider questions such as the following:

- Do we want to include women and children?
- Should we include only members of the dominant ethnic group?
- Should we invite only local leaders?
- Should we include only people who support our ideas?
- Do we want to build on existing groups and organizations? Or should we form new groups?
- Should we invite only those who are willing to support our work?

Next they might consider questions such as:

- What do we want to achieve in the community?
- Should we invite only people who support our ideas? Or should we also invite those who disagree? Would we gain support if we could show them that our ideas are good?
- Do we want only people who are willing to support us? Or should we also invite those who are opposed to us?
  - Is it important to have the support of the traditional leaders?
  - Do we want to work with people who oppose us?
  - Do we want to work with people who are willing to support us? Or should we also work with people who are opposed to us?
  - What do we gain or lose?

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[illegible] may be directly [illegible] by [illegible] from [illegible] have taught to accept harsh [illegible] and [illegible].

[illegible] [illegible] [illegible] [

[illegible] ABOUT VILLAGE [illegible]

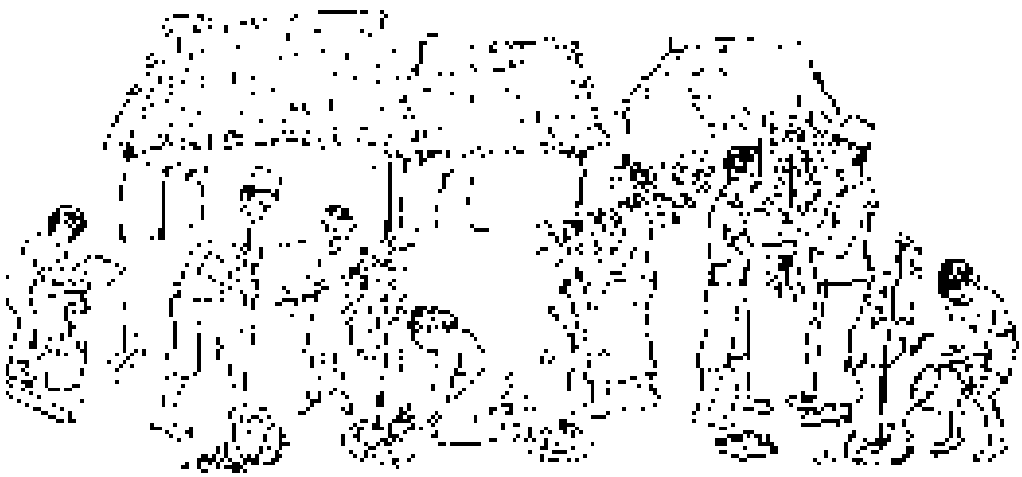
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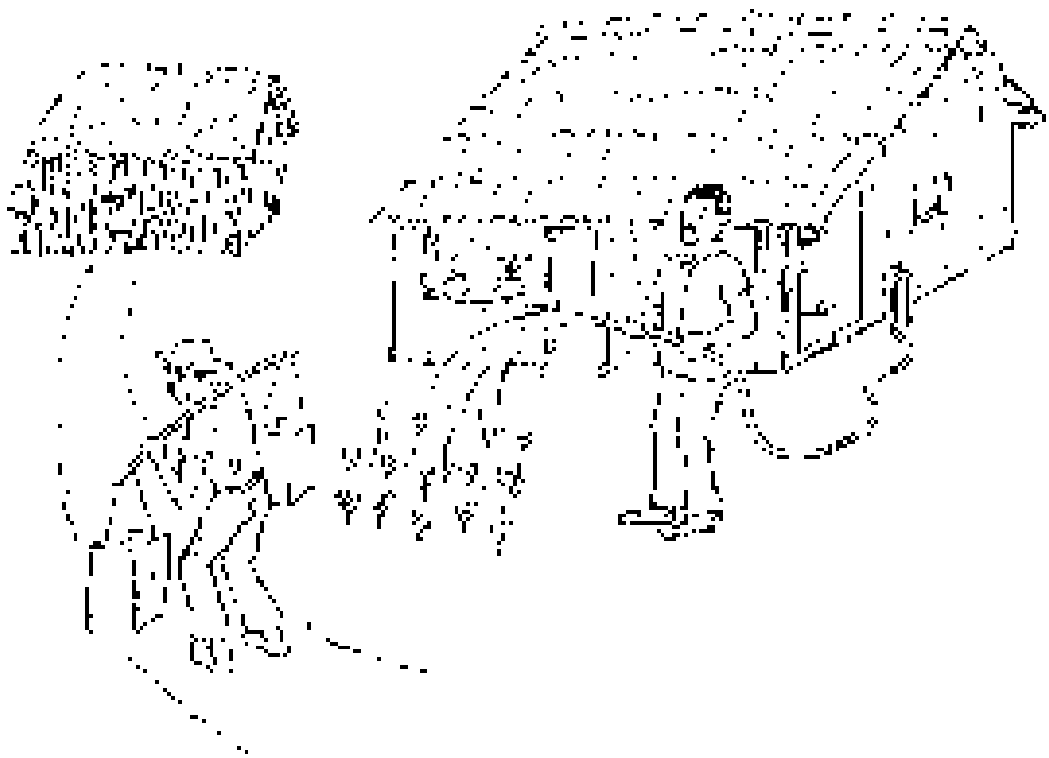
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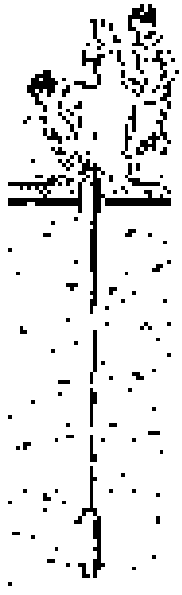
[illegible]

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> Any program that would help the weak gain power must carefully consider how much help to accept from the strong, and under what conditions.

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CHAPTER 7

Helping People Look at Their Customs and Beliefs

LOOKING AT LOCAL CUSTOMS AND TRADITIONS

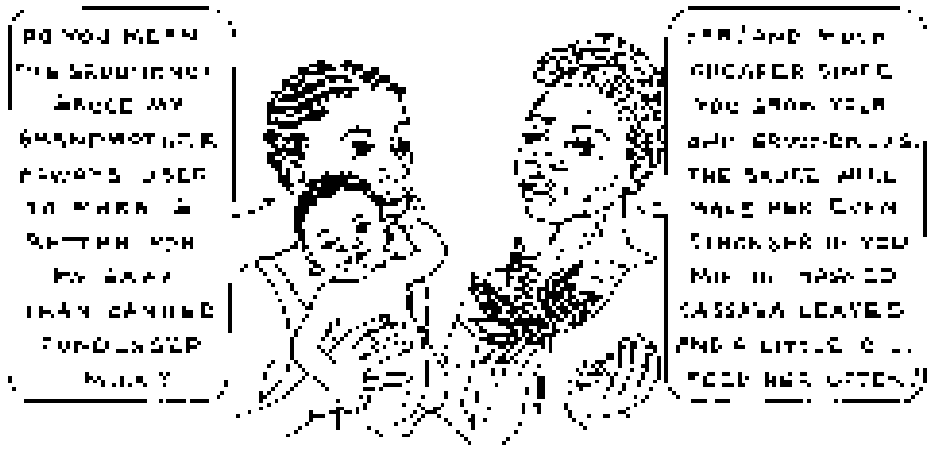


[illegible] health workers learn about people's customs and traditions.

- [illegible]
- [illegible]
- [illegible]

[illegible] help people look carefully and critically at both the old and the new, in order to avoid what is harmful and preserve what is best in each.

[illegible] place greatest emphasis on what is best [illegible]



Build on beneficial traditions.

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HELPING PEOPLE RECOGNIZE THE STRENGTHS IN THEIR TRADITIONS

- Have the group discuss the role, functions and beliefs in the local community that are especially threatened by the HIV/AIDS epidemic.
- Invite a community member to discuss the traditional role of women in the community.
- Ask participants to discuss how women and children are affected by the HIV/AIDS epidemic. Why are women and children more vulnerable to HIV infection than men? How does the epidemic affect the role of women in the community?
- Have participants identify [illegible] and contacts in their villages, and have some of them talk about their traditional values and beliefs. Why are these values important? How can they be used to help people change their behaviour?



- Ask participants to identify [illegible] in their villages who could help them to educate people about HIV/AIDS. Discuss how they could work with these people. Ask participants to identify [illegible] in their villages who could help them to educate people about HIV/AIDS. Discuss how they could work with these people.
- Invite a group of [illegible] to perform songs, dances or plays that they have created to help people learn about HIV/AIDS. Discuss the messages in the songs, dances or plays.

When you have completed the exercises on this page, turn to the following page and read the section entitled "Examples of how to help women and children more effectively."

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HEALTH PROBLEMS THAT RESULT WHEN OLD TRADITIONS ARE REPLACED BY NEW ONES



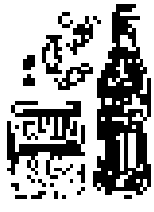
AN EXAMPLE FROM [illegible], AFRICA

EXAMPLES OF HEALTH PROBLEMS THAT RESULT WHEN OLD CUSTOMS ARE REPLACED BY LESS HEALTHY NEW ONES

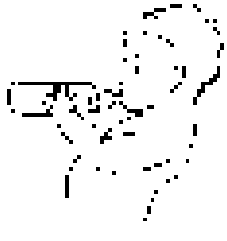










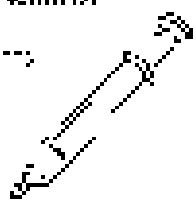






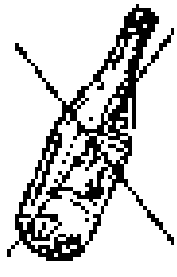
MORE EXAMPLES OF HEALTH PROBLEMS THAT RESULT WHEN OLD CUSTOMS ARE REPLACED BY LESS HEALTHY WAYS

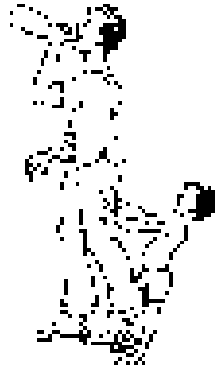


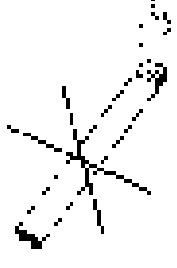












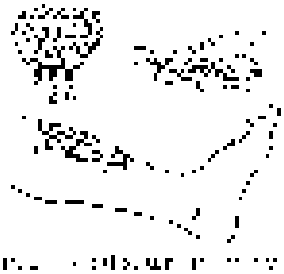


Problems follow when any group of people, regardless of how well intending, imposes or forces its ideas on another group of people.

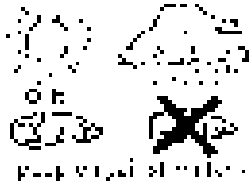
IDENTIFYING HEALTH PROTECTING CUSTOMS











DISCOVERING WHICH HEALTH TRADITIONS ARE BENEFICIAL AND WHICH MAY BE HARMFUL

[illegible] their own culture [illegible] very important [illegible] to record [illegible] their [illegible]

[illegible] community [illegible] some traditional practices [illegible] harmful. [illegible] people [illegible] simple and [illegible]

[illegible] help people [illegible] traditional practices [illegible] harmful practices. [illegible] traditional practices [illegible] harmful practices [illegible]

[illegible] following questions [illegible] a traditional practice [illegible] harmful. [illegible] a traditional practice, you should [illegible] Be creative, [illegible]

Ways to tell if a home remedy is beneficial or harmful:

1. [illegible] a home remedy [illegible] or [illegible] a traditional practice [illegible]
2. [illegible] a home remedy [illegible] or [illegible] a traditional practice [illegible]
3. [illegible] a home remedy [illegible] or [illegible] a traditional practice [illegible]
4. [illegible] a home remedy [illegible] or [illegible] a traditional practice [illegible]

EXAMPLE OF A BENEFICIAL REMEDY

[illegible] [illegible] [illegible] [

WAYS TO INTRODUCE NEW IDEAS BY BUILDING ON OLD ONES—Examples from Latin America

One of a health worker's most delicate jobs is to help people recognize and change health habits or customs that are harmful.

If the health worker says to someone, "What you do and believe is wrong," this usually will do more harm than good. How, then, can a health worker help people discover better ways of doing things without offending them, shaming them, or showing disrespect for their traditions? Here are some suggestions:

- Avoid telling people they are doing something wrong. Point out what they do right, and help them find out for themselves what they are doing wrong.
- Look for what is true or beneficial in a custom or belief that is partly harmful, and help people build new understanding around that.
- Help people explore the reasons, or even science, behind their beliefs and customs. Then help them realize the need to weigh the risks against the benefits—of both traditional and modern ways.

Example 1: Helping people learn a new way to treat diarrhea

In Mexico and much of Latin America, people believe that dangerous diarrhea results when a baby's soft spot, or *fontanel,* sinks in. They believe the baby's brains have fallen, causing the diarrhea.

So when a baby with diarrhea has a sunken soft spot, they treat him by . . .



In many parts of Latin America, a sunken 'soft spot' is thought to cause diarrhea.



sucking on the soft spot,



pushing upward on the roof of his mouth,



and slapping the baby's feet while holding him upside down.

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How can health workers help a mother to realize that the sunken soft spot is not the cause of the diarrhea, but rather the result? That it sinks in because the baby has lost too much liquid?

Rather than say to the mother, "You're wrong!" the health workers **help her look for what is right in the tradition.** They say to the mother, "You are right that when your baby has diarrhea, a sunken soft spot is a sign of danger! Is anything else in your baby sunken in?"

"Well, yes!" says the mother. "His eyes!"

"Do you notice anything else different about the baby's eyes?"

"They look dry and dull. When he cries there aren't any tears."

"Does any other part of the body seem dry?"

"His mouth. It looks all pasty."



sunken eyes of a baby with dehydration

"When did he urinate last? When did he pee?"

"Now that you mention it, not since yesterday afternoon!"

"Why do you think the baby doesn't pee?"

In this way, the **health worker starts with what the mother already knows and observes.** She helps her discover for herself that the soft spot has sunk because the baby lacks liquid. The mother can then reason that this is the *result* of the baby's diarrhea—not the *cause*.

Now the health worker says, "Let's try a new way to bring the soft spot back up. We will give the baby lots of liquid . . ." She teaches the mother how to prepare Rehydration Drink and give it to her baby (see ***Where There Is No Doctor,*** p. 152).

Other ideas for helping mothers and school children learn about dehydration and rehydration are on pages **24**-17 to **24**-30.



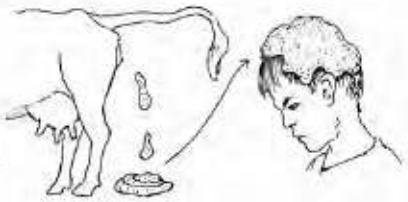
BUILDING ON PEOPLE'S TRADITIONS AND BELIEFS

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Example 2: Helping people learn to weigh benefits against risks

Some home remedies--like some modern medicines--are relatively safe, while others are more dangerous. Health workers need to help people learn to always consider the possible risks or dangers of a treatment. **Never use a form of treatment that could prove more dangerous than the illness.**

In Mexico, villagers have an interesting home cure for deep fungus infections of the scalp. The child's head is shaved completely and covered with fresh cow manure. After 24 hours the manure is washed off with cow's urine.



Many of us might be disgusted by this cow manure treatment, or say it is worthless. But stop to think about it; it may have some scientific value!

First, all feces (shit) contain bacteria that keep fungus from growing. (One reason why broad-range antibiotics sometimes cause diarrhea is that they kill the 'good' bacteria that prevent the growth of harmful fungus in the gut. See *WTND,* p. 58.)

Second, urine is a mild acid. Many modern anti-fungus medicines contain mild acids. So the urine as well as the manure has properties that help fight fungus infections.

On the negative side, however, this manure treatment has a high risk of causing tetanus or other serious bacterial infections. The cure could prove more dangerous than the illness.

The health workers in Ajoya therefore discourage this home treatment. But rather than tell people the cure is bad, they look for ways to strengthen people's respect for their traditions, yet help them learn something new. In this case, they help people to discover the scientific value of the cure, but also to consider the dangers. They point out that almost all forms of medicine--traditional and modern--have certain risks or dangers. Before using any treatment, **the possible benefits should always be weighed against the possible harm.**



THE DEEP FUNGUS INFECTION OF THIS GIRL WAS TREATED WITH FRESH COW DUNG.

In this way, the health workers help people develop a wiser, more sensible approach to the use of both traditional and modern medicines.

For more ideas on the sensible use of medicines, see Chapter 18.

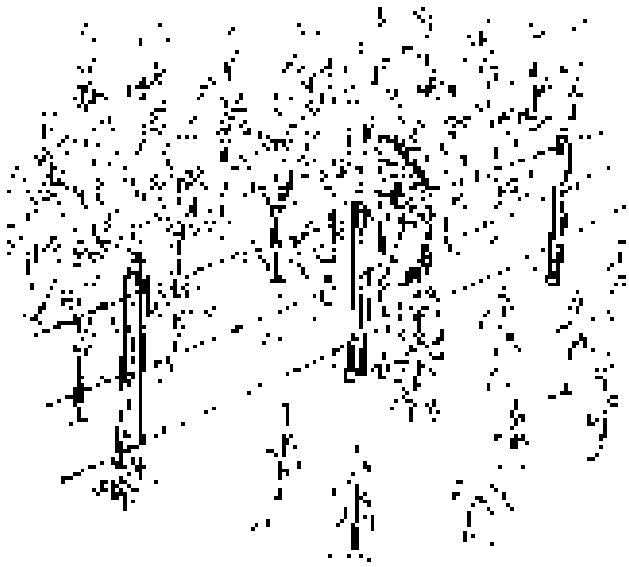
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TEACHING METHODS FOR HELPING PEOPLE UNDERSTAND NEW IDEAS*



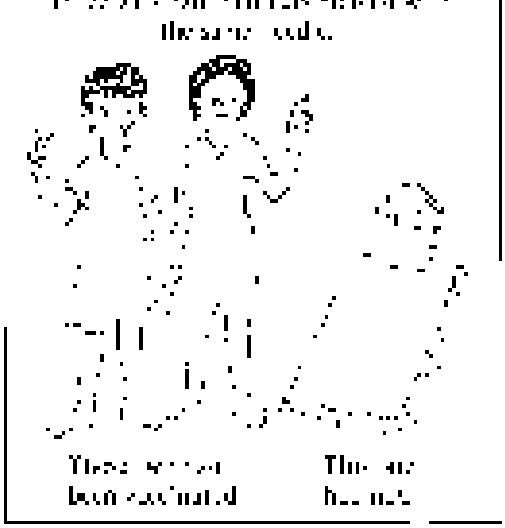
1 Association of ideas

2. Presenting ideas through real situations



3. Choosing an appropriate time





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4. On the spot survey



Chicken Owner	Number of birds in January	Number that died	Vaccinated?
John	12	6	No
Maria	8	1	Yes
Alice	5	2	Yes
Jose	6	5	No
Sylvia	15		



GOODWILL RESPECT, AND PRACTICE

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CHAPTER 8

Practice in Attending the Sick

THE IMPORTANCE OF A SOLID BASE IN CURATIVE SKILLS

As we discussed in Chapter 3, ability to attend the sick is one of the most important skills a community health worker can learn. This is because:

- Curative medicine answers a strong felt need. Most people show far more interest in curing their ills than in preventing them—at least at first.
- A health worker who is an effective healer will win people's confidence and cooperation more readily—even for preventive measures.
- Early, safe, low-cost treatment by people in their own homes is an essential part of prevention. It keeps many minor problems from becoming severe.
- Attending the sick provides a key opportunity for health education that relates to the family's immediate problems and concerns. (See the discussion below.)
- Only when health workers are well versed in curative medicine, including its risks and limitations, can they help people overcome common misunderstandings about modern medicine. (Training health workers only in 'prevention' can actually lead to greater misuse, overuse, and *mystification** of medicine!)

Appropriate curative medicine is a key part of prevention.

Treatment as a door to prevention

Many health workers have found that the 'clinical consultation', or occasion when a sick person seeks treatment, is one of the best opportunities to talk about preventive measures. Some find this more effective than organized health talks in small groups because . . .

- it is more immediate and personal,
- the sick person and her family are very much concerned with the illness in question, and
- many people come for treatment who might not come to health talks.



CURATIVE MEDICINE—
A DOORWAY TO PREVENTION

**Mystification:* Making something seem magical or supernatural, beyond the understanding of ordinary people.

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A health worker who can diagnose and treat, or help others to diagnose and treat many of their own health problems, has many more opportunities for health education.

Starting with what people want – then helping them explore what they need

[illegible]

However, after using one of these tools, it is a good idea to ask if there is more to talk about.

If you want people's good will and cooperation:

- Get started with what people want
- Then help them discover and explore their needs (REAL needs).



TREATMENT ONLY

THEN PREVENTION

You will be more likely to get cooperation if you are careful to [illegible] accept a more appropriate [illegible]



[illegible]

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LEARNING WHAT TO DO FOR THE SICK AND INJURED

[illegible] can be approached in a [illegible] ways:

- [illegible]

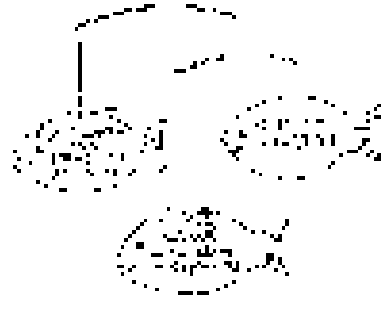
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[illegible]



A GOOD BALANCE FOR A PLAYGROUND

[illegible]

Clinical instructors

[illegible]

Usually it is harder for health workers to gain clinical experience under the guidance of persons who practice at a level similar to that of the health workers in their communities.

[illegible] Clinical learning [illegible] becomes more meaningful when it relates to real persons and problems recently seen in the clinic or community.

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The place and hours (hospital, health center, or home)

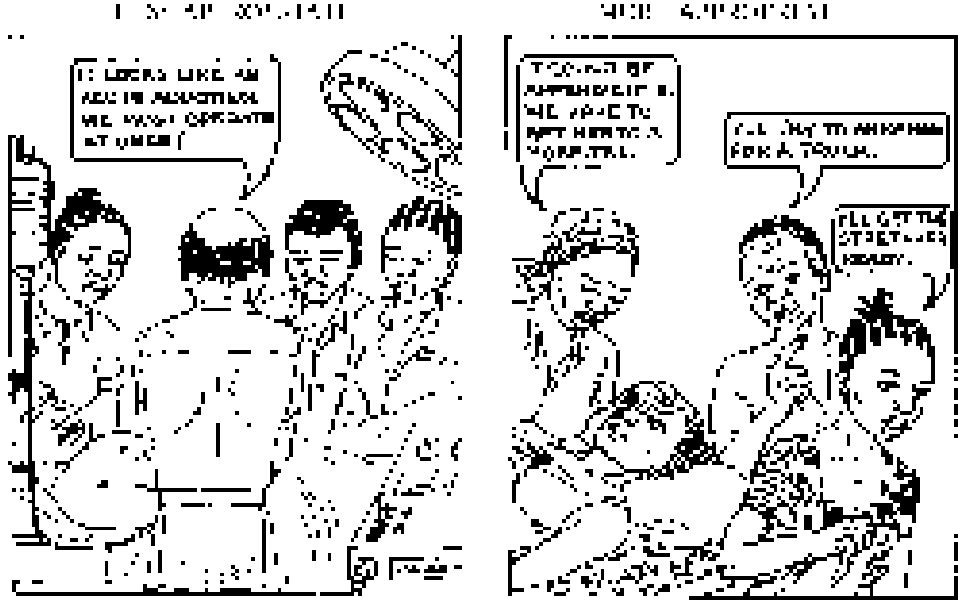
[illegible] clinical practice activities must take place in a safe environment. [illegible]

Many students have learning problems because they do not have enough practice. Practice does not always mean doing the same thing over and over again. It means doing the right things in the right way. Students must practice applying the skills they learn. They must practice solving problems. [illegible]

There is a balance between [illegible] and [illegible]. [illegible]

Both [illegible] have disadvantages. [illegible]

- [illegible] is less flexible, [illegible]
- [illegible] is less personal. [illegible]
- [illegible] costly equipment [illegible]
- [illegible] may have problems [illegible] confusion and temptation to go beyond their limits.



A medical student [illegible] diagnosis and operation [illegible]

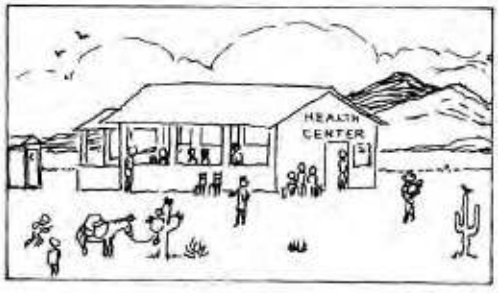
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Generally it is wiser for health workers to gain clinical experience in a small community health center. Here things are more personal and more flexible. The staff, the sick and their families, and the health workers have more chance to learn about each other—not just as 'problems' and 'problem solvers', but as fellow human beings. They can all begin to care for and about each other.

In a small rural clinic, however, there may not be a wide enough range of problems for health workers to gain adequate experience.

Ideally, perhaps, students should have a chance to learn in both a small, unhurried village setting, and in a health center large and busy enough so that they can see a broad range of problems and persons.

A community-based program in Nuevo Leon, Mexico *(Tierra y Libertad),* has managed to do this. Training is based in a small village. But the students take turns spending time in a busy community health center in a poor neighborhood in the nearby city of Monterrey.





Classroom preparation

It is a good idea to begin clinical practice early in the course. So classroom preparation for this also needs to begin early. Classes might include:

- **clinical ethics** (relating to the sick as persons, not 'patients')
- **basic teaching and communicating skills** to help in understanding needs and explaining things clearly to a sick person and his family
- **how to examine a sick person** (see *Where There Is No Doctor,* Ch. 3)
- **how to take care of a sick person** (see *WTND,* Ch. 4)
- **practice in using record sheets** (see Ch. 22)
- **solving problems step by step** (scientific method, Ch. 17)
- **diagnosis, treatment, and prevention of common illnesses and injuries** (based on local needs and resources)
- **proper use and measurement of medicines** (see *WTND,* Ch. 5, 6, 7, and 8)
- **preventive measures** for specific health problems

In classroom study of these subjects, the closer the learning situation can be to the real-life situation, the better. Through role plays and sociodramas, students can practice all the above skills in a lifelike way. A **checklist,** or list of review questions, can be used to evaluate how well the students do (see page **8**-10).

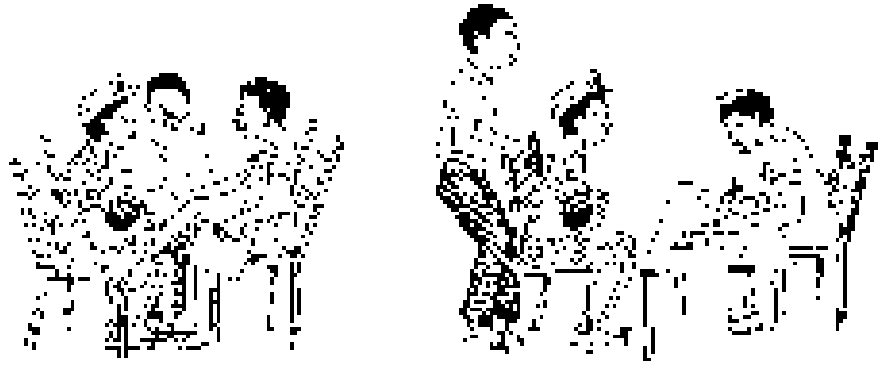
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ADVISING HEALTH WORKERS ABOUT 'CLINICAL ETHICS'

As you read more about the ethical principles of good nursing, you should consider how you can apply them to your own practice. Here are some practical guidelines for health workers, based on the principles of ethical practice.

Treat sick persons and their families as your friends and equals, not as objects of 'work' or examples of

- Never give them a drug or an injection without telling them what it is for.
- Encourage them to ask questions about their illness and treatment.
- Do not allow [illegible] not [illegible] people or family



- Use simple, clear language people can understand. Avoid jargon and technical terms.
- Ask questions to find out what they already know about their illness and treatment. Find out what they think is causing their illness and what they expect you to do for them.
- Do not act rushed. Sit down when you talk with them. Don't look at your watch or fidget.
- Respect people's right to refuse treatment.
- Never threaten or punish. Be encouraging. Help people to feel good about themselves.

First serve those whose needs are greatest. When many people have come to the health post, it is tempting to treat those who are especially well-dressed, important-looking or persistent. These people should never be given priority. They should wait their turn.



Sometimes you can't help everyone who comes. Some people can't wait because they are too ill. Others can wait because their illness is not serious. Try to explain to those who must wait why you cannot help them immediately. Tell them when you will be able to help them.

These guidelines are from a video programme made by Health Action International (HAI) and Healthwise, Australia.

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Respect the confidence and privacy of the sick person. Do not discuss someone's health problems outside the clinic or classroom. This is especially important in a small community where gossip can spread quickly.

Some people may ask you, "What is wrong with Mohan?" or "Is he going to die?" You might be tempted to tell them, but it is better not to do so. Mohan's family will learn what is wrong with him. They will also learn how willing you are to keep secrets. If you tell other people's secrets, you will lose their trust.

Be honest with the sick person and his family—but also be kind. Sometimes when a person is very ill or dying, or has a frightening disease, you may be tempted to tell the truth bluntly. But this may do more harm than good. Instead, you should be honest and sensitive. Think carefully about what you say and how you say it. Choose words that are as truthful as possible, but that will not cause unnecessary fear or pain.

Help the sick person gain a better understanding of his illness. Sometimes people have misunderstandings about their illness. Perhaps they have been told by a traditional healer that they are bewitched. Perhaps they have been told by a doctor that they have a disease that is incurable. Perhaps they have been told by their family that they are worthless. Your knowledge of health can help them overcome these misunderstandings.

Use medicines only when needed, and help people understand why it is important to limit their use. Unfortunately, many health workers and doctors overuse medicines. Some people think that they will get well more quickly if they take medicines. Some people think that they will get well more quickly if they receive injections. Some people think that they will get well more quickly if they receive expensive medicines. Some people think that they will get well more quickly if they receive medicines that are new and unfamiliar.

Some people may even demand medicines. You can help them understand why they do not need medicines. Explain why you do not think medicines are necessary. Explain the benefits of treatment without medicines. Explain the dangers of medicines. Explain how you can help them get well without medicines. Explain how you can help them get well more quickly without medicines. Explain how you can help them get well more safely without medicines. Explain how you can help them get well more cheaply without medicines. Explain how you can help them get well more easily without medicines. Explain how you can help them get well more conveniently without medicines. Explain how you can help them get well more comfortably without medicines. Explain how you can help them get well more naturally without medicines. Explain how you can help them get well more healthily without medicines. Explain how you can help them get well more happily without medicines. 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KNOW YOUR LIMITS

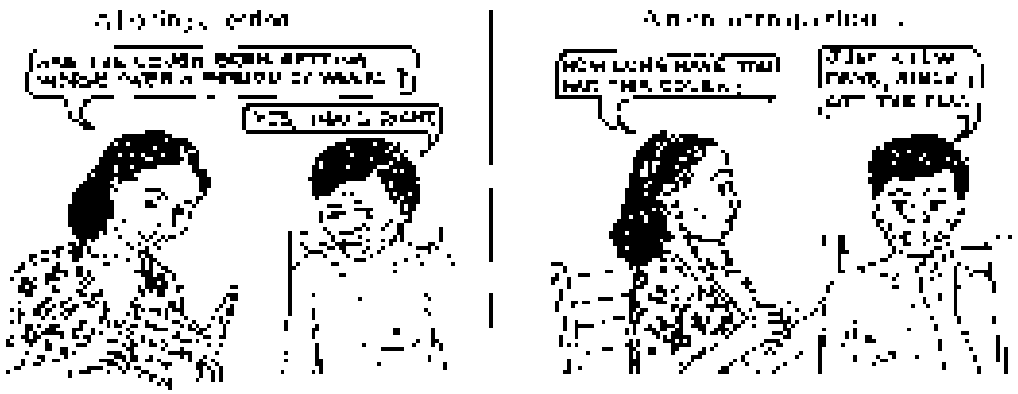
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THE ART OF ASKING QUESTIONS

[illegible]

[illegible]

Usually it is a good idea to avoid asking questions that lead the person to [illegible] For example, ask "How long have you had this cough?" instead of "You've had this cough for a long time, haven't you?"



[illegible]

[illegible]



[illegible]

[illegible]

Sometimes you can help [illegible] by asking questions that help them to [illegible]

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SAMPLE CHECKLIST TO EVALUATE A CONSULTATION

Note: [illegible] checklist [illegible] a supervisor, [illegible] [illegible] [illegible]

TREATMENT AND MANAGEMENT



SKILL DEMONSTRATIONS AND PRACTICE

ROLE OF THE INSTRUCTOR IN THE CLINICAL SITUATION

The role of the instructor in the clinical situation is very important. The instructor needs to be present with the students, to help them learn, to encourage them, and to make sure that they are safe. The instructor must also make sure that the patient is not harmed by the students' actions. The instructor must also make sure that the students are not harmed by the patient.

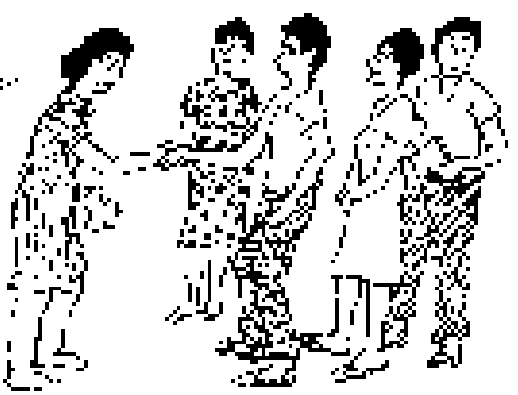
Teaching assistants: If there are enough teachers, it is usually best if one teacher stays with a small group of students. If there are not enough teachers, it is sometimes possible to use experienced health workers as teaching assistants. The teaching assistant usually gives more attention to the students than the busy teacher can. The teaching assistant must be willing to learn how to teach. The teacher must show the teaching assistant how to teach, and must check the assistant's work.

Involving the sick person and her family as helpers: Sick people and their families can help students learn. Students must respect the sick person and her family. They must not behave like visitors. They must help with the work of caring for the patient.

You can often transform the problem of too few patients into a positive learning situation. You can:

- Explain to the sick person and her family about the training course, and the need for students to practise on real patients. Explain that the students will learn how to help the patient and her family. They will learn how to help the patient to recover quickly.
- Divide the students into small groups. Ask only one group to go to the patient's home at a time.
- Keep each group small. Usually not more than four students.
- Instruct the students to ask the sick person and her family to help them solve the problem. Make sure that the students do not behave like visitors. They must help with the work of caring for the patient. They must not be a burden to the family.

If you ask the patient and her family to help you, they will feel proud that you value their knowledge and experience. They will enjoy showing you how much they know. They will enjoy showing you how much they can help. They will enjoy showing you how much they can learn.



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STAGES OF CLINICAL LEARNING

The [illegible] clinical learning [illegible] a student [illegible] skills [illegible] supervised [illegible]

As a student progresses through the stages of clinical learning, the supervisor gradually [illegible] more responsibility for the student's [illegible] and [illegible] the student's [illegible] and skills. [illegible] the student [illegible] the supervisor [illegible] the student [illegible] the student [illegible] the student

POSSIBLE STAGES IN CLINICAL PRACTICE

STAGE 1.

What health worker needs to do

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

What to say or ask

During the consultation:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

After they leave the consultation:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]



STAGE 2.

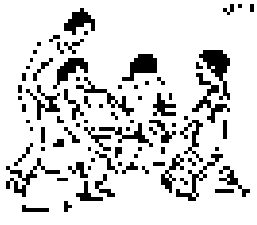
What health worker needs to do

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

What to say or ask

During the consultation:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]



After the consultation:

- [illegible]

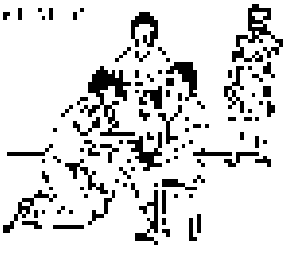
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FOR HEALTH WORKERS IN TRAINING

STAGE 3:

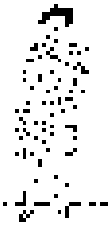
During the consultation:

After the consultation:



STAGE 4:

During the consultation:

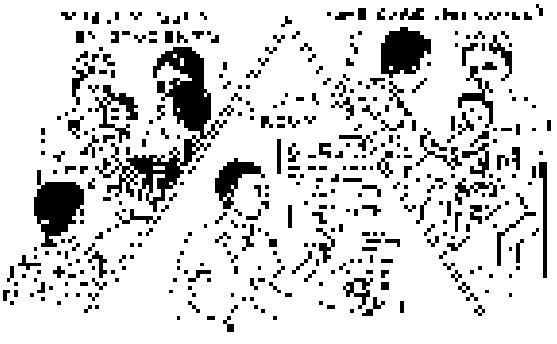




ADAPTING CLASSWORK TO PROBLEMS SEEN IN THE CLINIC OR HOME

[illegible]

[illegible]



Students learn better when classes relate to problems they have just faced in real life. [illegible]

[illegible]

FOLLOWING THE CLINICAL CONSULTATION

[illegible]

In many sessions, students [illegible]

Remember the importance of clinical skills:

[illegible]

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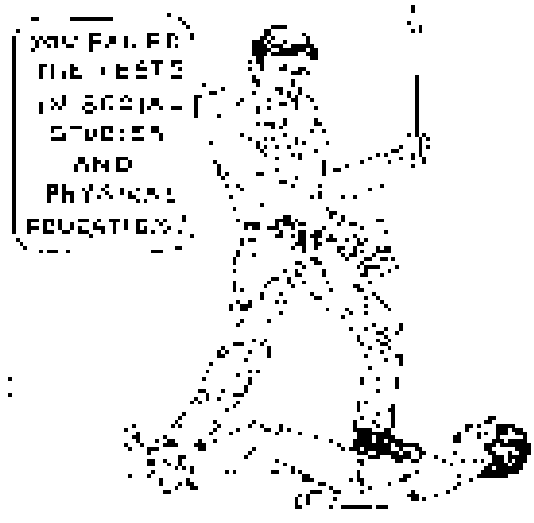
CHAPTER 9

Examinations and Evaluation as a Learning Process

TESTS AND EXAMS

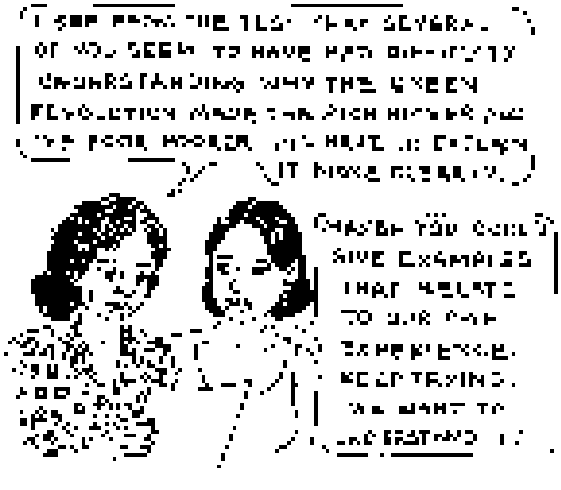
The purpose of tests and exams is to help students learn.

In many schools, exams are used to punish students who do not learn. Students who get low marks are made to feel stupid. They are punished in many ways. They may be forced to repeat a year of school. They may be expelled.



Although tests and exams can help students learn, they can also discourage students from learning. Students who get high marks on exams may be praised and rewarded. Those who do not do well on tests may be punished or left behind.

In addition to the problems tests and exams cause for students, they can cause problems for teachers. Teachers may feel that their work is being judged by the results of tests and exams. They may feel that they are being forced to teach in a way that they do not think is best.



In addition to the things teachers must do to help students learn well, they must also help students learn how to take tests and exams. They must help students understand the purpose of tests and exams.

Many examinations are designed to test how much students remember of what they have been taught. Questions are often taken directly from the textbook. The questions become teaching aids. They tell students what they should study. They tell students what they should learn.

It is good to test students' memory. But tests and exams should also test other things. They should test students' ability to think and to solve problems. They should test students' ability to use what they have learned.

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The Function of Texts and Events in Two Different Approaches to Teaching Health Workers



Conventional School-like Education

- Texts are used as a way of giving information to students.
- Students are expected to learn the information in the texts and to be able to repeat it on tests.
- A good student is one who can remember and repeat what the teacher and the texts say.
- Texts are usually complicated and written in a style that is different from the way people normally speak.
- Students are usually expected to read the texts on their own, before coming to class.
- Students are usually expected to memorize the information in the texts.
- Students are usually expected to do what the texts say they should do.
- Students are usually expected to do what the teacher tells them to do.
- Students are usually expected to learn by themselves.



Participant-centered Learning

- Texts are sometimes used to help students solve problems or answer questions that arise in their learning.
- Texts are usually short and simply written so that students can read them easily.
- A good student is one who can find information in texts and other resources, and who can use that information to help solve problems or answer questions that arise in his or her learning.
- Texts are usually used as a resource for learning. Students may read texts in class or at home, alone or in groups, depending on what is most appropriate for the text and for the learning activity.
- Students are usually expected to use information from texts and other resources to help them learn.
- Students are usually expected to help each other learn.
- Students are usually expected to help their teacher learn.

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THE IMPORTANCE OF OPEN-BOOK EXAMS

There are good reasons to encourage students to use their books and notes during exams.

Typical [illegible] exams [illegible] taking [illegible] to [illegible] students, all of [illegible] trying [illegible] to help [illegible] memory, [illegible] way, [illegible] health [illegible] does not [illegible] a creative approach [illegible] looking [illegible] answers [illegible] in their [illegible] memories.

When a health worker is faced with a sick person, he may think [illegible] remember all [illegible] and why [illegible] and how [illegible] medicines [illegible]. He may [illegible] a book, [illegible] to [illegible] things [illegible] but [illegible] other [illegible] programs. We have [illegible] students answer [illegible] and [illegible] [illegible] [illegible]

HELPING STUDENTS UNDERSTAND THE NEW APPROACH TO TESTS AND EXAMS



...ome people believe that the system is fixed and they can't change it. But if we all work together, we can change it!

...some students, and even teachers, may still try to cheat, even though cheating no longer serves its original purpose. It is important that, instead of trying to 'beat the system' by cheating within it, it makes more sense to work together to change it!

WHO PREPARES THE EXAMS AND WHEN?

...

...

...

[illegible]



A woman brings a 2 year old boy who has had diarrhea for 3 days, with blood and mucus. He also has dry, sunken eyes and is very thirsty. What problems would you look for? What would you do?

GUIDELINES FOR PREPARING APPROPRIATE TEST QUESTIONS

Test questions should:

- make people think
- present a problem-solving situation similar to [illegible]
- deal with priority needs
- be stated clearly and simply (not complicated)
- [illegible]
- test and strengthen skills [illegible]
- [illegible]
- [illegible]

WHAT STYLE OF TEST QUESTIONS TO USE

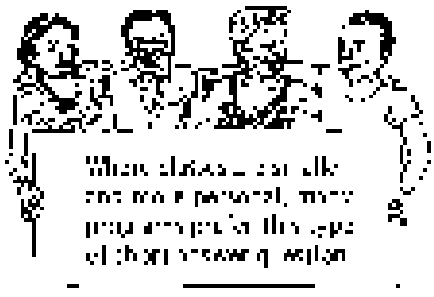
[illegible]

Type of question	Type of answer	Example
1. Open-ended (Gives the student the opportunity to give a free answer)	A. [illegible]	[illegible]
	B. [illegible]	[illegible]
2. Closed (Gives the student a choice of answers)	A. [illegible]	A child with [illegible] should be [illegible]
	B. [illegible]	A child with [illegible] a. [illegible] b. [illegible] c. [illegible] d. [illegible]

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Each of these types of question has advantages and disadvantages. Which is most appropriate for your student group?

Open-ended questions (A and T) usually require the student to think and organize his or her own answer. Some may require skill in writing, while others may require skill in speaking. For large classes, open-ended questions can be difficult to grade. Some open-ended questions require short answers. Yet these can also be used for large classes if the expected answer is very clear.



Open-ended questions that require short answers (T) are often difficult for students to understand. Yet they can also be used for large classes if the expected answer is very clear. Because short answers are easier to grade, many programs prefer this type of short answer question.

Because short answers are easier to grade, more questions can be asked on the exam. This gives a better picture of the student's knowledge. The disadvantage is that it is more difficult to write short answer questions. Yet they are useful for students to understand. Like multiple choice questions, which take more time to write, they provide more reliability.

True or False questions (T) are the most easy to grade. But they are difficult to write. They should be used only when the expected answer is very clear. Even then, they are not useful for measuring student problem solving skills. They are not useful for measuring attitudes or skills.

Multiple choice questions (MC) are also objective. They are the best type of question for measuring student knowledge. They can also be used to measure problem solving skills. They are not useful for measuring attitudes or skills. They require more time to write than True or False questions, but provide more information. Sometimes, they can even require more discrimination.

For certain situations, there are some advantages and disadvantages. Multiple choice tests can be corrected quickly and objectively by machine. But they require skill, time and resources to develop. Open-ended questions are easy to write, but require more time to grade. They require skill in writing. They require more time to answer. They require skill in writing. They

Trick questions. [illegible] surprises that make people stop and think. [illegible] surprises [illegible] [illegible] [illegible]

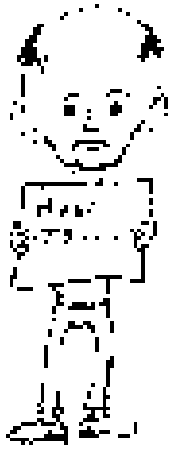
- **Attitudes toward people in need.** [illegible]

- **Relating to others as equals.**

[illegible]

[illegible]

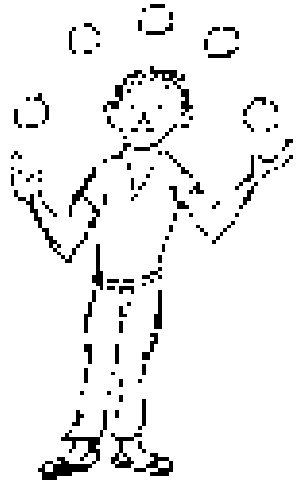
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[illegible]



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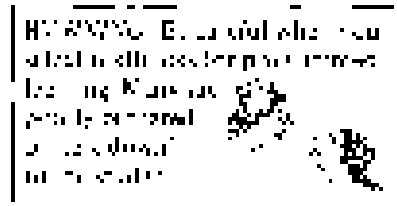


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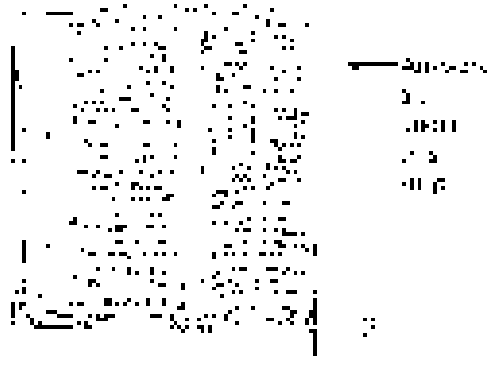
SELF-TEST NG BY STUDENTS AND HEALTH WOR <TAS

[illegible] independent study or self-testing [illegible] This also shows how and where to get the book and tools [illegible]

Programmed learning



[illegible] programmed learning. [illegible] study [illegible] [illegible] [illegible] [illegible] [illegible]



Separate learning guides

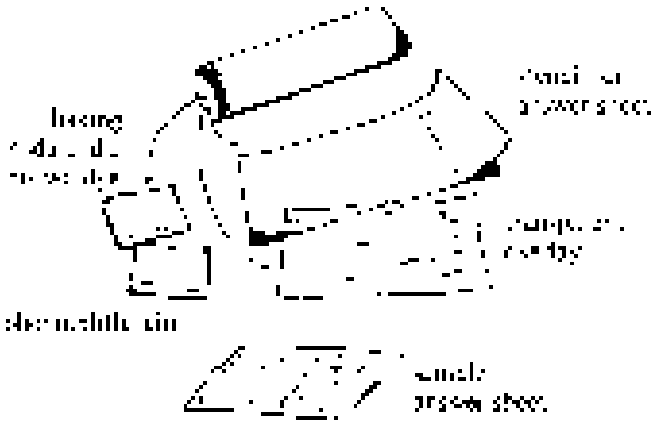
[illegible] programmed learning. [illegible] learning guides. [illegible]

[illegible] learning guide for [illegible] Kenya [illegible] Community Oriented Child Care. [illegible] prepared for [illegible] [illegible]

Magic answer sheets: [illegible] [illegible] [illegible] [illegible]

[illegible]

[illegible] MARKING [illegible] MULTIPLE-CHOICE QUESTIONS



[illegible]

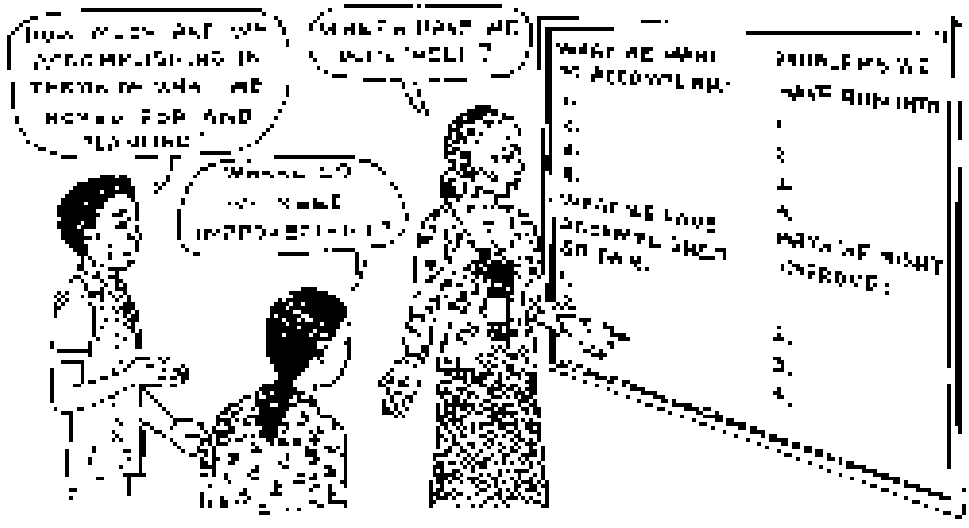
[illegible]

[illegible]

EVALUATION:

Finding out how effective your program is

Evaluation is the process of finding out whether or not your training programme is achieving its goals.



Evaluation of training programs has been approached in many ways, and for many purposes. Some approaches are aimed at finding out the extent to which specific, pre-stated objectives have been met. Other approaches are geared to getting groups of persons to study the 'objects' of study at length, outside their context, in order to identify and judge, and may not necessarily address any.

EVALUATION FOR WHOM AND BY WHOM?

Evaluations run by outsiders: Sometimes an evaluation of a training programme is conducted by a team of experts who are brought in from outside the training programme. They look at the aims and objectives of the training programme, and then assess how well these have been met. Such evaluations usually focus on the effectiveness of the training programme in terms of its own goals. This kind of top-down evaluation is not our concern in this book.

> Many evaluations are carried out by people who are not involved in the training programme. Such evaluations are usually done by experts who do not share the values and goals of the participants.

Evaluations run for participants: In this book we shall look at evaluation as a process which helps participants to improve their learning. We shall be interested in how the training programme can help participants to achieve its objectives. In this way, evaluation becomes a cooperative effort between trainers and participants. It not only serves the needs of the training programme, but also helps participants in their own learning process.

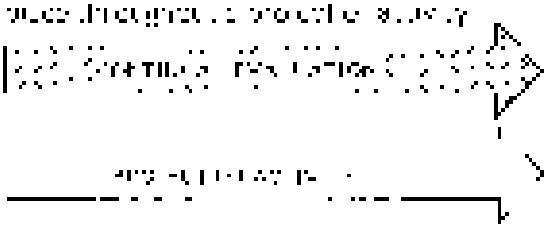
We begin with a simple example of one kind of evaluation.

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EVALUATION AS AN INFORMAL, ONGOING GROUP PROCESS

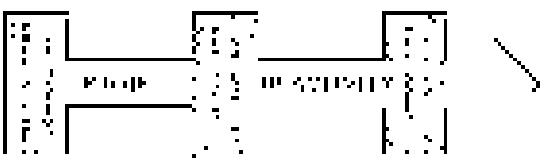
[illegible]

1. CONTINUAL EVALUATION [illegible]



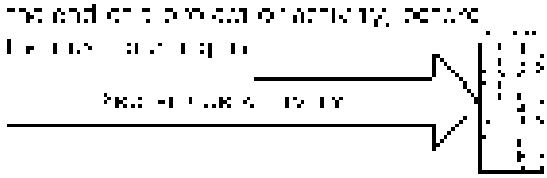
[illegible]

2. PERIODIC EVALUATION [illegible]



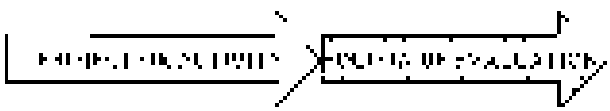
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3. FINAL EVALUATION [illegible]



[illegible]

4. FOLLOW-UP EVALUATION [illegible]



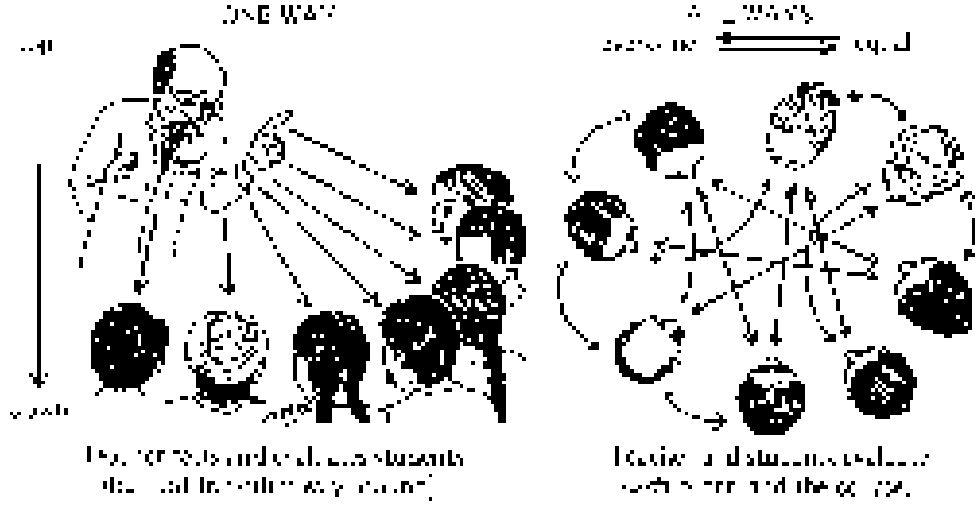
[illegible]

- [illegible]
- [illegible]
- [illegible]

- [illegible]

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EVALUATION DURING TRAINING AS A TWO-WAY PROCESS



Teacher tests students to see if they have learned what he has taught them

Teacher and students evaluate each other and themselves

WAYS TO INCLUDE STUDENTS IN EVALUATION DURING TRAINING

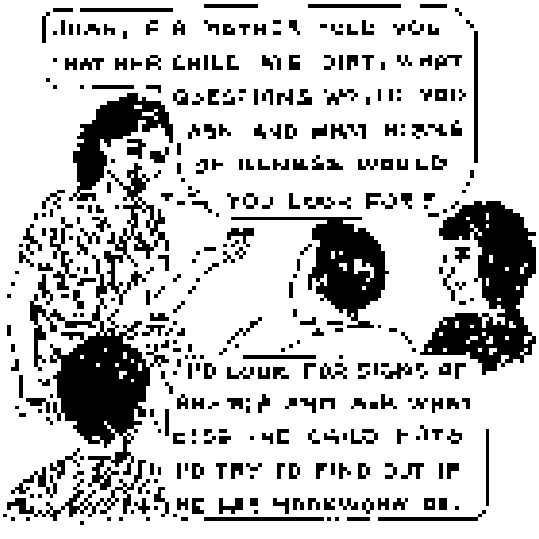
(Ideas for evaluation can be used together or separately. Choose the ones that best fit your training and your students.)

* **Short evaluation discussions at the end of each day.** These can begin with one of the following questions:

Instructor asks students to [illegible] **that they liked or disliked about the day, what they learned or did not learn, and how they could have been better.**



At first it may be hard for students to speak honestly and critically in front of the instructor. But if students know they can write anonymously or in small groups, students can provide good evaluations by the end of the training.



Students test themselves or [illegible] **by taking a short test at the beginning and end of the training. Then they can see what they have learned and what they still need to learn.**

[illegible] **Students can keep a** [illegible] **of what they learn each day. Then they can look back at the end of the training and see how much they have learned.**

* **Ask students to write down** [illegible] **questions on small pieces of paper. Then they will have to think about what they have learned in order to answer the questions.**

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2. **A rotating evaluation committee.** Students can take turns forming an evaluation committee to ask questions and record comments about each session. [illegible]

3. **Response sheets.** Each of the comments can be recorded on the group's response sheet:

- Observe classes and comment on the instructor's strengths, weaknesses, and ways they might be improved. Discuss all of your observations, especially these.
- Consider how well the instructor and students are following the lesson plan.
- Observe the classroom activities, including the way the instructor and students are using the teaching/learning materials, and the way they are being stored.
- Plan and lead weekly small group evaluation sessions.

4. **Weekly evaluation sessions.** [illegible] students and staff, etc., [illegible] the group's observations. [illegible] suggestions and [illegible] skills.

The following section describes [illegible] constructive criticism, [illegible] and [illegible] skills.

DEVELOPING THE SKILL OF CONSTRUCTIVE CRITICISM

[illegible] skill of [illegible] suggestions. Whenever you point to [illegible] suggestions, you are [illegible] to others.

> When offering criticism, learn to comment on the good as well as the bad. And mention the good things first.

[illegible] Here is [illegible] two ways.



[illegible] positive criticism [illegible]

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INSTRUCTORS' SELF EVALUATION AND GROUP EVALUATION

In addition to [illegible] instructors to do their own evaluation of their classes and sessions. [illegible]

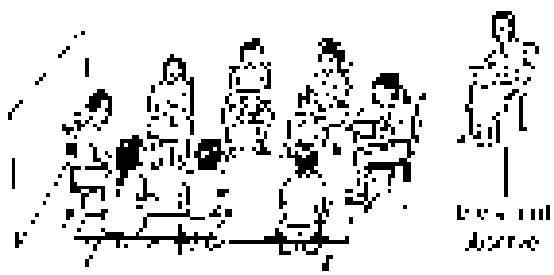
Self-evaluation of classes. [illegible] Self-evaluation is [illegible] (see pages 5-11). When you apply it, you [illegible] each of these:

[illegible] a checklist like the one [illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible] the class, write down your suggestions for improving the class. [illegible] the class plan. [illegible] but it is more difficult to become [illegible]

The silent observer. [illegible]



[illegible] After the session is over, [illegible]

Daily evaluation sessions in [illegible] **classes.** [illegible] especially [illegible] when the teaching [illegible] instructors [illegible] instructors [illegible] evaluation [illegible] privately. [illegible] observations [illegible] instructors [illegible] [illegible] [illegible]

CHECKLIST FOR EVALUATING TEACHING[1]



HOW WELL DOES THE WAY I TRAIN HEALTH WORKERS PREPARE THEM TO WORK WITH PERSONS IN A COMMUNITY-STRENGTHENING PEOPLE-CENTERED WAY?

1. [illegible]
2. [illegible] to [illegible] and [illegible]
3. [illegible] [illegible] [illegible] [illegible] [illegible]
4. [illegible]
5. [illegible]
6. [illegible]
7. [illegible]
8. [illegible]
9. [illegible]
10. [illegible]
11. [illegible]
12. [illegible]
13. [illegible]
14. [illegible]
15. [illegible]
16. [illegible]
17. [illegible]
18. [illegible]
19. [illegible]
20. [illegible]
21. [illegible]
22. [illegible]
23. [illegible]
24. [illegible]
25. [illegible]
26. [illegible]
27. [illegible]
28. [illegible]
29. [illegible]

---

[1] [illegible]

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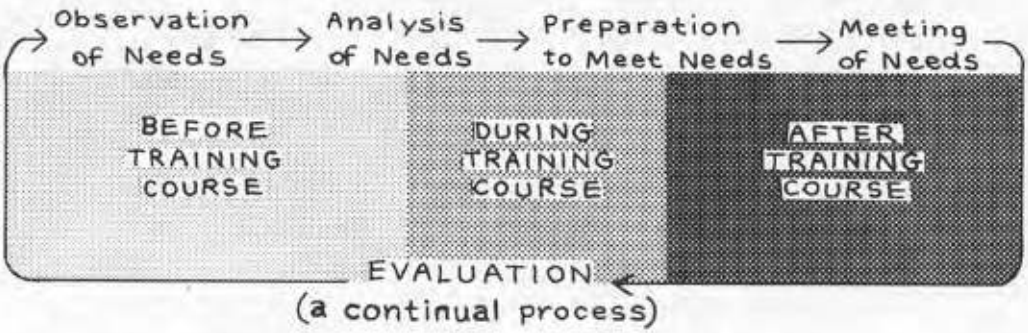
OVERALL EVALUATION OF A TRAINING PROGRAM

RELATING EVALUATION TO NEEDS

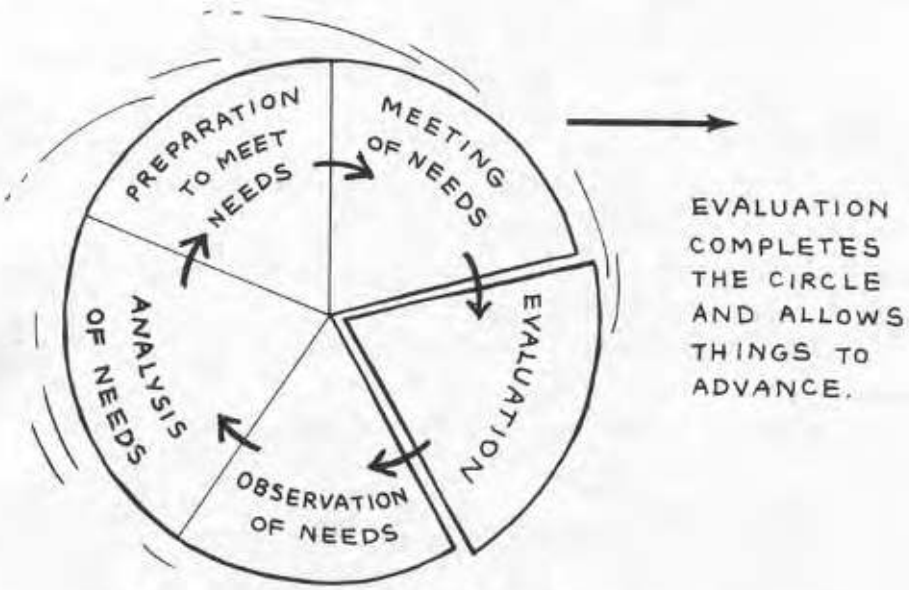
To be useful, evaluation must be kept simple. It cannot cover every aspect of training in depth. On what, then, should evaluation focus?

In several places in this book we have discussed the problem of faulty training. Students may study hard and get good marks on tests. Yet, on return to their communities, they may find themselves at a loss when faced with real needs. To be meaningful, then, **evaluation of training must focus on how well health workers are prepared to help people meet their needs.**

From before a training course begins until after it is over, the planning and evaluation process should be based on recognizing and meeting people's needs.



Evaluation of a training program—before, during, and after—is like a key section that completes a wheel.

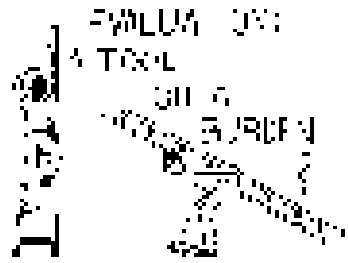


Evaluation is needed if we are to move forward, because it allows us to learn from our successes and mistakes.

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FOLLOW UP EVALUATION



[illegible] to see if the [illegible] are working well. [illegible] Evaluation is not a test. But it can help [illegible] to see what they are doing well and what they could do better. Evaluation can help [illegible] to see if [illegible] are working well. [illegible] Evaluation can help [illegible] to see if [illegible] are working well. [illegible] Evaluation can help [illegible] to see if [illegible] are working well.

Many people find evaluation difficult. They think it means [illegible] and [illegible]. They think it means [illegible]. But evaluation is not a test. It is [illegible] to see if [illegible] are working well. [illegible] Evaluation can help [illegible] to see if [illegible] are working well. [illegible] Evaluation can help [illegible] to see if [illegible] are working well. [illegible] Evaluation can help [illegible] to see if [illegible] are working well.

[illegible] Evaluation can help

OTHER GAME IDEAS FOR EVALUATION

This [illegible] was published by the [illegible] Health Project, [illegible], [illegible] Philippines [illegible], 1979.

USING DRAWINGS

[illegible] drawings [illegible] the idea of evaluating [illegible] with [illegible] group [illegible] [illegible] the [illegible] [illegible] [illegible]

THE LIMITATIONS OF EVALUATION

[illegible]

[illegible]



When conducting an evaluation, remember that
NO EVALUATION SHOULD BE MORE COMPLICATED THAN NECESSARY

EVALUATING EVALUATION

[illegible]

- [illegible]
- [illegible]
- [illegible]
- [illegible]

Evaluation should not only measure whether we have achieved our goals. It should help us judge whether our goals were appropriate in the first place.

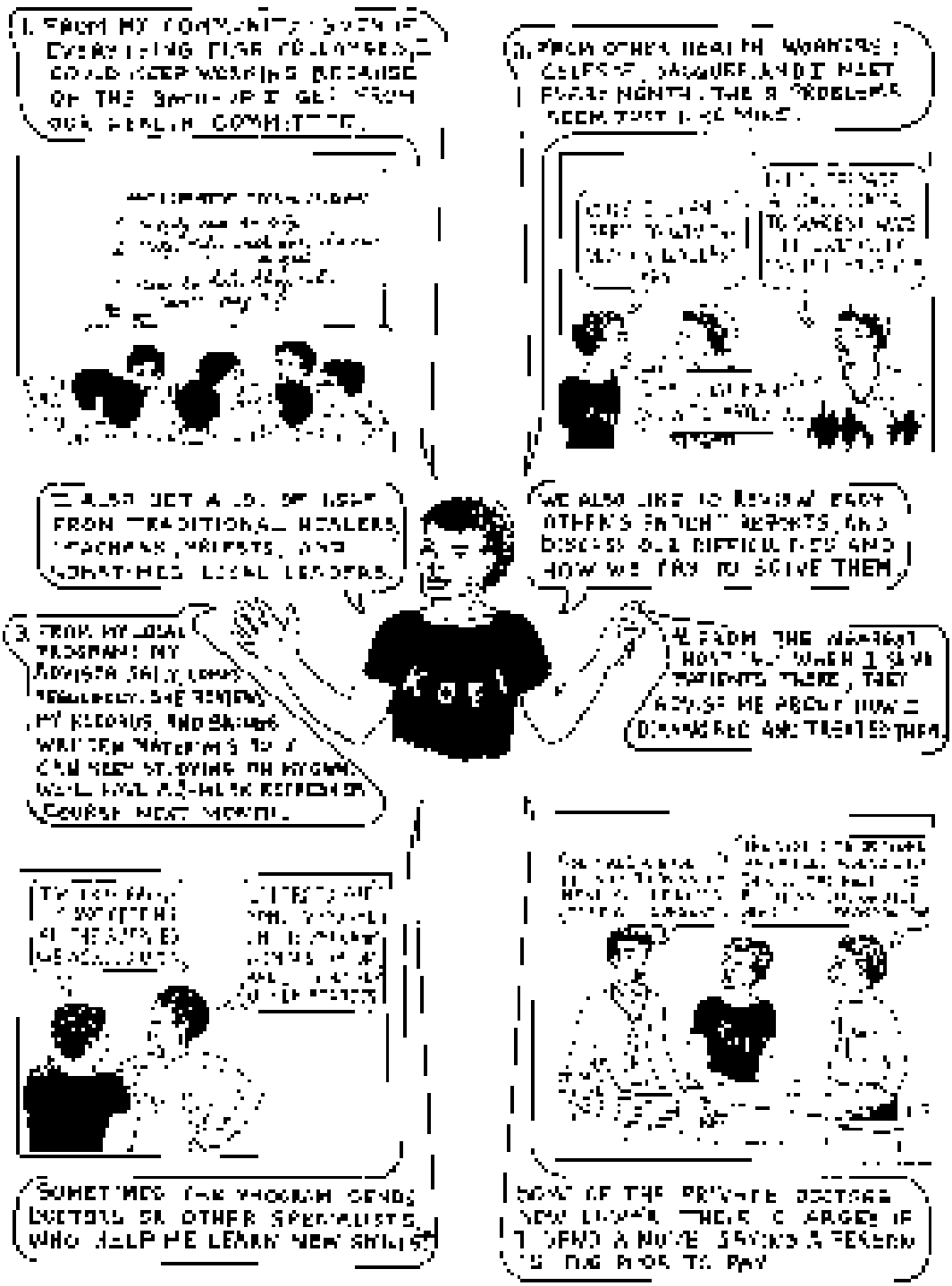
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CHAPTER 10

Follow-up, Support, and Continued Learning

When and how can health workers continue to learn after training? [illegible] and [illegible] [illegible] [illegible]

WHAT CAN A VILLAGE HEALTH WORKER LOOK FOR SUPPORT?



Remember: Your answers to [illegible] will depend on your particular [illegible] and your own [illegible] ability.

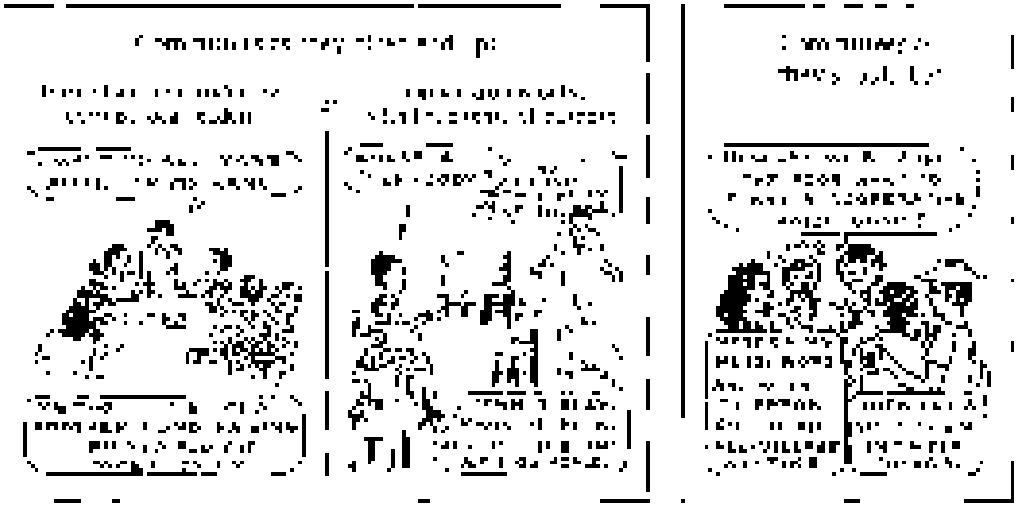
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COMMUNITY HEALTH COMMITTEES

[illegible]

[illegible]

The picture shows people who are not taking part in the group. Look at the picture and talk about why they are not taking part. Are there any people in your community who are not taking part in health committees? Why not? To be effective, health committees need members who will actively represent the poor.



TWO STORIES FOR DISCUSSION:

1. Forming a health committee in Ngbakoto

[illegible]

[illegible]

[illegible]

[illegible]

What could you do to help these people? What could you or your health committee do? [illegible]

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2. Forming a health committee in Bodila





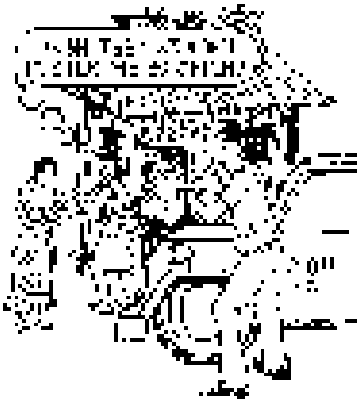
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Why is it important to ask questions? Are there other questions you would like to add to the list you made before reading this story? Does your community have a health committee? If not, do you think one should be formed? Why or why not?

[illegible] [illegible] [illegible] [

HOW MUCH SUPPORT FROM THE PROGRAM IS NEEDED?



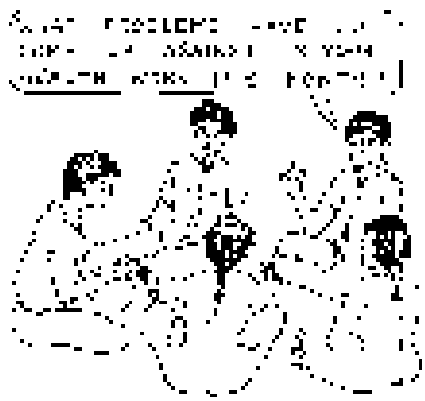


[illegible] positive [illegible] support [illegible] for the health workers. When [illegible] health [illegible] [illegible], the [illegible] programs [illegible] to [illegible] mistakes and [illegible].

[illegible] [illegible] [illegible] [

WHO MAKE T-E BEST ADVISERS OR SUPERVISORS?





WHAT SORT OF RECORD KEEPING IS NEEDED?

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Forms for keeping records

Some people may [illegible] for keeping personal records and for making [illegible] and maintain supervision [illegible]. A few simple forms may be useful. For many programs [illegible] Remember, [illegible] filling out a set of forms can be [illegible].

When you [illegible] forms for your program, you should ask yourself:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible] Even if [illegible] forms are easy to read and understand by the community, there is probably no need to use the [illegible]

Remember [illegible] Keep forms as few and simple as possible. The more you [illegible]



KEEP FORMS FEW AND SIMPLE.

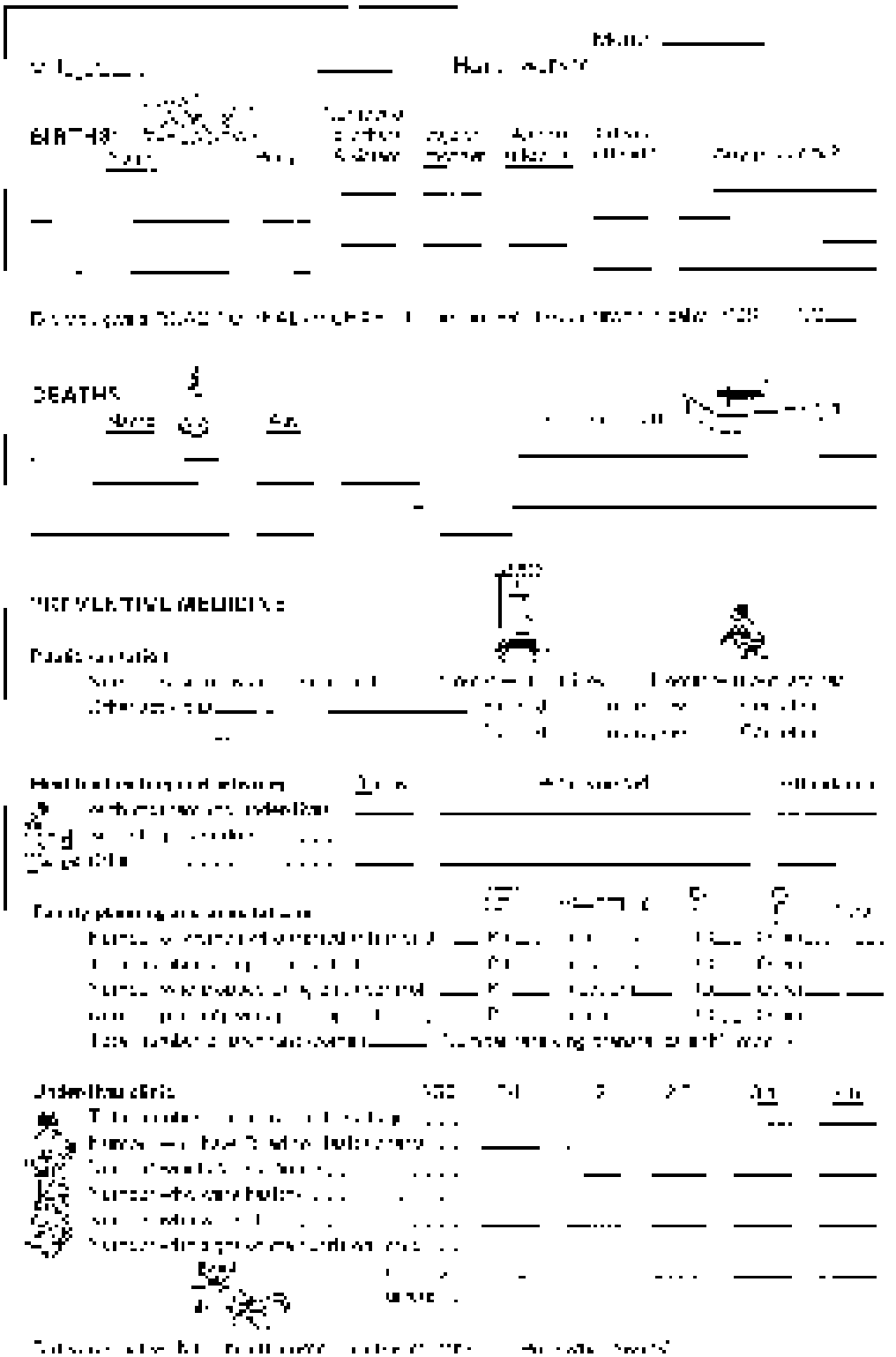
Simple forms can be helpful for keeping patient records in [illegible] each patient's [illegible]. Examples of forms that can be used for patient records are shown in [illegible] Chapter 21 of this book or [illegible] can give you other ways of [illegible]

PATIENT RECORD [illegible] ..... WTW20, p. 47
RECORD OF PATIENT'S [illegible] ..... WTW20, p. 350
CHILD [illegible] ..... WTW20, p. 454

[illegible] Some people [illegible] by using [illegible] by [illegible] village [illegible] and the [illegible]. Some [illegible] by [illegible] each month. Compare the 2 [illegible] on page

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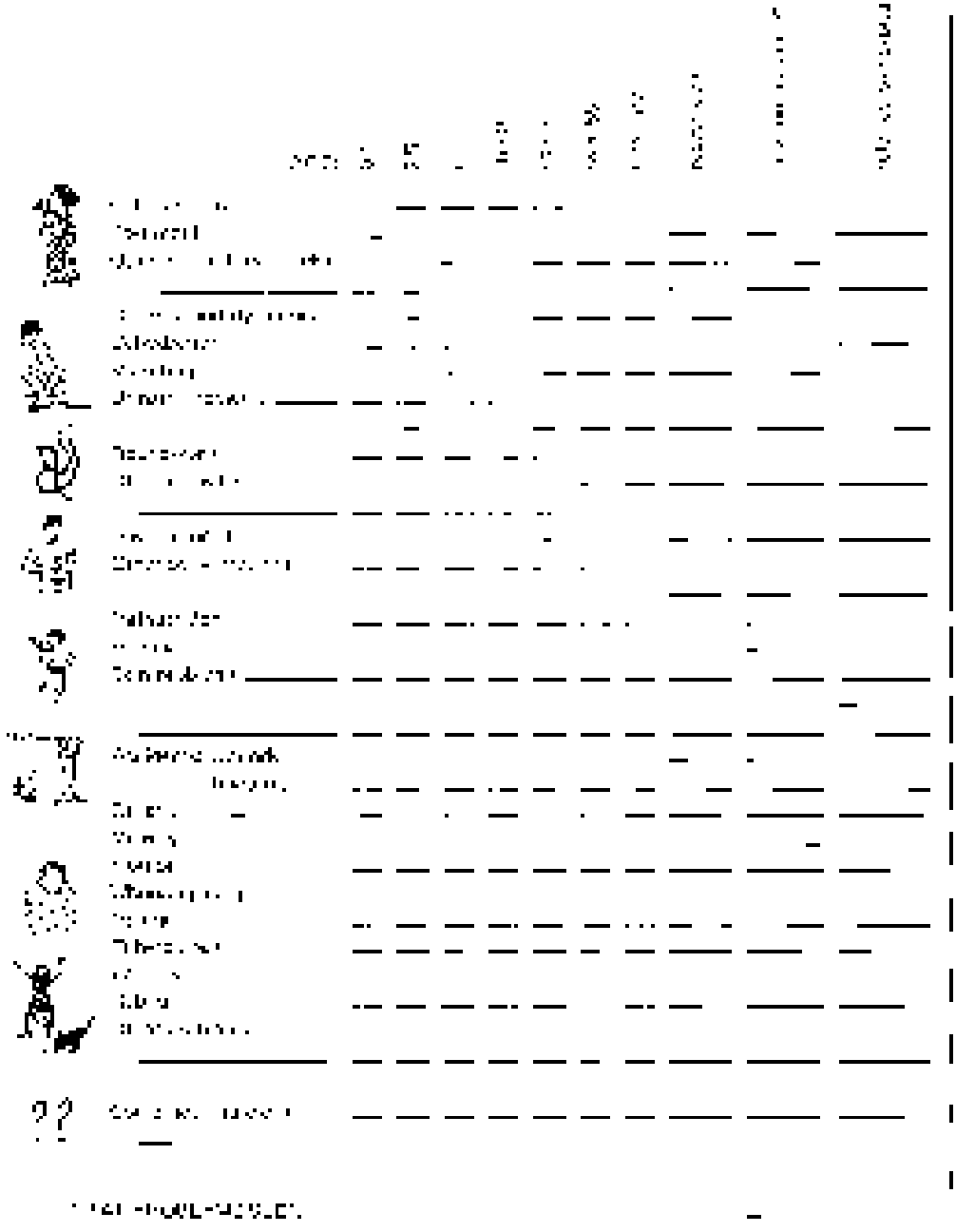
[illegible] [illegible] [illegible] [



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MONTHLY REPORT 2 (back side)

HEALTH PROBLEMS SEEN THIS MONTH



DEALING WITH PROBLEMS

[illegible]

[illegible]

COMMON DIFFICULTIES AND WAYS TO AVOID THEM

1. Charging too much for medicines or services. [illegible]



[illegible]

2. Failure of people to pay the health worker for medicines and services. [illegible]

[illegible]

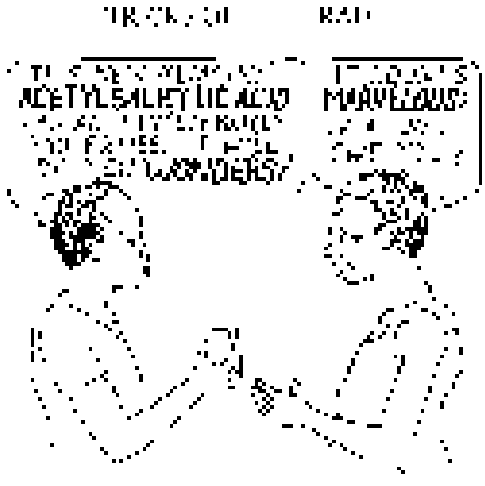
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3. Using too many medicines. [illegible] health workers to believe that they can help people by prescribing medicines. [illegible] Many medicines are expensive. [illegible] Some people [illegible] medicines. [illegible] (see chapter 13).

4. Spending too much time on curative medicine. [illegible] health workers spend most of their time on curative services [illegible] prevention.

[illegible] health workers usually [illegible] prevention. [illegible] people with a problem need help [illegible] Curative medicine [illegible] Health workers [illegible] and [illegible] Health workers [illegible] Health workers [illegible] Health workers

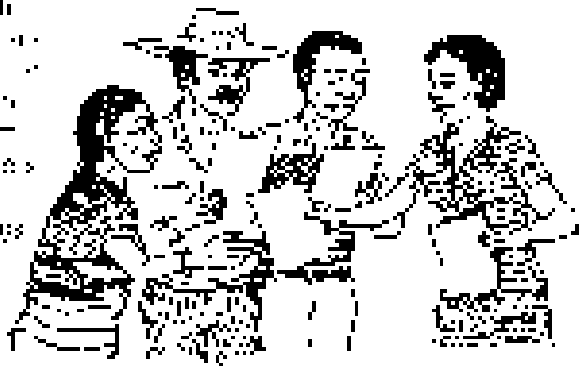
6. Abuse of knowledge and power.



CONTINUING OPPORTUNITIES TO LEARN

- **Visits from advisers.**

- **Meetings with neighboring health workers.**

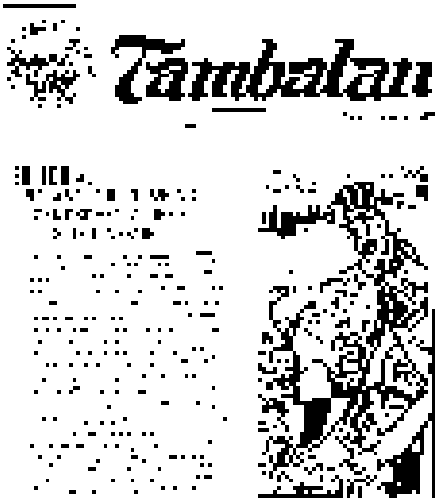


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- **Books and other educational materials.** [illegible]

[illegible]



- **Local newsletters.** [illegible]

[illegible]

- **Refresher courses and continued training.** [illegible]

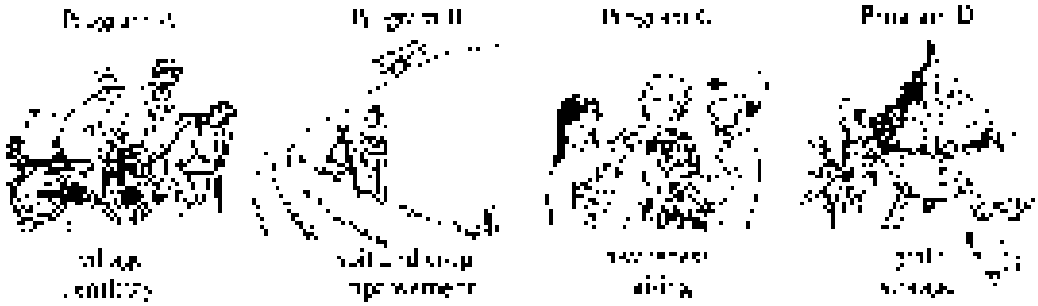
- **Apprenticeship opportunities.** [illegible]

Adaptado de www.hesperian.org

- **Teaching assistants.** Some programs give their graduates the opportunity to help teach in the program. Assisting others is a valuable learning experience. It helps the graduate to review the teaching skills and principles he or she has learned. It also helps the graduate learn how to learn something more in depth.

- **Meetings between different programs.** Instructors from different programs should meet regularly to share ideas and solve problems. Meetings could be held at least once a year for all instructors in the country. Instructors could also meet with instructors from other programs in their region. Meetings could be held in the capital city or in a place where many graduates live. Instructors could discuss their common problems. They could plan how to help each other. They could make plans for exchanging information and teaching assistants. They could also plan how to help graduates find employment.

- **Opportunities to learn from other programs.** Different programs should try to learn from each other. They could do this in several ways.



Each program is unique. It has developed special skills in dealing with its particular problems. And each program has certain skills that could help other programs. Some programs may be able to help other programs in different areas. Some programs will specialize in certain skills and can train other programs. Perhaps programs will specialize in certain areas and can train other programs in other areas. There could be local workshops. Perhaps there could be meetings of programs in different parts of a country.

INSTRUCTORS ALSO NEED SUPPORT AND LEARNING OPPORTUNITIES

Workers in health services do not have the only kinds of jobs that do not give them a chance to learn new things. Almost all people do. Most do not meet new people. Most do not travel. Most do not have any chance to learn new ways to work.

Many of the suggestions we have given for helping health workers to learn new things and to work better can also be used to help instructors. Instructors also need opportunities to learn new things. They also need training — in-service training.

Perhaps the most effective way to help instructors learn to solve their problems and develop their skills is to help them learn how to help their students learn how to solve their problems. This is the basic principle of problem-posing education. It is also the basic principle of primary health care. It helps people learn how to help themselves.

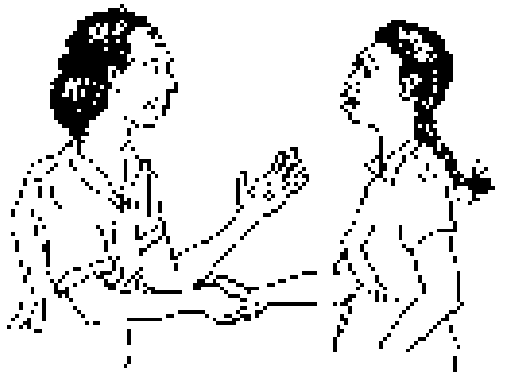
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VILLAGE HEALTH WORKERS WHO FORM THEIR OWN SUPPORT SYSTEM

[illegible] experience in programs like these [illegible] they [illegible] government [illegible] the community. But [illegible] considered [illegible] the direction of control is [illegible] just the reverse: control and decision [illegible] [illegible] community.

[illegible] programs [illegible] Thailand [illegible] their [illegible] health workers [illegible] [illegible] [illegible]

SUPPORT, ADVICE AND CRITICISM
SHOULD GO BOTH WAYS.

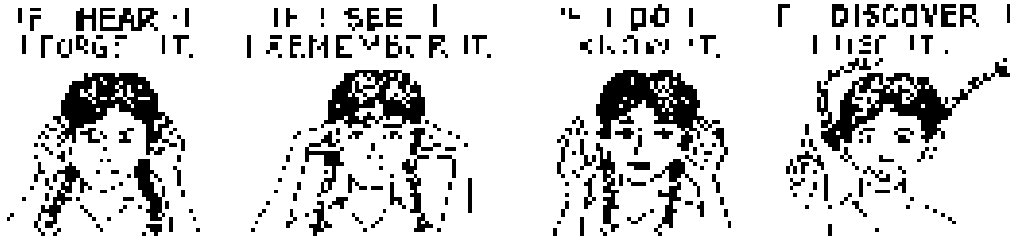


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PART TWO

LEARNING THROUGH SEEING, DOING, AND THINKING



The rest of this book gives ideas for bringing learning to life. It suggests ways to make learning more meaningful, useful, and adventurous.

The basic philosophy behind this book is learner-centered practice. Health workers need to learn skills that help them observe, understand, and explore ways to improve the life and health of their people.

An effective training program will emphasize one or more of these ways of learning:

1. Observation: Participants learn by observing and listening carefully, and by asking good questions.
2. Understanding: The participants learn to analyze problems critically and to make reasoned decisions using appropriate information.
3. Action: The participants learn by doing and by applying what they have learned through experience and practice.

For primary observation, understanding, and action to occur, seeing, listening, and doing must be combined. Unfortunately, many training programs do little to encourage participants to think. They focus on memorizing facts and following instructions. Traditional and even standard teaching methods tend to stress passive learning and can help students develop poor study habits. Students learn to follow directions but do not learn how to think for themselves. Such training can even reward poor learning skills rather than reward problem solving.

Students can gain knowledge, or learn to follow instructions, by listening, by reading books, or by following instructions. But these activities rarely result in long-term changes in behavior. They may help students pass tests, but they rarely help them solve problems. Training that emphasizes memorization and discourages questioning may actually corrupt students' minds. Such students probably will not become leaders or the people who will struggle to overcome the biggest causes of ill health.

> The human mind is made to think and explore. It grows stronger with exercise. But it grows weak, lazy, or resentful when limited to tightly defined tasks.

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[illegible] the [illegible] of the [illegible]

The best tool a person has for understanding and changing the conditions that affect his world is the human mind. [illegible]

Part Two [illegible]

Chapter 11 [illegible]

Chapter 12 [illegible]

Chapter 13 [illegible]

Chapter 14 [illegible]

Chapters 15 and 16 [illegible]

Chapter 17 [illegible]

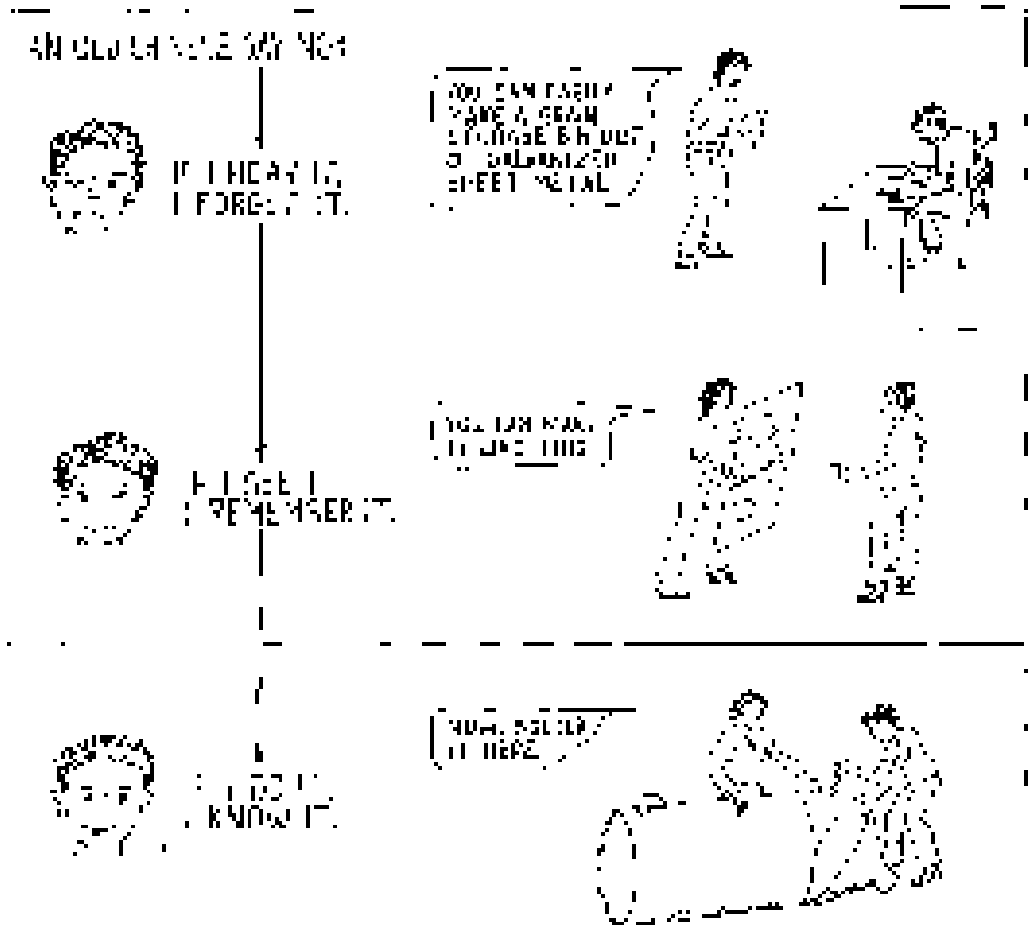
Chapter 18 [illegible]

Chapter 19 [illegible]

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CHAPTER 11

Making and Using Teaching Aids



As children learn by what they do, they need to be involved in activities and things that are real to them.

- They need to be given opportunities to take part in discussions, to explore and investigate things, to ask questions and find answers.
- They need to be encouraged to make for themselves models and other visual aids. They can learn a lot by making things, and the things they make can be used in their play.
- They need to be given opportunities to find out, to discover, to do and make and discover things for themselves, to learn by doing. Children learn best by doing things for themselves. They remember what they find out for themselves much longer than what they are told or what they read in books.

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GUIDELINES FOR APPROPRIATE TEACHING AIDS

When you make teaching aids:

1. **Make your own teaching aids, using local materials whenever possible.**
2. **When making teaching aids, use and build on skills students already have.**
3. **The aids should make the lesson more interesting, but rather involve students in learning activities than simply impressing them with the aids.**
4. **Look for ways to use real objects instead of pictures or teaching aids.**
5. **Where pictures are necessary, make sure they are clear and simple enough for people with poor eyesight.**
6. **Test all your teaching aids to make sure they are understood correctly by the people you are trying to reach.**
7. **Make teaching aids as natural and lifelike as you can, especially when detail is important.**
8. **Use a teaching aid to help you teach, but do not let the aid control you. Be ready to adapt your teaching aids to the needs of the people you are teaching.**
9. **Make sure that you are using your teaching aids correctly by testing them on others.**
10. **Use teaching aids that encourage participation by the students, but that help the students to think things through and discover solutions for themselves. Teaching aids should not be used to impress students or show off the teacher's knowledge.**
11. **Use your imagination, and be creative. Use aids to stimulate interest. Think of new and different ways of using teaching aids in your own unique and personal style.**
12. **Keep teaching aids relatively simple, so that when teaching others you will be able to make some for themselves.**

Remember: Good teaching aids will not automatically make you a good teacher. You still need to prepare your lessons carefully and practice your teaching skills.

Before choosing, decide exactly what you want to achieve by using a teaching aid. Then choose the least complicated method that will help you achieve your objective.

APPROPRIATE TEACHING AIDS FOR LEARNING



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1. MAKING YOUR OWN TEACHING AIDS FROM LOW-COST MATERIALS

Example: **Learning about childbirth**

LESS APPROPRIATE



Some programs use an expensive plastic model of a woman's hips to teach health workers or midwives about childbirth. Although such models look natural and are easy to practice with, they are not something health workers can make in their villages to teach local people. (photo from Venezuela)

MORE APPROPRIATE



A surprisingly lifelike model for teaching about childbirth can be made by cutting and painting a cardboard box. Health workers or midwives can make this 'birth box' at almost no cost. The back flap, cut to look like breasts, is used to teach the importance of putting the baby to the breast right after birth. This helps to deliver the placenta and reduce bleeding.



STILL MORE APPROPRIATE

In these photos, student health workers and a midwife act out a birth. (Mexico)



Teaching about birth can become even more lifelike with the use of two local resources: a student and a pair of old pants. The student dresses like a woman about to give birth, and has a doll 'baby' hidden in her clothing. The pants are cut to form a 'birth opening'. The student wears other pants underneath to avoid embarrassment. If possible, sew elastic around the opening so it will stretch.



In this way, the students can explore the hope, fear, pain, and joy of childbirth. They learn about the mother's feelings, as well as the mechanics of delivery. By using real people, students learn to feel more relaxed about this natural process. (For more ideas for learning about childbirth, see p. **22**-8 and **22**-9.)

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2. MAKING TEACHING AIDS BY BUILDING ON SKILLS PEOPLE ALREADY HAVE

Example: **Making a large Road to Health chart for a flannel-board**

If mothers, midwives, or students with little formal education are asked to draw a complicated chart, they may find it very difficult. They may feel foolish or ashamed because drawing charts is something they have never done before.

LESS APPROPRIATE



Mothers who have had little schooling try to draw a large teaching model of a Road to Health chart (see *WTND*, p. 299).

MORE APPROPRIATE



Mothers and students make a teaching model of a Road to Health chart by sewing ribbons and threads onto a big piece of flannel. (Project Piaxtla, Mexico)

Here, however, some mothers and students are making a chart by sewing rather than drawing the lines. Because they are using a skill they already have and enjoy (decorative sewing), some of the strangeness, or magic, is taken out of chart making from the beginning.

In this way, **the students develop a new skill by building on an old one.** They feel confident and proud to put their traditions and knowledge to use in new ways. Where you live, people may be skilled in weaving straw mats or cloth, dying cloth (batik), or carving wood. Any of these traditional skills could be used to make a large teaching model of a Road to Health chart. (In some regions, of course, people may have more experience in drawing. In that case, it would make more sense to draw the chart.)

For ideas about using the flannel-board Road to Health chart, see p. **22**-15.

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3. INVOLVING STUDENTS IN MAKING THEIR OWN TEACHING AIDS

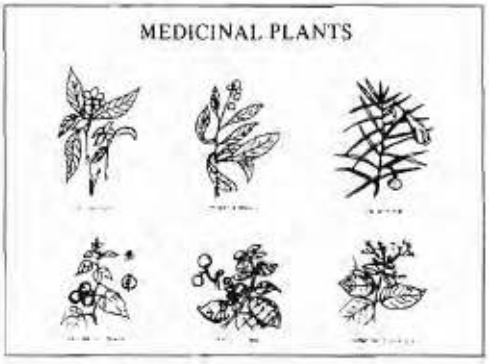
Example: **Health posters**

LESS APPROPRIATE–
poster made by outside artist



Many programs use posters made by professional artists when drawings by health workers and other local persons might work as well and involve people more.

MORE APPROPRIATE–
poster made by outside artist



However, it may make sense to use some professionally made posters and displays, especially when details are important.

Instructors or a local artist can help students learn to draw or copy pictures (see p. **12**-9). The health workers can then help school children to make posters about health subjects. The best posters can be displayed in public. This way, the health workers and the children learn the messages of the posters extra well. They also learn a valuable skill—drawing—and have fun at the same time.

MORE APPROPRIATE



Health worker showing children how to make health posters.



Poster made by school child.

For more ideas on making drawings and posters, see Chapter 12.

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4. USING REAL PEOPLE OR OBJECTS INSTEAD OF JUST DRAWINGS

Example 1: **Snakebite**

LESS APPROPRIATE



For the CHILD-to-child activity on preventing accidents (see p. **24**-7), a school teacher in Ajoya, Mexico used drawings to show the difference between the bites of poisonous and non-poisonous snakes.

But a local health worker drew red fang marks right on a child's arm. This made the lesson much clearer.

MORE APPROPRIATE

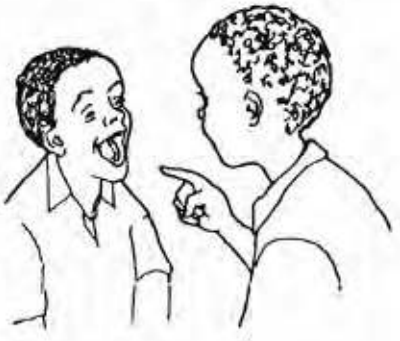


STILL MORE APPROPRIATE



It is even better if you can show students the teeth of live snakes (be careful!) or the skulls. A skull can be cleaned of flesh by putting it on an ant hill for a day or so, and then soaking it in potash (water with ashes) or lye.

Example 2: **Learning about cleaning teeth**



Instead of simply learning that germ colonies, called plaque, form on teeth and gums, students can actually see where the plaque is and learn the best way to remove it with a simple experiment.

Students can gather in pairs or groups and color their teeth with an ordinary household food dye (or try betel nut or berry juice). It can be applied with a clean cloth, or simply by putting several drops onto the tongue and wiping the tongue around the teeth.

Students then look into each others' mouths or into a mirror to see where the staining is heaviest. It will be heaviest where the plaque is heaviest. They can then try to remove the stain with brushes, chewing sticks, or using any other local method.



Students can make a brushstick like this one, using the twig of a tree in their area. The teeth can be sharpened with one end and brushed with the other (***WTND,*** p.230).

The students will also see what teeth are hard to clean and what teeth need the most cleaning to remove the stains and plaque. They can also learn which ways of cleaning work best by checking others' teeth and comparing the different cleaning methods.

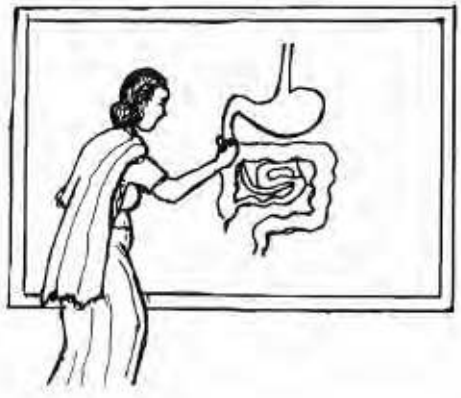
For some students one method will work best, for others a different one will work best to clean teeth and remove plaque.

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5. DRAWING PARTS OF THE BODY (AND SIGNS OF HEALTH PROBLEMS) ON PEOPLE, NOT PAPER

Example: **Anatomy of the belly or chest**

LESS APPROPRIATE



Drawing anatomy on paper or on the blackboard makes things not only flat, but dull.

MORE APPROPRIATE



Whenever possible draw on people, not paper.

Drawing the inner parts or organs of the body directly on a person has 3 advantages:

- It is more interesting, and therefore easier to remember.
- The organs are seen in relation to the rest of the body and appear more lifelike.
- It is a good way to get students to feel more comfortable about touching and examining each other—and eventually a sick person.

MORE OR LESS APPROPRIATE



T-shirt with anatomy

One disadvantage of drawing on people in class is that it takes time.



A quicker way is to use T-shirts with drawings of different body systems already on them: one for the digestive system, one for the bones, one for the heart and blood system, and so on.

T-shirts with anatomy printed on them can be purchased in some countries. But these may be expensive and more detailed than you need. It is better to draw or paint the anatomy on T-shirts with your student group. You can even try 'silk screening' them using the method described on page **16**-12.

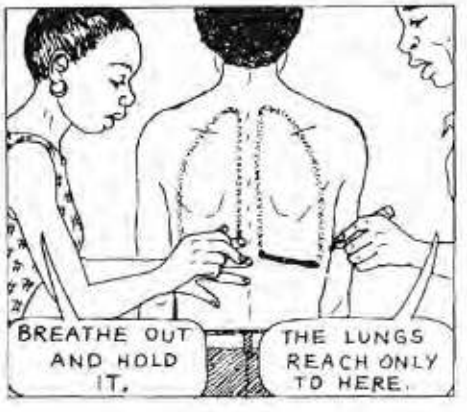
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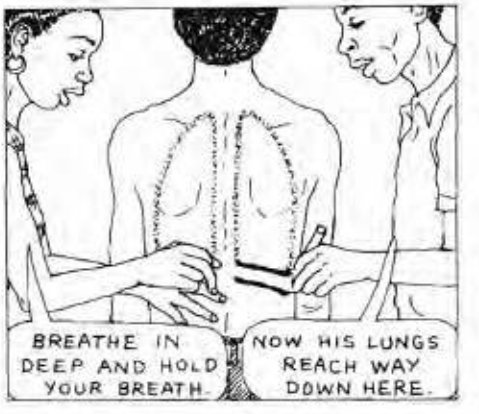
6. TEACHING NEW SKILLS OR IDEAS BY COMPARING THEM WITH THINGS THAT ARE FAMILIAR

Example: **Thumping (percussing) the lungs**

When teaching about physical exam or respiratory problems, you probably will want to explain where the lungs are and how they work. For this, it helps to draw the lungs on a student, as shown on page **11**-7. Draw them on both the chest and the back.

To determine the size of the lungs, show students how to thump or ***percuss*** the back, listening for the hollow sound of air in the lungs. Draw the bottom line of the lungs first when they are as empty as possible, and then when they are full. Students will see how the movement of the ***diaphragm*** (a muscular sheet below the lungs) affects breathing and lung size (also see p. **11**-13).





By doing this, students not only learn about the position, size, and work of the lungs, they also learn a useful skill for physical examination—thumping the lungs to listen for relative hollowness. This can help them spot signs of disease.

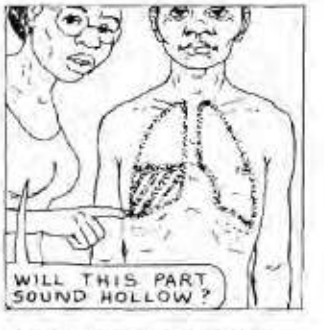
To help students understand the different sounds they hear when thumping, have them determine the level of water (or gasoline) in a large drum or barrel.



Then thump the chest of a student.



Next, compare with a person who has a solid (diseased) area or liquid in a lung.



If possible, also show the students X-rays of normal and diseased lungs.

For other examples of teaching new things by comparing them with something familiar, see 'how flies spread germs', p. **7**-11; the story from India, p. **13**-1; and the use of plants and fruit to teach about dehydration, p. **24**-19.

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7. MAKING TEACHING AIDS AS LIFELIKE AS POSSIBLE

Example: **The belly wrinkle test**

When teaching mothers and children about the signs of dehydration, health workers can tell them about the 'belly wrinkle test', or even show drawings like this:

APPROPRIATE (A DRAWING)

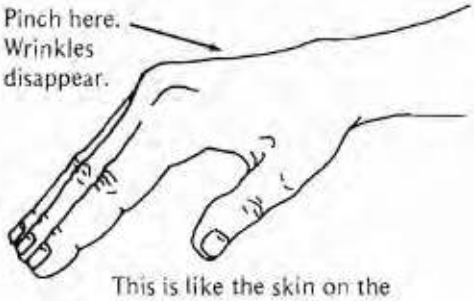


It is much better, however, if students actually **do** the test and find out how it works.

Students can practice doing the test on the back of someone's hand. (The hand of an older person works better than the hand of a child.)

MORE APPROPRIATE (ACTUALLY DOING IT)

In this position, wrinkles will not stay after the skin is pinched.



This is like the skin on the belly of a healthy baby.

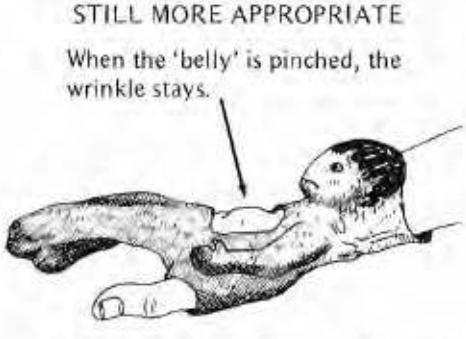
But in this position, the pinched skin stays wrinkled for a moment—just as on the belly of a dehydrated child.



This is like the skin on the belly of a dehydrated baby.

When you show the belly wrinkle test to children, make sure they realize that the test should be done on the belly of a baby, not on the hand. You can have the children make a doll like this, out of an old glove or stocking and an egg.

STILL MORE APPROPRIATE





Using a doll like this makes the test more realistic. It also turns learning into a game.

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8. TEACHING AIDS THAT REQUIRE DOING AS WELL AS SEEING

Example: **Closing a cut or wound**

The poster at right is adapted from a drawing in ***Where There Is No Doctor*** (p. 85). It shows, step by step, how to make butterfly bandages and close a wound.

But it does not, by itself, give students a chance to learn through practice. Students see how something is done, but they do not actually do it.



MORE APPROPRIATE



A lifelike way to practice closing wounds is to have someone wear a tight-fitting rubber (surgical) glove. Make a cut in the glove, and color the skin under the cut red to make it look like blood.

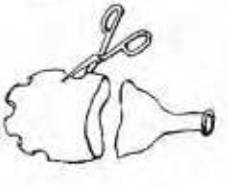


The rubber glove tends to stretch and pull apart like real skin. The students can prepare butterfly bandages and close the 'wound' by pulling the sides of the cut together.



The students can also practice sewing or suturing a wound using the same rubber glove. As with a real wound, care must be taken with the placement and tension (pull) of the thread in order to avoid tearing or bunching up the delicate 'skin'.

If you do not have surgical gloves, try using a large balloon. Cut holes for the fingers, like this.

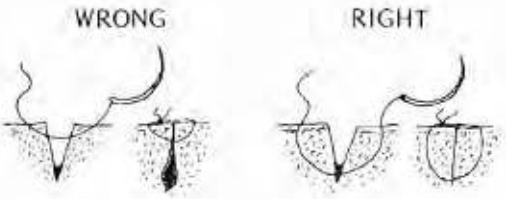


And wear it like this. But be careful. It tears easily.



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A common mistake when suturing wounds is to make the stitches too shallow. If the wound is not completely closed inside, it heals more slowly and is more likely to become infected.



EVEN MORE APPROPRIATE



Foam rubber helps students learn how deep to sew stitches.

Unfortunately, the rubber glove teaching aid does not let students practice deep suturing. A better teaching aid for this can be made by wrapping a piece of foam rubber or thick felt around someone's arm. Make a deep cut in the foam and color it red.

Students will learn even better if they can practice on real wounds. It is, of course, best if they do not practice on people until they have gained some skill. Try to use freshly killed animals—especially pigs.

(In the Philippines, health workers make cuts and practice suturing on live dogs. But this also teaches them that cruelty can sometimes be justified. Do you think this is right?)

STILL MORE APPROPRIATE



Students practice closing a wound on a dead pig.

MOST APPROPRIATE (after learning the skill through other practice)



After students have had plenty of practice, they should be given every opportunity to close real human wounds—even if this sometimes means interrupting a class.

In this photo, student health workers are helping to close the head wound of a boy hit by a rock.

(Ajoya, Mexico)

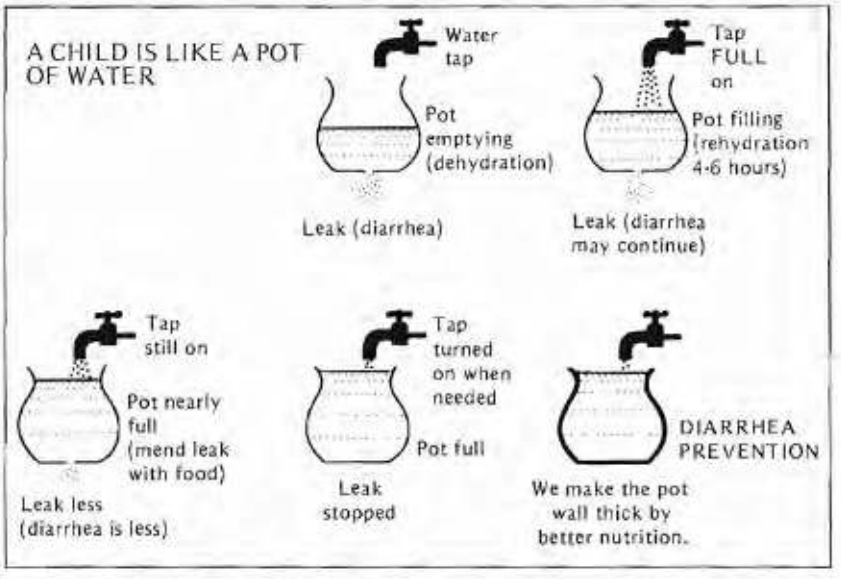
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9. MAKING TEACHING AIDS FASCINATING AND FUN– ESPECIALLY THOSE USED WITH CHILDREN

Example: **Diarrhea and dehydration**

LESS APPROPRIATE

Drawings like these contain important ideas. But children, especially, may have trouble understanding them. Also, they are not much fun– even when actual pots are used along with the drawings.



It is more fun and children learn better if they can make or paint their own 'pots' to look like babies. Model babies can be made out of clay, tin cans, plastic bottles, or gourds.

MORE APPROPRIATE

CLAY BABY–

This can be made with the help of mothers who make their own pottery.



GOURD BABY–

Gourds of this shape are grown in many parts of the world for use as water jugs.



The children then experiment with the model baby to find out about dehydration. Because they make their own teaching aid and discover answers for themselves, learning becomes an adventure. It is fun and they never forget what they learn.



Children in Ajoya, Mexico use a gourd baby to demonstrate signs of dehydration.

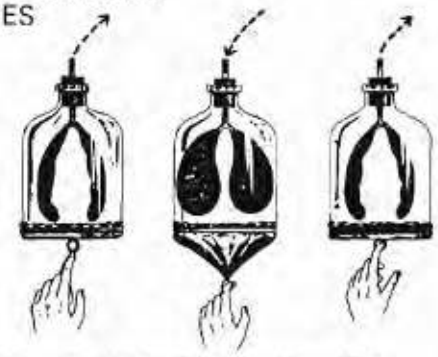
For more ideas on how to teach about dehydration using these model babies, see page **24**-18.

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10. USING TEACHING AIDS THAT GET STUDENTS TO FIGURE THINGS OUT FOR THEMSELVES

Example 1. **Learning about injuries to the chest and lungs**

The pictures to the right are taken from a popular Venezuelan health magazine called *Ser*. They show how the movement of the *diaphragm* (the muscular sheet below the lungs) helps the lungs fill with air.





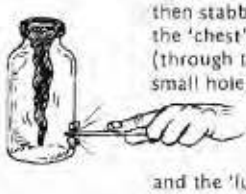
In the mountains of Mexico, gunshot and knife wounds to the chest are common. If air is being sucked through the wound when the person breathes, the hole should be covered at once with an air-tight bandage. (See ***WTND***, p. 91). To help students discover why this is important, the instructors in Ajoya designed a teaching aid based on the idea shown above.

1. They drilled a small hole in a glass bottle (using a dental drill).

2. They put a balloon in the bottle and blew it up. Then they plugged the hole with wax.



3. They asked the students to pretend the bottle was a man's chest and the balloon his lung. The students were amazed that the balloon stayed full of air although it was open at the top. (They discovered the principle of the vacuum.)



One student then stabbed the 'chest' (through the small hole),

and the 'lung' inside collapsed.

4. To show why it is important tocover a chest wound at once, a student slowly sucked the air out of the bottle until the 'lung' filled up again. (In the body, the air is slowly absorbed.)

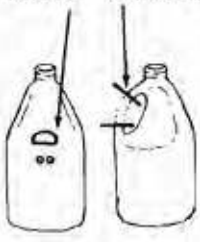


As long as the student kept the hole covered, the 'lung' stayed full. So the students discovered why an air-tight bandage is important.

Example 2: **Mouth-to-mouth breathing**

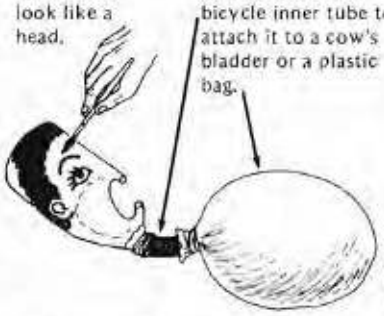
Students can use the following model to find out how mouth-to-mouth breathing works and practice doing it.

Cut holes in a plastic bottle, like this or like this.



Paint it to look like a head.

Use a piece of old bicycle inner tube to attach it to a cow's bladder or a plastic bag.



One person gives mouth-to-mouth breathing while another presses on the 'chest' as it rises and falls.



A still better way to learn about mouth-to-mouth breathing, of course, is for students to practice on each other.

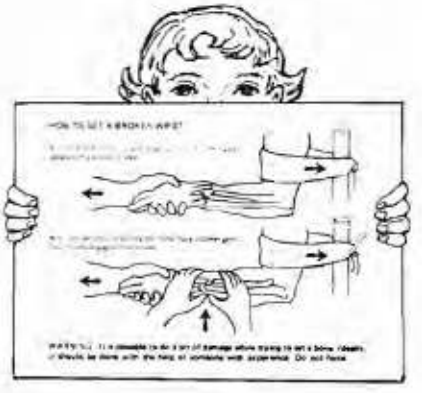
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11. USING IMAGINATION TO DEVELOP NEW TEACHING AIDS

Example: **Setting broken bones**

LESS APPROPRIATE

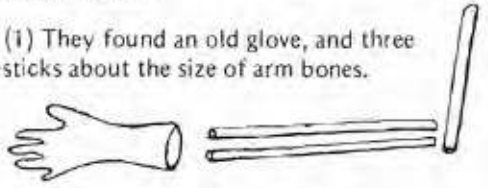
The poster on the right is from page 98 of ***Where There is No Doctor.*** It gives an idea of how to set a broken arm, but does not provide students with a chance to practice it—to learn by doing.



MORE APPROPRIATE

An experienced village health worker, Pablo Chavez, and his students invented the following teaching aid:

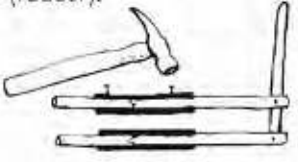
(1) They found an old glove, and three sticks about the size of arm bones.



(2) They broke two of the sticks.



(3) Then they fastened them back together with tightly stretched pieces of an old inner tube (rubber).



(4) They put the sticks inside a stocking, and packed it with wild kapok to make an 'arm'.

(5) The 'arm' was tied to a person's neck in such a way that it looked natural.

The 'arm' was then 'broken', like this

so that the ends of the sticks overlapped, like this



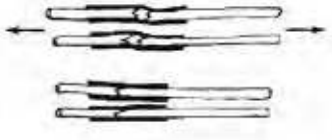
inside view

(6) Students then practiced setting the broken 'bones'. Just as with a real break, two persons had to stretch the arm while a third person positioned the bones.



Pull apart,

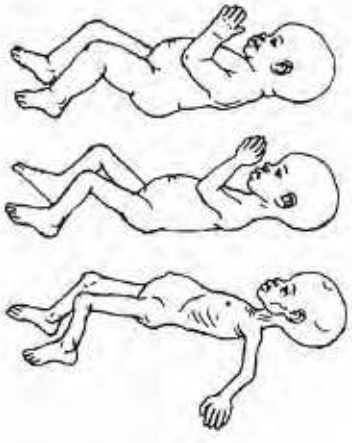
then set 'bones'.



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12. KEEPING TEACHING AIDS SIMPLE, SO THAT STUDENTS CAN MAKE THEIR OWN FOR TEACHING IN THEIR COMMUNITIES

Example: **Cardboard babies**

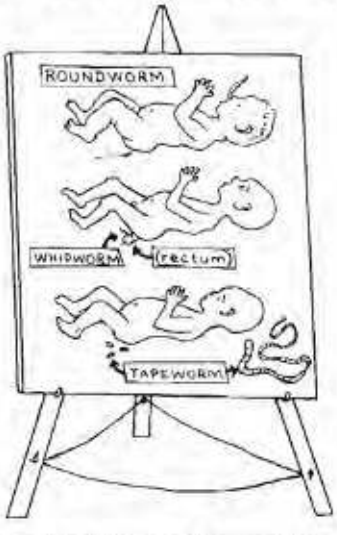


A set of life-size 'babies' cut out of cardboard can be used for teaching many things in many ways.

The 'babies' should be drawn and colored to look as lifelike as possible. If students find it hard to draw realistically, they can copy or trace the program's teaching models.

Ways of using the cardboard babies:

(1) **On flannel-boards.** You can paste flannel on the backs of the cardboard babies, and use them for many different flannel-board presentations. Here the babies are shown with different kinds of worms. The worms and the labels are also cut out of cardboard. (For other flannel-board ideas, see the Index.)



(2) **In role playing.** For classroom learning, health workers can act out the diagnosis, treatment, and prevention of different health problems. The use of cardboard babies makes the role plays more fun and more realistic. (See Chapter 14.)



(3) **For public plays and farmers' theater.** The cardboard babies can be used on stage instead of real babies. See the play on "The Importance of Breast Feeding," page **27**-31.



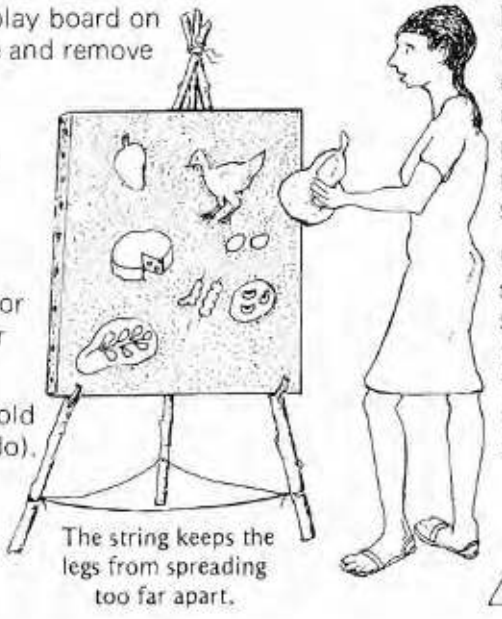
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IDEAS FOR PRESENTING TEACHING AIDS

FLANNEL-BOARDS

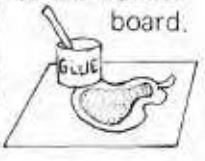
A flannel-board is a display board on which you can easily place and remove pictures. It consists of:

- A frame with a firm surface made of boards, plywood, fiberboard, masonite, or strong cardboard.
- A large sheet of flannel or soft cloth stretched over the frame.
- 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 students.

Glue flannel, sandpaper, or soft cloth on the backs of the pictures so they will stick to the flannel-board.



A flannel-board like the one above is a handy teaching aid. It is a good idea to have each student make one during the course to take home and use in his community. Experience shows that **having students make their own teaching aids during the course often works out better** than simply telling them how and expecting them to do it when they are back in their villages.

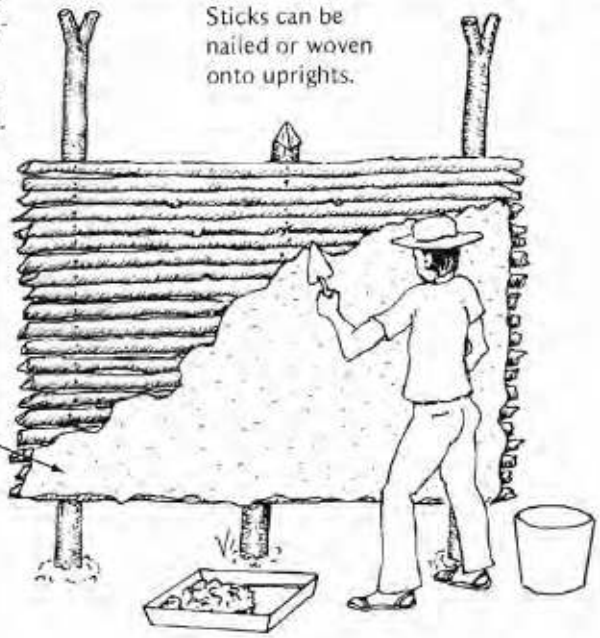


For a training program, a **large flannel-board** like this is extremely useful. It can hold signs and objects large enough for everyone to see clearly. If plywood, masonite, or fiberboard is too expensive, the flannel can simply be tacked on a wall. However, pictures will stay in place better if the surface is tilted backward somewhat.

Remember: Teaching methods need to be adapted to local circumstances. In the highlands of Guatemala, nutrition workers have found that many people are uncomfortable standing in front of large groups. So, instead of asking them to come up to a flannel-board in front of the group, leaders pass around a **small flannel-board.** That way, participants have a chance to see and touch the board, and place objects on it, without embarrassment.

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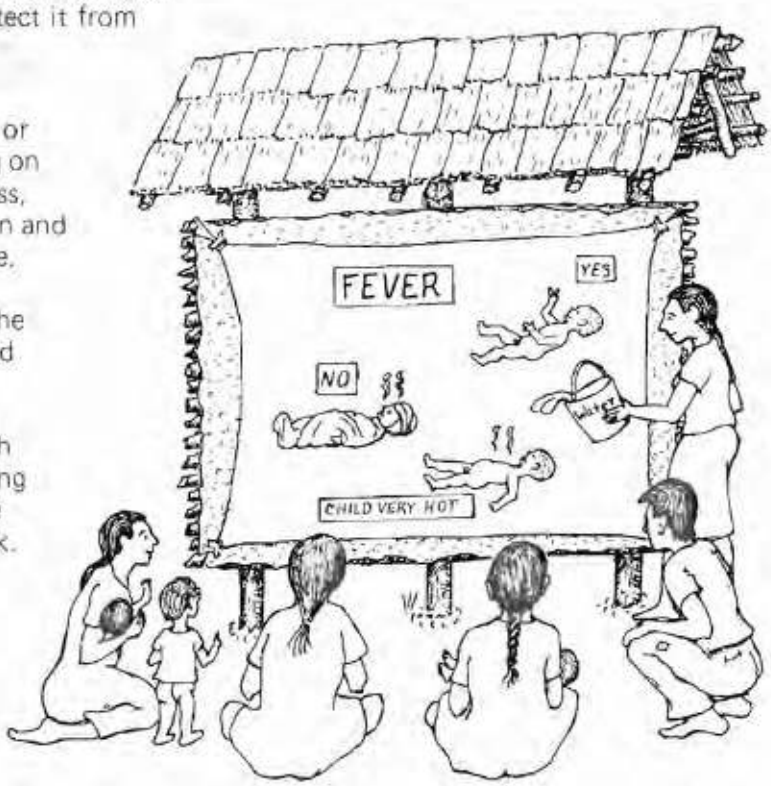
If classes are often held in a particular spot outdoors, a low-cost 'billboard' of ***bajareque*** (mud on bamboo or sticks) can be made to hold up a flannel sheet and posters. Be sure the surface tilts backward a little so that flannel-board pieces will not fall off easily. Try to build it in a place that is protected from the wind.



You can build a small roof over the billboard to protect it from the weather.

The flannel sheet or blanket can be hung on the billboard for class, and then taken down and stored in a safe place.

Between classes the billboard can be used for posters and announcements. If children make health posters, try displaying the best ones on the billboard every week.



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FLANNEL-BOARD ALTERNATIVES

Two common problems with flannel-boards are that . . .

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

You can overcome both of these problems by using local resources and your imagination.

1. Low-cost flannel-board

From Guatemalan health workers come the following suggestions for making flannel-boards from local materials at almost no cost:

- For the display board, use a **blanket** folded over the back of a chair.
- 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 chaff** (the waste husks of the grain) over the wet paste. The tiny barbs of the chaff work better than sandpaper or flannel to hold the pictures on the blanket.



A Guatemalan health worker uses a blanket over a chair as a flannel-board.



Rice chaff or other grain husks may work as well. (Please let us know the results if you try them.)

Homemade glue can also be made from certain local plants. In Mexico, villagers make a strong glue by squeezing the juice from the bulbs of certain wild orchids, and boiling it into a thick syrup.



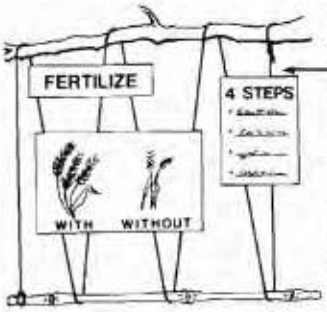
2. Masonite instead of flannel

In Mexico, health workers found that the rough back side of a sheet of masonite (fiberboard) works just as well as a flannel-board. It does not need to be covered with cloth.

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3. String-board

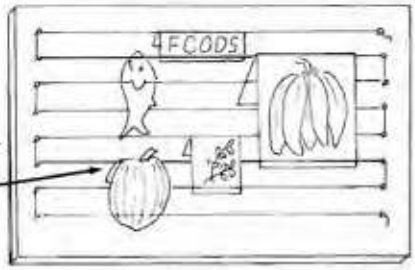
To prevent pictures from falling off or blowing away, you can use a string-board instead of (or combined with) a flannel-board.



The simplest form is like this.

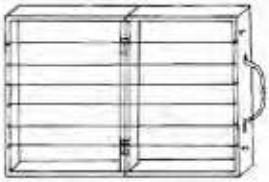
Or stretch strings or elastic ribbons across a board or frame.

Then slip pictures on folded paper or cardboard over the strings.



Imaginative string-board teaching aids were developed in the Gambia, Africa by a Peace Corps volunteer. This one is used to teach mothers and children about malaria. The learners can place the mosquito so it actually 'bites' the arm.





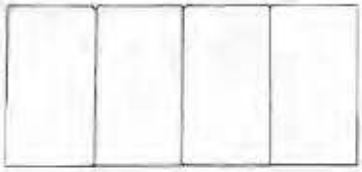


This is a combination string-board and flannel-board. It folds into a simple case for carrying and storing the pictures.

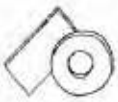
4. Magnet-board

This is another wind-resistant alternative to the flannel-board.



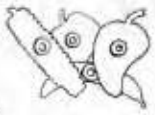


Use a thin piece of tin-plated steel. Perhaps you can find an old metal sign board or open up and flatten an old lard tin.



You will need some way to magnetize small pieces of iron. One way is to use an old induction coil from an automobile. Ask a school teacher 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.



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

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FLASH CARDS

Flash cards are cards showing a series of pictures or messages. Like flip charts (see p. **11**-23), they can be used to tell stories or to teach skills step by step. But they allow more flexibility because they are not attached together in a given order. You can rearrange them to tell different stories, or to teach different ideas. The size of the cards will depend on how they are to be used and how big the group is.

Flash cards can be used . . .

- To teach basic concepts of health care--especially with groups of mothers, children, and persons who cannot read.
- 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. Each person is given several to 'play' or match with other cards, according to the rules of the game (see p. **11**-22).

Flash cards are usually drawn on cardboard. But they can also be made of heavy cloth that can be rolled up for carrying.



The Voluntary Health Association of India (VHAI) distributes an instruction sheet explaining how to prepare **flash cards from old tins or metal cans.** First the tin is hammered flat, cut into cards, and painted white. Then pictures can be drawn or painted on the cards.

On these 2 facing pages, we show the 8 photographs from the VHAI's instruction sheet. This printed sheet communicates completely through pictures, without any need for words. It is a good example of an effective teaching material that can be used by persons who cannot read (as well as by those who can).

1.



2.



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3.



4.



5.



6.



7.



8.



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Flash card games

Sets of flash cards can be used to play games that help students learn about particular health problems. For example, for games about the different problems that cause diarrhea, students can make a set of flash cards like these:



The cards shown here are only a beginning. Add more according to the common diarrheal diseases in your area.

Health workers can play several games with these cards. Make the games lively by having people announce or act out what is on each card they play.

GAME 1: What and why? First, hand each person some cards of each kind (CAUSES, SIGNS, TREATMENTS, etc.). One student holds up a card with a sign of an illness and asks, "What other signs might I have?" Other students hold up more signs, one by one, forming a description of a particular problem. They ask, "What problem do I have?" Then the student who has the card naming that problem holds it up. If no one challenges the diagnosis, that student asks, "Why did I get sick?" Now each person who has a card with a possible cause of the problem holds it up. The group discusses how the illness is spread.

GAME 2: What to do? Following GAME 1, a similar game can be played to review the treatment and prevention of different kinds of diarrhea. Encourage the students to look in their books and to add information and suggestions not included on the cards.

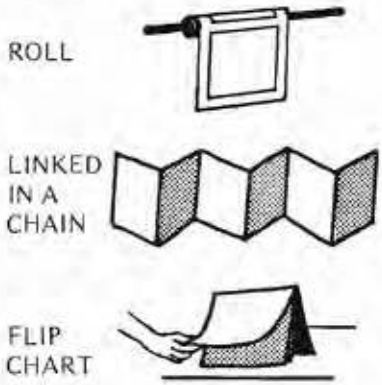
More games: Students can divide into small groups to think of new games using the cards. Or have them design new cards about other health problems, or cards without words to use with children or people who do not read. This way students use their imaginations to create learning games for people in their communities.

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FLIP CHARTS AND OTHER WAYS TO TELL STORIES WITH PICTURES

Pictures—hand drawn, silkscreened, or mimeographed—can be used as aids for telling stories or teaching skills step by step.

It is easier to keep pictures in order if they are joined together in some way. They can be rolled on a stick, linked together, or made into flip charts. Attach them together any way you like—by stapling, sewing, gluing, attaching them to rings, or bolting them between 2 thin boards.



Pictures are doubly effective if the learning group—health workers or mothers or children—helps to make them. The group may want to use a flip chart or story from some other source as a model, and adapt the pictures and events to the local situation.



To make it easier to read a flip chart story to a group, 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 what the group is looking at.

But even better than telling people the story is to let them tell you what they see happening in the pictures.

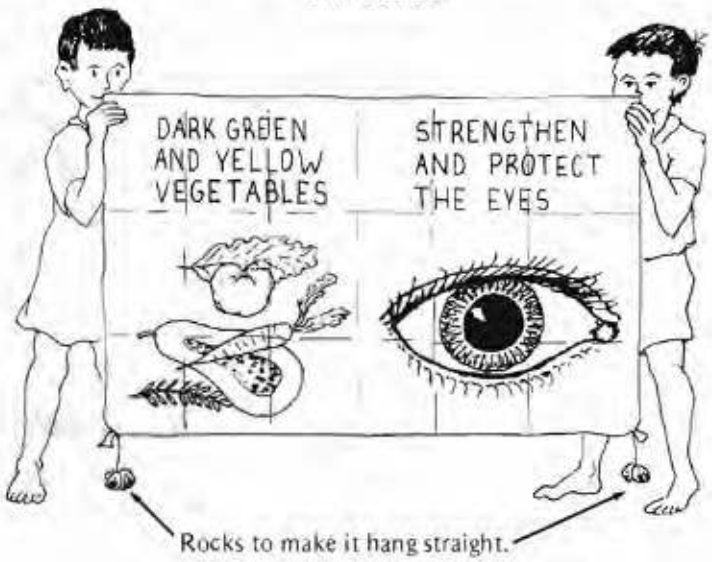
FOLDABLE POSTERS ON THIN PLASTIC SHEETS:

You can make large posters from thin sheets of white plastic or old plastic mattress covers. Draw on them with 'waterproof' marking pens. These posters can easily be folded, carried about, and even washed.

FOLDED UP



UNFOLDED



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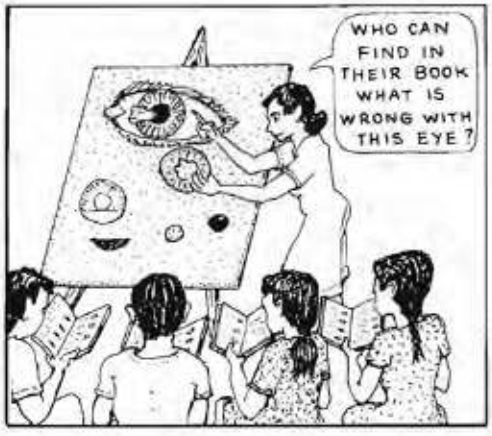
GAMES THAT HELP PEOPLE LEARN

Many of the teaching aids described in this book can be used for group learning games.

For example, you can use the flannel-board eyes (described on page **21**-8) in a game that helps health workers learn to identify various eye problems. Students take turns arranging the pieces to form different eye problems, while the others try to identify them by using their books.

If quicker students always answer first, have everyone take turns answering. Or you can decide who will answer next by spinning a bottle (p. **4**-8), throwing dice, or picking numbers out of a hat.

You and your students can invent similar games for learning about skin problems or other illnesses.



Many teaching aids can be used as games to test students' abilities to identify different health problems.

Puzzles

Students can make their own puzzles by cutting pieces of cardboard, wood, or cloth to fit together in certain ways. They can design 'jigsaw' puzzles that fit together to form one picture or shape (like the puzzle about diarrhea on the next page). Or they can make puzzles that have separate pieces representing signs of illnesses that fit onto a human figure (see the teaching aid about swollen lymph nodes, p. **21**-6). Either of these can be used in many kinds of learning games.

Playful, yet serious learning puzzles can also be used as aids for learning about antibiotics and worm medicines. (These are described on pages **19**-2 to **19**-12.)

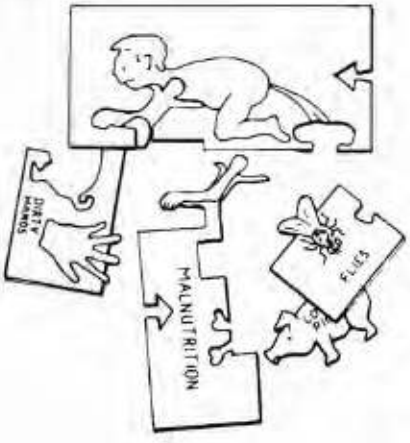
A similar set of puzzles for learning about different vaginal infections has been designed by the health team in Ajoya, Mexico. The puzzles include pieces that fit together (on a flannel-board) to demonstrate signs of the problems and aspects of treatment.



Puzzles for learning about signs and treatment of different vaginal infections can be used for 'self-testing' games.

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'JIGSAW' PUZZLE SHOWING THE CAUSES OF DIARRHEA:

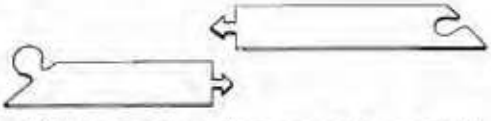


Life itself is full of puzzles. A responsible health worker helps people look at their many problems to see how they fit together to form a whole picture. It is like putting together the pieces of a puzzle.

Teaching aids in the form of puzzles can help students see for themselves how many different conditions and problems in their lives are related.

Putting together the puzzle shown here helps students to recognize how various factors combine to cause death by diarrhea. Poor personal hygiene and poor public sanitation lead to the spread of infection. Several factors cause malnutrition, and poorly nourished children get sick more often and are more likely to die because they cannot fight off disease. The students also see how the whole unhealthy situation is locked in place by unjust social factors.

To encourage students to think and choose, include alternative pieces for different diseases, signs, and causes. Or have some blank pieces that students can fill in based on their own ideas and experience.

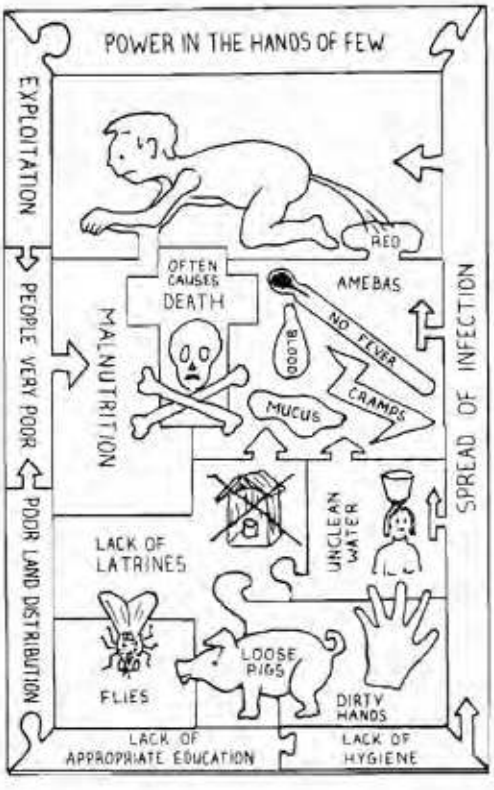


Many exciting discussions can result from putting together this kind of puzzle.

After the group explores how the different causes relate to each other, a whole new area of discussion can be opened by asking questions such as these:

- What should be done about this situation?
- What can be done about each of the contributing causes?
- Will treating the diarrhea solve the problem? What will?
- Where should we begin?

Encourage students to make their own puzzles based on problems and causes in their communities.

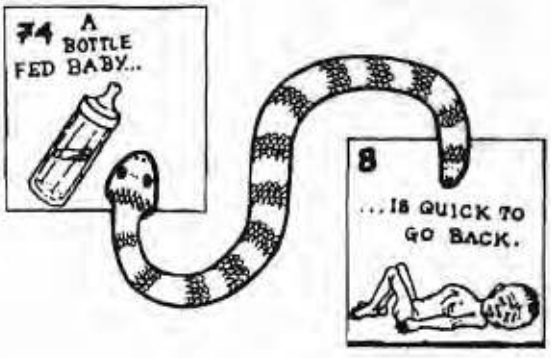


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Games health workers can introduce in their villages

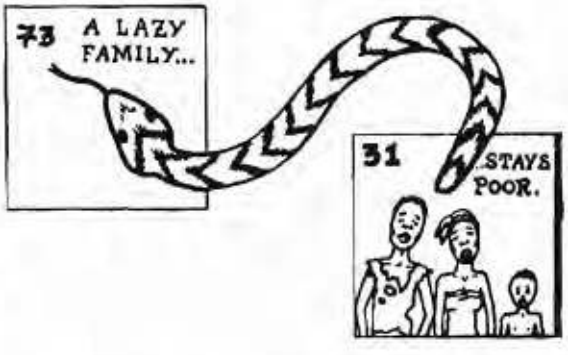
Games can be fun to play and at the same time teach about important health practices. Some learning games are used with groups of mothers and children in community programs. An example is the "Snakes and Ladders" game from Liberia, Africa shown and explained on the next page.

One of the strengths of this version of "Snakes and Ladders" is that the pictures, messages, and language have been adapted to the local situation. For instance, in squares 74 and 8 it says that a bottle-fed baby is "quick to go back"—which to the Liberian people means to go back to God, to die. Also, "running stomach" in square 24 is the local term for diarrhea.

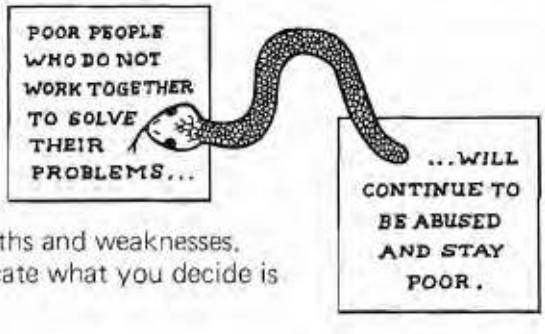


One of the weaknesses of this version of the game is that it focuses mainly on the physical causes of poor health. Where social causes are mentioned, the messages tend to put the blame on the poor themselves rather than on problems in the social system. This reinforces poor people's sense of powerlessness and worthlessness, rather than strengthening their self-confidence and their will to act to change their situation.

For example, the message in squares 73 and 31 tells players that **the family's poverty is their own fault,** that if they were not so lazy they would not be poor. This message misses the fact that many poor people work very hard, or gladly would if given the chance. Also, much of the benefit of their work goes to those who already have plenty. Most of the poor stay poor no matter how hard they work.



A much more positive message about the cause of poverty might be one like this →



If your group plans to use this snakes and ladders game, we suggest that you first discuss its strengths and weaknesses. Then adapt the messages to communicate what you decide is most helpful for your situation.

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HEALTH EDUCATION
SNAKES AND LADDERS*

RULES:

2, 3, or 4 people can play this game. Each player uses a seed to show what place he or she has on the board.

Each player throws the die. The player with the highest number starts the game.



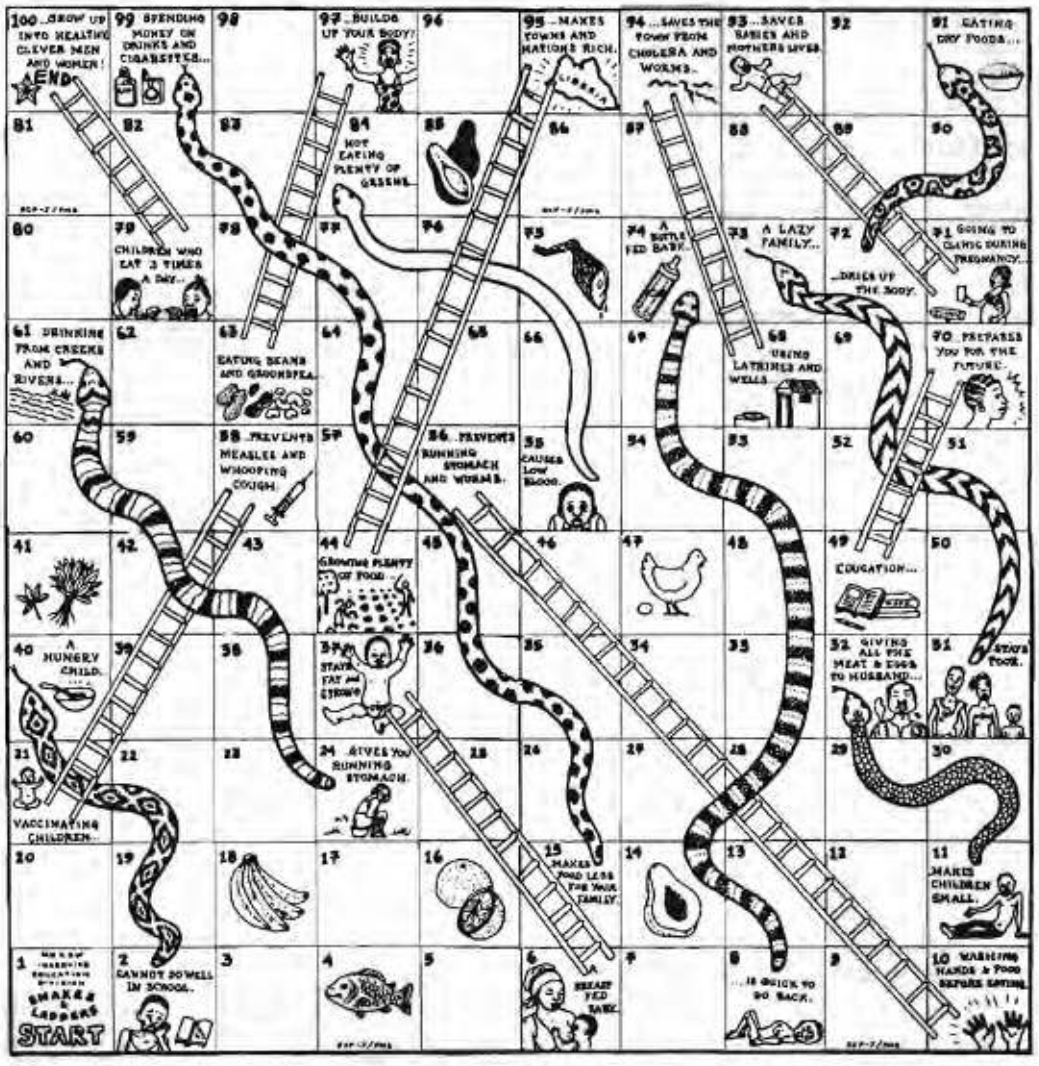
The first player throws the die and moves his or her seed according to the number shown on the die, beginning from square 1, marked **START.**

If a player rolls a 6, the die can be thrown again for another turn.

If a marker stops on the head of a SNAKE, the snake swallows it. The player then moves the seed down to the tail of the snake, and reads the message to all the players. That player's turn is over, and his next turn begins from the square at the tail of the snake.

If a seed lands on a square that has the foot of a LADDER, the player moves it to the top of the ladder, and reads the message to all the players. That player's turn ends at the top of the ladder, and his or her next turn begins from there.

The first player to reach square 100 wins the game, but **the player must throw the exact number needed to land on that final square.**



*This game was adapted for Liberia from one prepared by the National Food and Nutrition Commission of Zambia, in *PSC Newsletter*, UNICEF.

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"Snakes and Ladders" and similar games generally have two big weaknesses as teaching aids:

1. **The messages are given to the players.** The players land on the squares and read the messages, but they do not need to think or solve anything for themselves. It is doubtful whether such pre-packaged messages will be effective unless people discuss them and relate them to their own lives during and after the game.

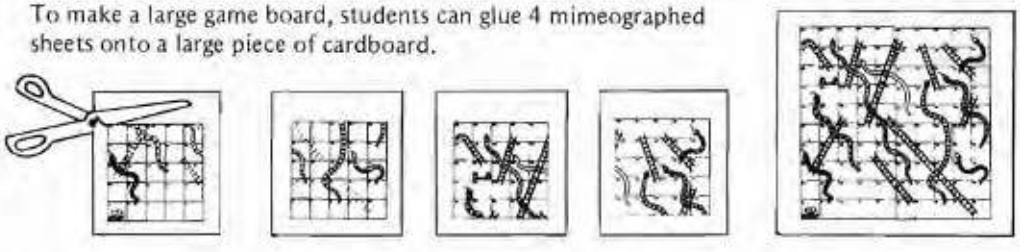
2. **The game is primarily one of luck or chance.** Apart from the written messages, the game carries the unwritten message that the health of a child is determined by lucky or unlucky rolls of the die. Although the game is intended to help people learn what they themselves can do to protect their children's health, there is a danger that it may reinforce people's sense of 'fatalism'. It may make them feel that their children's health is also a matter of luck or fortune, outside their control.

There is one way to get around these weaknesses of the game, at least in part.

Involve student health workers in creating the game. You might start by having them play the game from Liberia. Then together analyze its weaknesses (for example, the attitude of blaming the victim in the statement, "A lazy family stays poor."). Invite the students to **re-make the game, adapting it to conditions in their own villages.** See if they can think of messages that point out both physical and social causes of ill health, and that help build people's self-confidence to improve their situation.

To make preparation of the game easier, you can give each health worker mimeographed sheets with the squares, snakes, and ladders already filled in, but **without the messages and pictures.** The students can add these for themselves.

To make a large game board, students can glue 4 mimeographed sheets onto a large piece of cardboard.



By making their own games and choosing messages appropriate for their communities, the health workers become actively involved in thinking about local problems. The health workers can, in turn, use a similar approach with groups of parents and children in their villages. (Children can color in the snakes.) If people take part in creating the games they play, they will be more likely to continue to discuss the messages they themselves have decided upon. The game becomes less one of luck, and more one of thought, purpose, and action.

Other games similar to "Snakes and Ladders" (but more like "Monopoly") can get people involved in **role playing.** Again, dice are thrown and players advance on a board with many squares. But the game focuses more on cultural, economic, and political factors that affect health, and players act out the roles of poor workers, landholders, shopkeepers, village officials, and so on. An example of such a game is "Hacienda," available from the Publications Department, Center for International Education, 285 Hills South, University of Massachusetts, Amherst, Massachusetts 01003, USA.

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HOW TO 'SHOW' PEOPLE THINGS THAT ARE TOO SMALL TO SEE

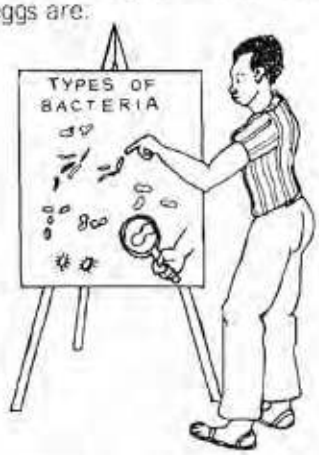
One especially difficult idea to teach is the extreme smallness of things like bacteria and amebas, which can only be seen with a microscope. If a microscope is available, it helps to have students use it to look at bacteria, worm eggs, and amebas, even if they will not have microscopes in their villages.



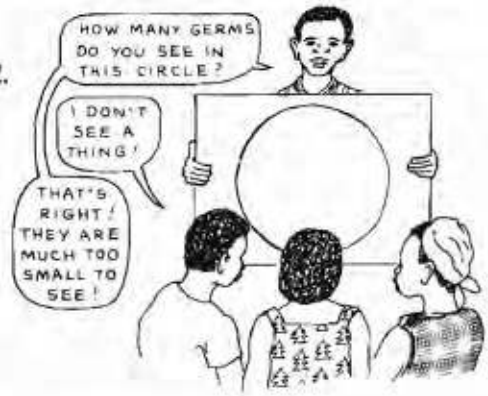
Many people confuse amebas with small worms because they cannot imagine that amebas are too small to see.

Here is one way to help students understand how small bacteria, amebas, and worm eggs are.

1.



2.



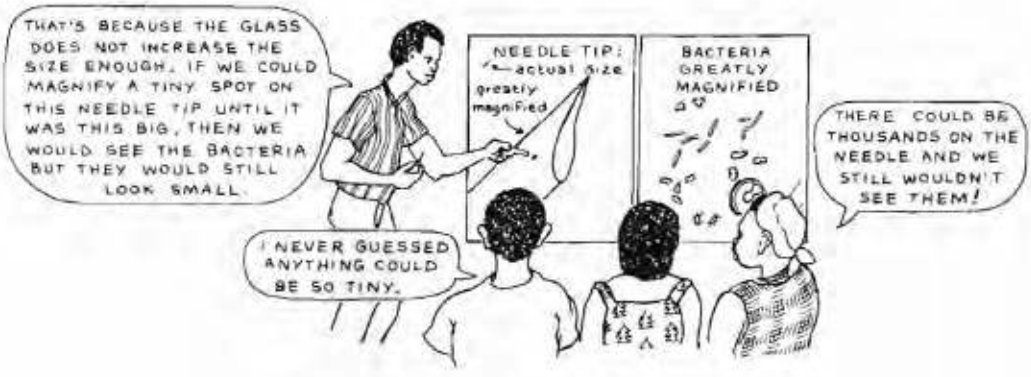
3.



4.



5.



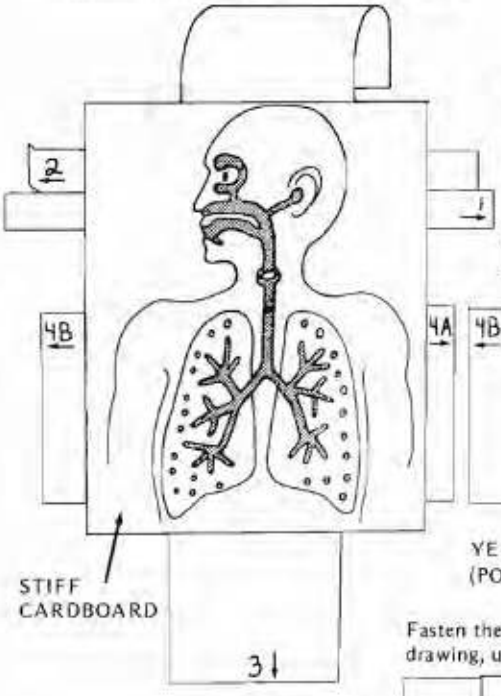
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A teaching aid for showing how germs invade the body

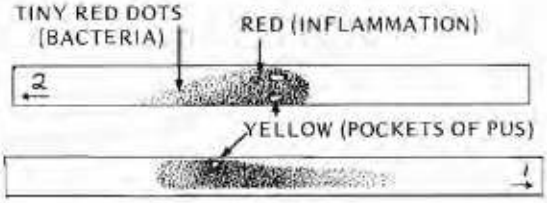
When people are learning how infection spreads, and how it invades the body, it helps if they can actually 'see' what happens. For this purpose, the village health team in Ajoya invented the following teaching aid. By pulling different cardboard strips, students can actually see the 'germs' move in through the nose and attack the different parts of the respiratory system.

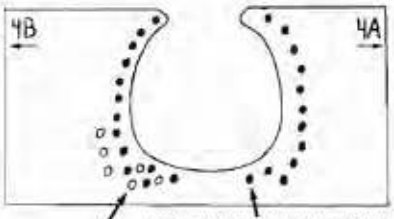


WHOLE TEACHING AID ASSEMBLED



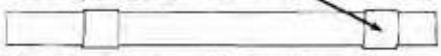
FOUR MOVABLE STRIPS







Fasten the strips to the back of the drawing, using paper 'belt loops'



through which the strips can slide.

By pulling the different strips in the direction of the arrows, you can see the bacteria invade, followed by inflammation, and then infection with pus.

PULL STRIP 1, AND SEE THE GERMS BEGIN TO ENTER THE NOSE.

PULL STRIP 2, AND THEY INVADE THE SINUSES . . .

AND CAUSE INFLAMMATION.

FINALLY THERE ARE POCKETS OF PUS.



Pull strip 1 farther and the germs will invade the ear, and form pus. Pull strip 3 to show an infection of the voice box, and then the tubes in the lungs (bronchitis). Pull strip 4A and the infection reaches the tiny air sacs of the lungs, causing pneumonia. Pull strip 4B and a pocket of pus forms in the lower right lung.

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PHOTOS OF THE 'INVADING GERMS' TEACHING AID



GERMS BEGIN TO INVADE.



PUS IN EAR.

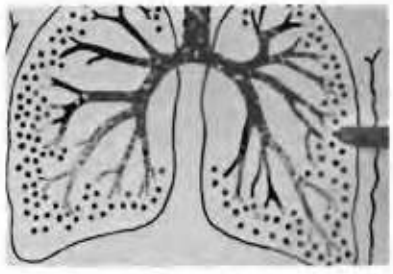




GERMS AND INFECTION SPREAD TO LOWER RESPIRATORY TRACT.



BRONCHITIS
Bronchi (tubes) are infected, but *alveoli* (little sacs) are clear.



PNEUMONIA
Infection has spread to even the tiny air sacs.

ENCOURAGING HEALTH WORKERS TO BE CREATIVE:

The 'invading germs' teaching aid was designed and put together by instructors and students during a health worker training course in Ajoya, Mexico. The invention of new and better teaching aids has become one of the most challenging and exciting parts of the training program. Teaching aids designed during the course are doubly valuable. They not only help health workers to learn and teach basic health principles, they also help the health workers and their instructors become more creative. Together they begin to think in terms of hunting for new and better answers. **Learning—and life itself—becomes an adventure!**

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EACH ONE TEACH ONE

A good teacher is like a spark or *catalyst* that starts a chain of action. He or she sets a process or a project in motion . . . soon others take over . . . they, in turn, get still more people involved . . . and so on. Here is an imaginary example:

1. Teacher ⟶ Health Workers



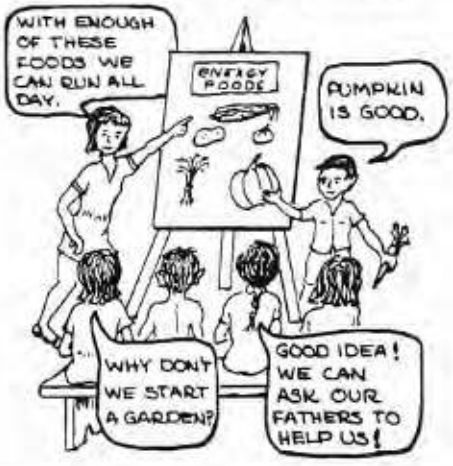
2. Health Workers ⟶ Mothers



3. Mothers ⟶ Children



4. Children ⟶ Other Children



Here you see how the instructor sparks an idea, and how it grows. In this example, it goes from:

TEACHER ⟶ HEALTH WORKERS ⟶ MOTHERS ⟶ CHILDREN ⟶ OTHER CHILDREN ⟶ FATHERS

(Of course, in real life the spread of ideas usually happens more slowly and is not as obvious as shown here.)

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CHAPTER 12

Learning to Make, Take, and Use Pictures

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]



[illegible]

DIFFERENT WAYS TO ILLUSTRATE THE SAME IDEA

Photographs [illegible]

Drawings [illegible]

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FIVE KINDS OF ILLUSTRATIONS*

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. (People might wonder, "Why is the baby's neck black?")

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.

Notice that in this book and in *Where There Is No Doctor* we mostly use simple line drawings. As a result, many health workers have copied them for posters and other health education materials.

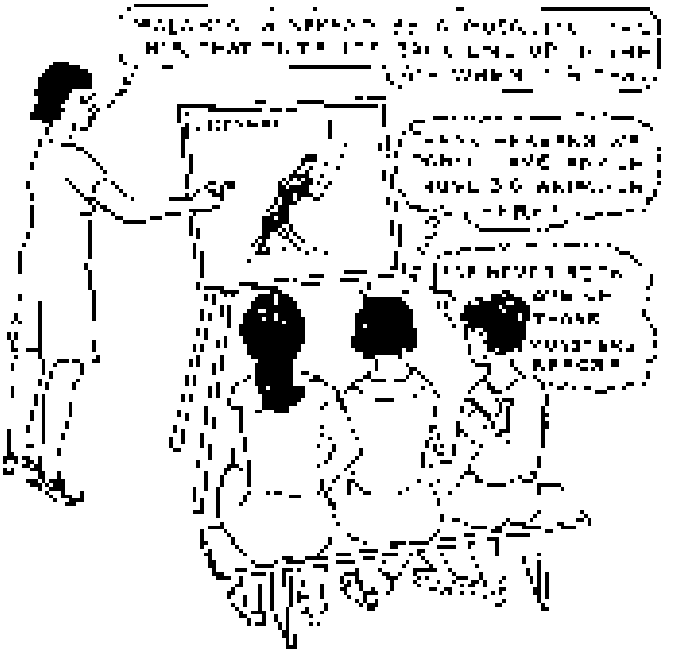
*These drawings and photos are from ***Teaching For Better Learning,*** by Fred R. Abbatt, World Health Organization, 1980.

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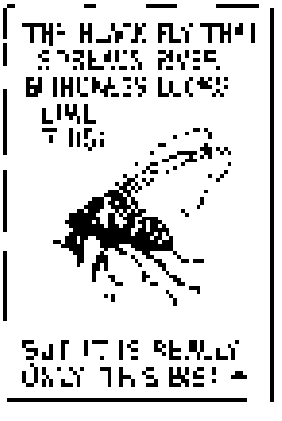
MAKE SURE DRAWINGS COMMUNICATE WHAT YOU WANT

A picture is worth a thousand words. But it is not always true that pictures show what you want to say. Look at the people you are trying to reach.

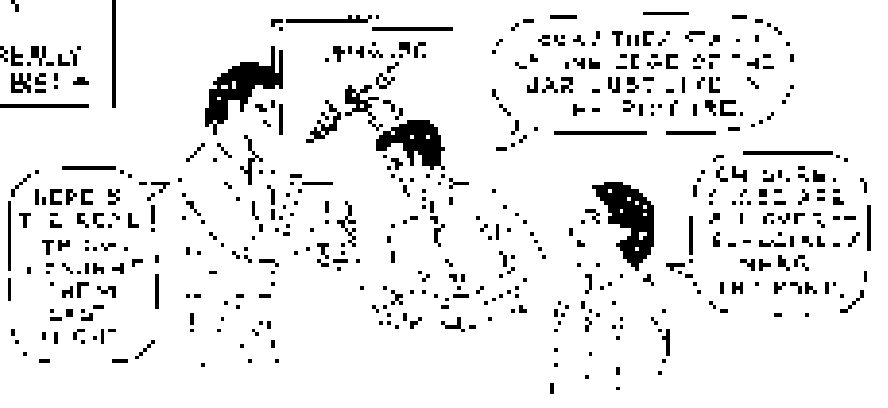
Confusion about size



Wrong



Right

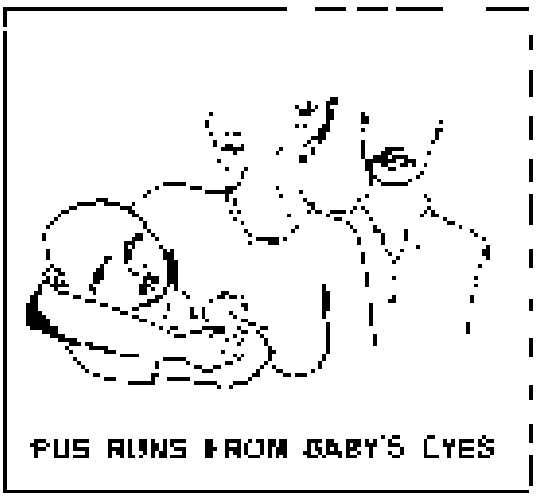


The importance of showing people's expressions



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Be sure your drawings communicate care and respect

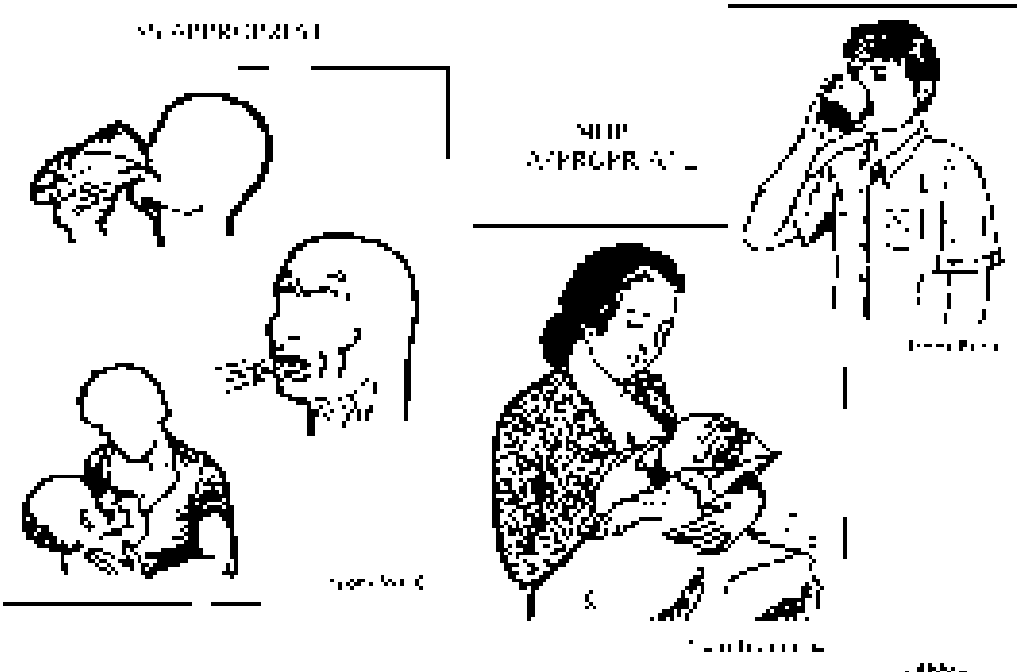




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Techniques for illustrating parts of the body

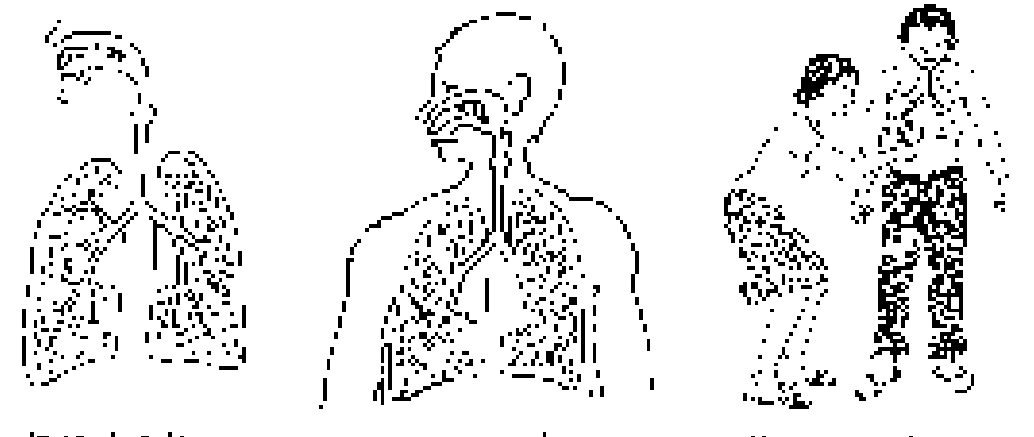
1. **Avoid making people look inhuman.** [illegible]



2. Whenever possible, give people faces: eyes, mouths, noses, ears.



3. Include enough in your drawings to be sure people can tell where different structures or organs are in the body. For example, look at these ways of showing the [illegible]



[illegible] only the body. [illegible]

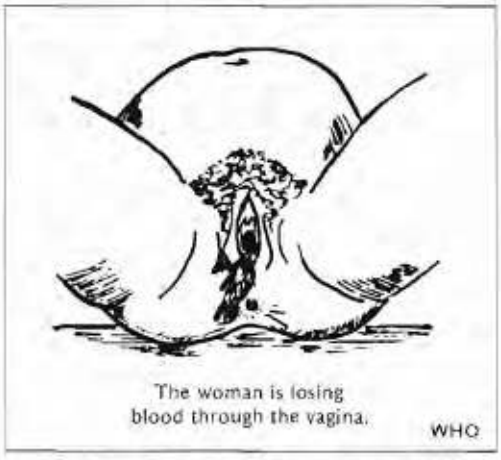
[illegible] [illegible] [illegible]

[illegible] [illegible] [illegible]

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Avoid cutting off arms and legs. Try to draw enough of the body to be sure people can recognize what is shown.

LESS APPROPRIATE



The woman is losing blood through the vagina. WHO

Here we must read the caption to find out what is happening. We cannot tell from the picture.

MORE APPROPRIATE



Here we do not need to be told. We see what is happening.

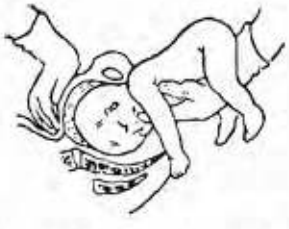
3. **When using pictures to teach skills, include landmarks people will recognize.** Compare these illustrations of breech birth:

When possible, show **outside anatomy** (what people actually see and are familiar with) . . .



MORE APPROPRIATE

rather than **inside anatomy** (what people do not usually see and may not recognize).



LESS APPROPRIATE



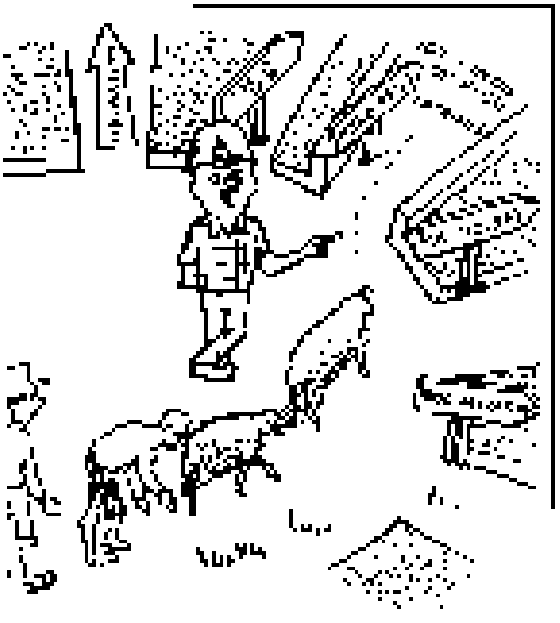
From *Manual Practico Para Parteras,* by Esther Gally, Editorial Pax, Mexico, 1977.

Combining real people (or photos) with drawings:

Another effective method is to combine drawings with real persons or things in the same presentation. The picture you see here was made by holding a real baby in front of a drawing showing the inside of a mother's body. The same method, using a drawing of the mother's whole body, is shown on p. **22**-9.

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When to use cartoons and when to make people look real





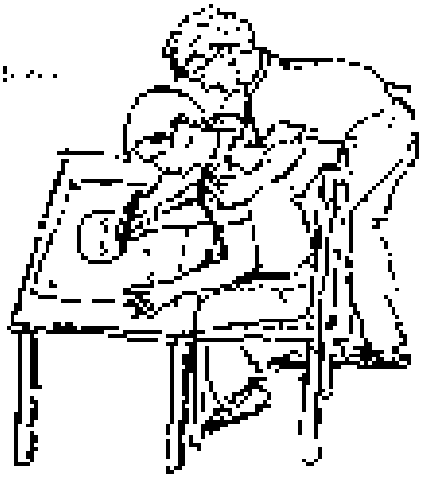


LEARNING TO DRAW

Learning to draw is like any other process of learning to see. To draw you must observe things accurately and then show what you see. Drawing skill grows out of a love of looking and curiosity.

Almost anyone can learn to draw. With practice and patience you can learn to draw well.

To draw you must pay attention to the way things look. You must learn to see differences between things. And you must learn to see relationships between parts.



Tracing and copying from others



One of the best ways to learn how to draw is to practice copying the pictures of people who can draw well. Trace pictures from books and magazines. Then copy them without tracing.

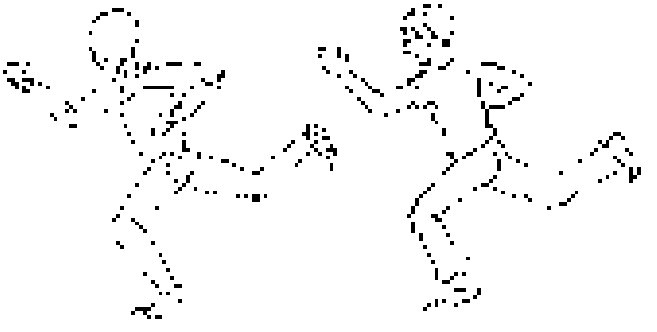
Tracing and copying helps you learn how to look carefully at things. It helps you learn how to see differences between things. It helps you learn how to see the shapes of things.

Drawing people

When you draw people, you must pay attention to many details. First, look at the general shape of the body. Then look at the shapes of the parts of the body. Look at the proportions.

If you want your drawings of children to look like children, you must pay special attention to the proportions. Important things are:

- the size of the head
- the position of the eyes on the face
- the length of arms and legs



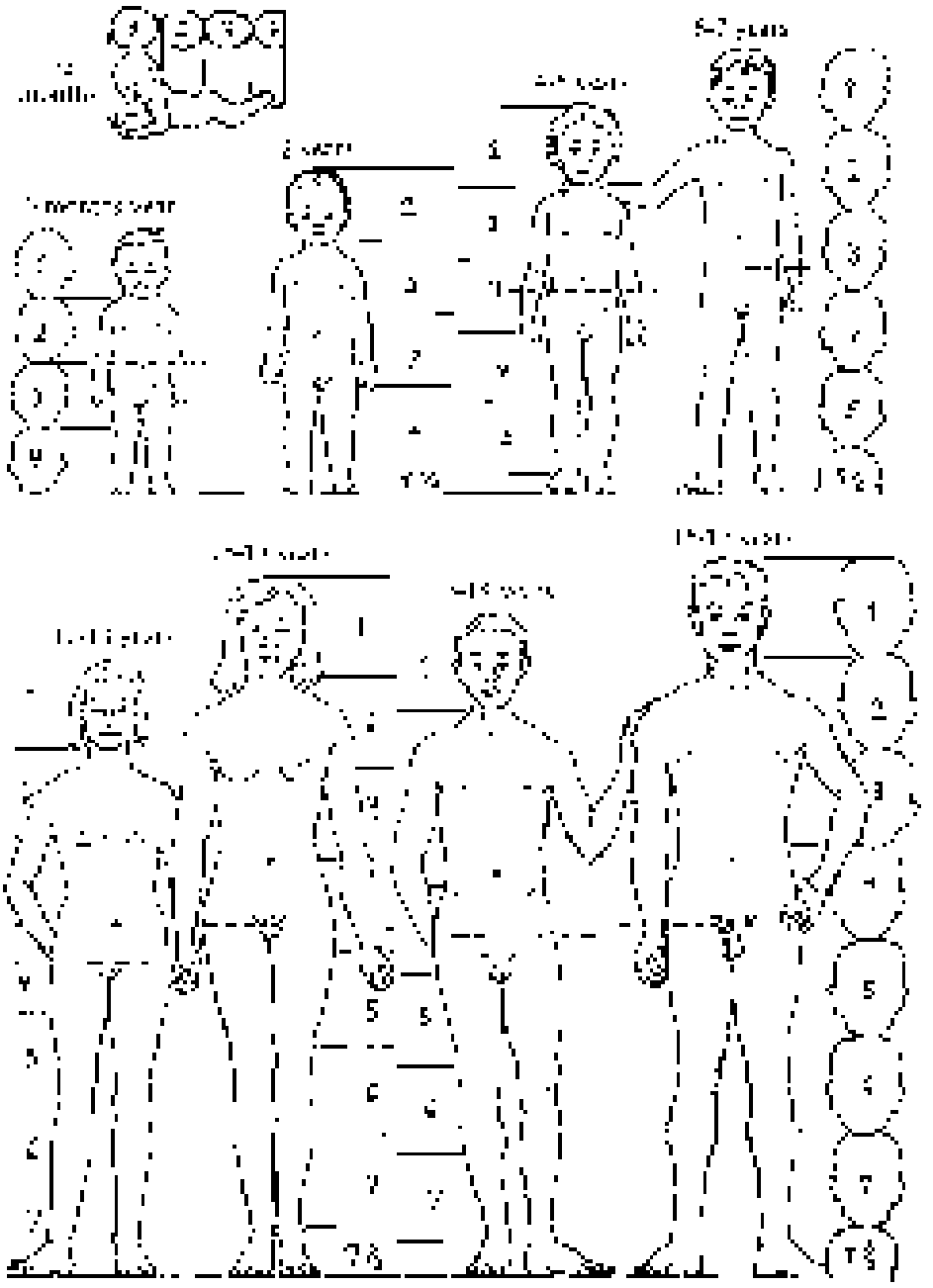
When drawing people, remember that no two people look exactly alike. Each person has his own special shape.

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Proportions

Introduce the idea that people are not all the same size. Talk about how you can tell the difference between a baby and an adult. Ask the students to draw a picture of a baby and an adult.

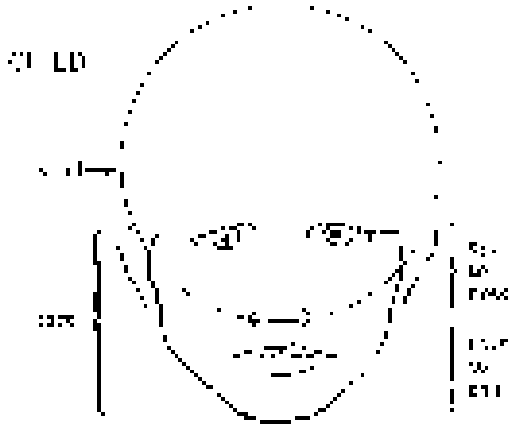
Notice that in children the head is much bigger, relative to the body, than in adults. Also, young children's legs are relatively shorter. As children grow, their body proportions change.

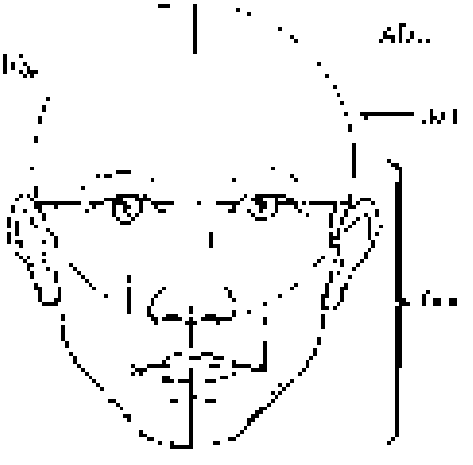


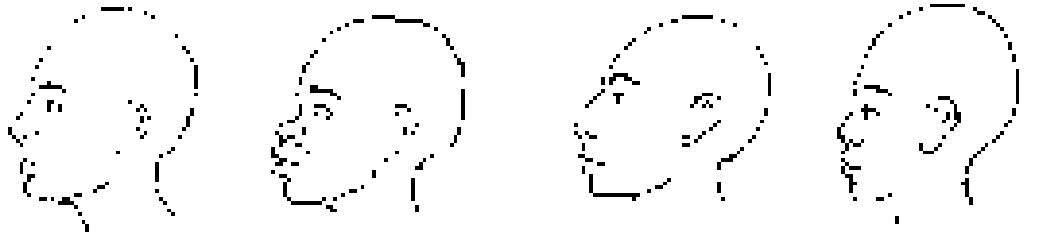
Use these drawings to check the proportions of your own drawings.

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Drawing faces





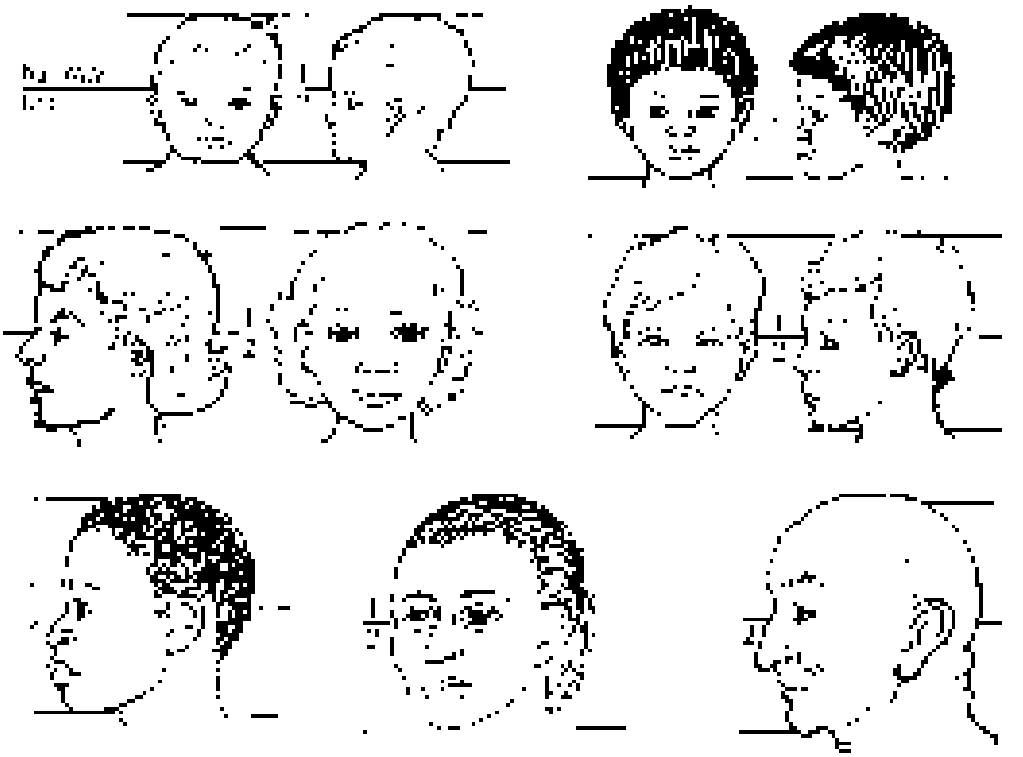
Face features: 

Face expressions: 

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Face proportions

[illegible] the eyes of young children are well below the halfway line. In adults the eyes are slightly above the halfway line. [illegible]



Drawing hands

[illegible]



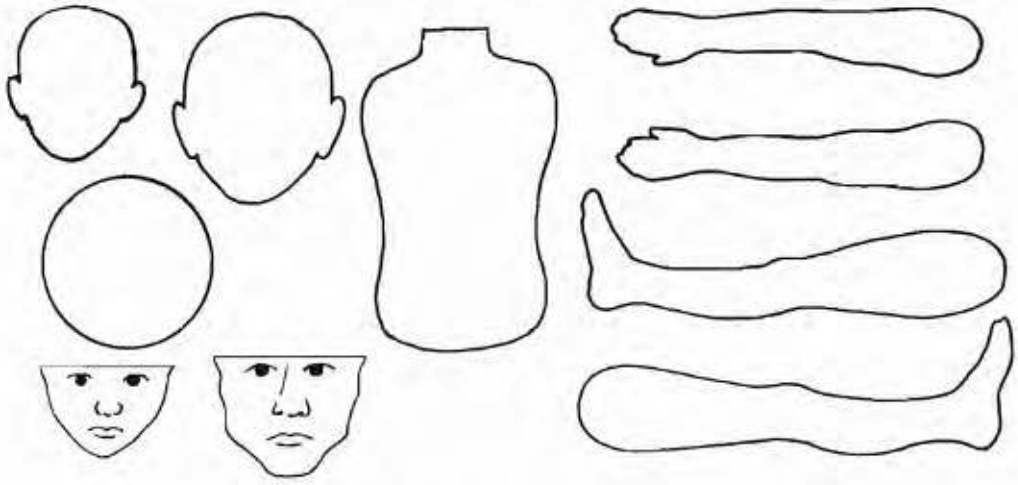


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Learning to draw human proportions correctly

This method was developed at an 'educational exchange' for instructors of village health workers, held in Ajoya, Mexico in 1979.

Have students cut out figures like those below, but much larger. They can be made of flannel, or cardboard fixed for flannel-board use.



By putting the pieces together in different ways, the students can form persons of different ages.



The small head on the body forms an adult.



The big head on the body forms a child.



The child can be made younger by pushing up the arms and legs to make them shorter.



The small face on the skull forms a child.



The large face on the same skull forms an adult.

Health workers can make their own sets of figures during training. Then they can use them in their villages to help others learn to draw.

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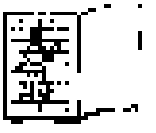
TECHNIQUES FOR COPYING

When copying pictures, it is important to get the proportions right. Here are three ways this can be done.

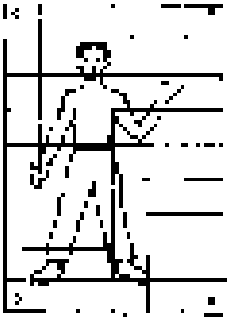
Method 1: Copying square by square

This is a good way to make a bigger copy of a small picture.

First draw a set of light squares over the picture you want to copy.

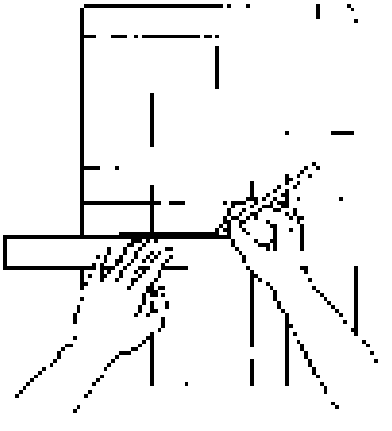


Then draw the same number of squares, but larger, on paper, cardboard or cloth. Copy the drawing in each small square.



Method 2: Using a grid

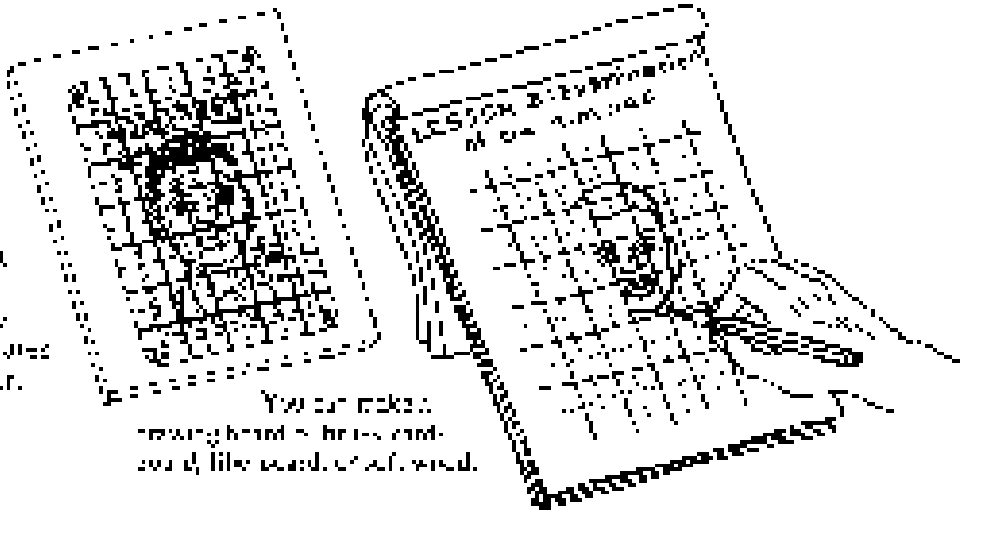
To copy a picture, you may enlarge or reduce it, or keep it the same size. You can prepare a sheet of paper or cardboard by drawing a grid of lines on it. Use heavy lines to make 4 or 8 squares. Then draw the lines lightly to divide the squares into smaller squares. Number the squares on the edges of the grid. Then draw the picture in each square, one square at a time. Then erase the grid.



It is easy to make a new drawing of the same size.

Method 3: Using a frame

To copy, simply place the frame over the picture you want to copy. Copy what you see in each square.



You can make a viewing frame from cardboard, like wood or reed.

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Method 2: The elastic string method*

This can be used for making bigger copies of small pictures, especially on the blackboard but also on posters and flip charts.



After attaching the original drawing to the blackboard, pin one end of an elastic string to the left of the drawing. A knot should be tied in the middle of the string so that, when the string is stretched across the drawing, the knot may cover any point on the drawing. At the other end of the string, tie a piece of chalk (or a pencil, if you are drawing on paper or cloth).

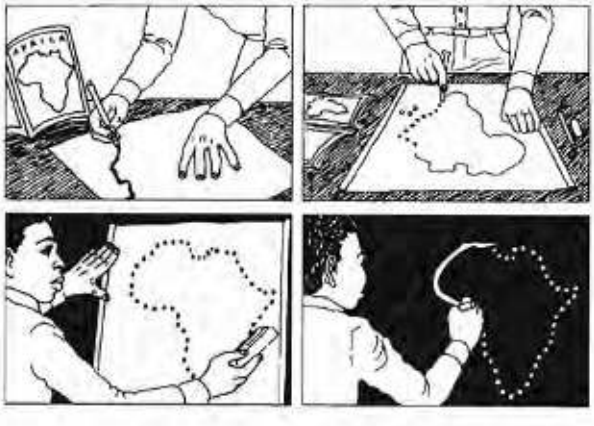
Now begin to copy, taking care that the knot in the string follows the outline of the original drawing.

The larger the distance between the chalk and the knot, the greater the enlargement will be.

Method 3: The punched pattern or template method

Use this method for pictures of the human body, maps, or other things that you want to put frequently on the blackboard or on posters, but have trouble drawing freehand. Patterns or 'templates' can be prepared for repeated use.

First prepare a full-size drawing on heavy paper or cardboard. Then use a leather punch to make small holes, 2 to 4 mm. across, over the lines of the drawing. Now place the cardboard pattern against the blackboard and rub a dusty eraser (or a cloth with chalk dust) over the surface. An outline of the picture will be formed by chalk dots on the blackboard. Remove the pattern and connect the dots with chalk.



*These ideas and photographs come from a booklet entitled "Blackboard Tips." It was developed in a workshop in Botswana and published by the Werkgroep Ontwikkelings Technieken, Technische Hogeschool Twente, Postbus 217, Enschede, Holland.

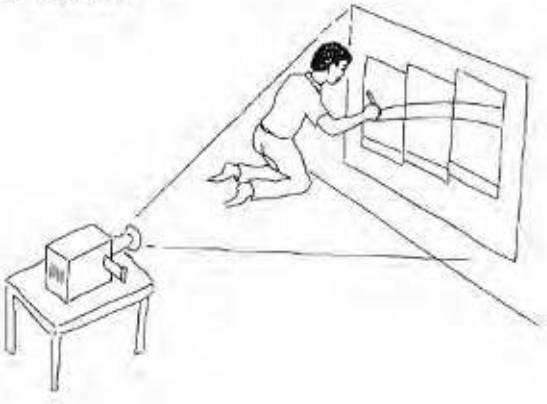
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Method 4: Cut-outs

Another way to make a pattern, instead of using punched holes, is to carefully cut out the drawing. Cut along its outer edges so that you have a cardboard image in the form of the object you want to draw. This type of cut-out pattern can also have punched holes to mark lines inside the drawing.



Method 5: Tracing a color slide projection

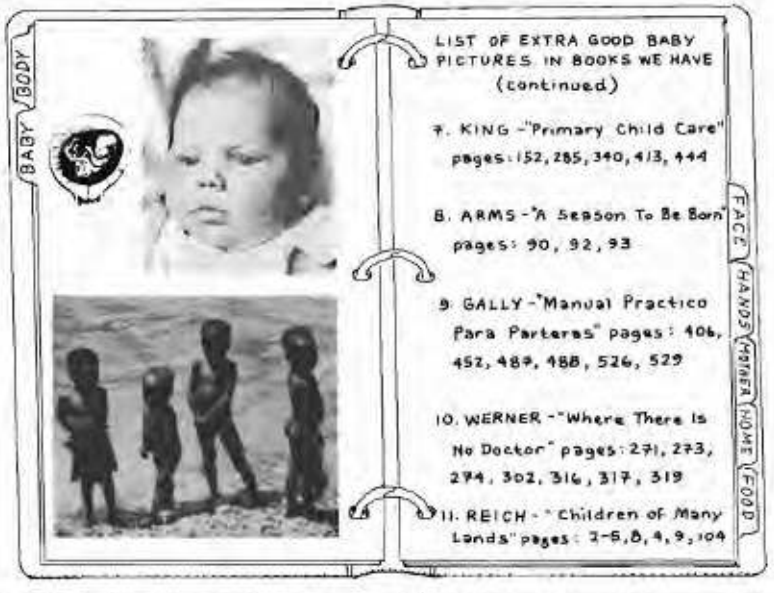


This is a good way to make accurate enlargements of pictures from color slides or transparencies. Project the slide against a large paper or a wall. Then trace the picture exactly.

This method is especially useful for Road to Health charts, thinness charts (see page **25**-10), etc. Slides of both these charts are available from TALC (see page **Back**-3).

KEEPING A 'SCRAPBOOK' OF GOOD PICTURES FOR COPYING

Good pictures for making drawings or posters can be found in magazines, books, newspapers, advertisements, and so on. But often when you want to draw, it is hard to find a good picture to use as a model. So it helps to make a collection of drawings and photos you may want to copy. For easy reference, you can organize them by subjects in a scrapbook (notebook or album). It is also helpful to keep a list of books and the pages with pictures you may want to copy.



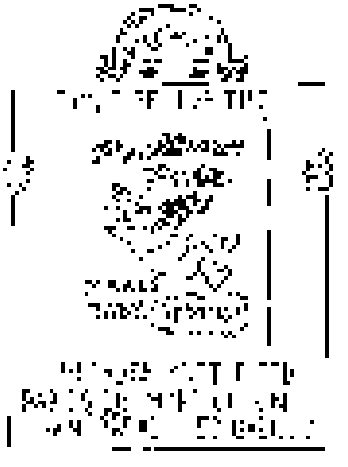
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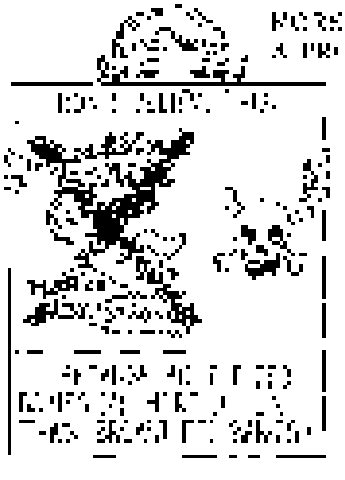
USING PHOTOGRAPHS AS TEACHING AIDS

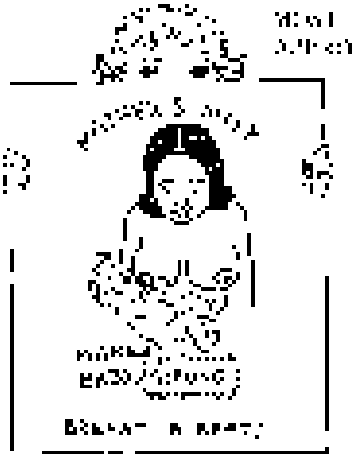












Be sure the picture carries a helpful message—with or without the words.

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How to get better photos with your camera

In this book we cannot teach you how to use a camera. You should read the instruction book that came with your camera, and perhaps ask someone who has experience to help you.

Here are just a few suggestions for getting good pictures.

1. Film speed

Fast film (speed 400 or more)

Use fast film (400 ASA or more) when:
- there is little light
- you cannot use flash (because the subject is too far away)
- you do not want to use flash (because the subject is too close)

Slow film (speed 100 ASA or less)

Use slow film (100 ASA or less) when:
- there is plenty of light
- you want to use flash (because the subject is close)
- you want to use a tripod (because you are taking a picture of something that is not moving)

The best way to choose film is to ask someone who knows about photography. Tell them what you want to photograph and where you will be taking the pictures.

2. Keeping the camera steady

For good pictures you must hold the camera as steady as you can. Even a small movement of the camera can spoil the picture. Be ready, and squeeze the shutter gently. Do not jerk the camera as you press the shutter.





Keep the camera still when you press the shutter

If you are using a camera with a timer, it is best to use it. If you do not have a timer, hold your breath as you press the shutter. Pressure on the shutter button can cause the camera to move. Be sure to keep both your hands still while you take the photo.

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3. **Lighting**

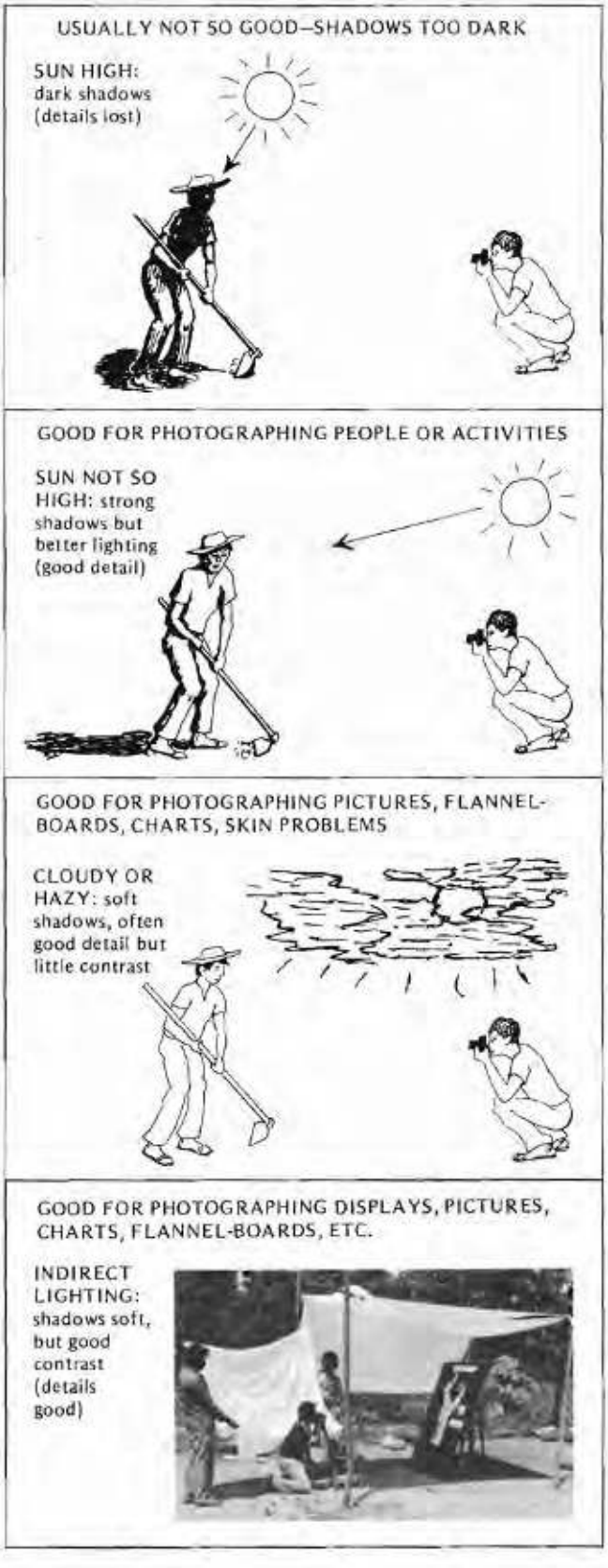
Good lighting is important. Before clicking the shutter of your camera, always check to be sure the light falls well on the faces of people and on the details of whatever you are trying to photograph.

Sometimes good pictures can be taken in direct sunlight, but usually the shadows come out very dark.

If you take pictures outdoors, they will often be better if you **take them when the sun is not too high overhead**—an hour or two after sunrise or an hour or two before sunset.

Also, to avoid shadows that are too dark, try to take pictures on a cloudy or hazy day.

For taking pictures of charts, skin problems, and other subjects to be used for teaching, indirect lighting is often best. Light can be shined against a white wall so that it reflects onto the subject. Or hold a white sheet so that the sunlight reflects onto the object to be photographed.



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4. Background

The background—or what is behind the main subject in a photo—should, if possible, do at least one of three things:

1. **add meaning** or interest to the main subject of the picture,
2. **add contrast** to the main subject, helping it to stand out clearly,
3. **not detract** or take attention away from the main subject.



The background in this picture of a community garden adds to the message.



This photograph was taken in the sunlight, against the dark background of an open doorway. The scales and the baby stand out clearly.

LESS APPROPRIATE



In this photo, the background is a wall with a colorful painting on it. The painting makes the photo confusing, and adds nothing to the message.

MORE APPROPRIATE



This photo was taken against a plain white wall. The subject of the picture stands out clearly, and the background does not disturb.

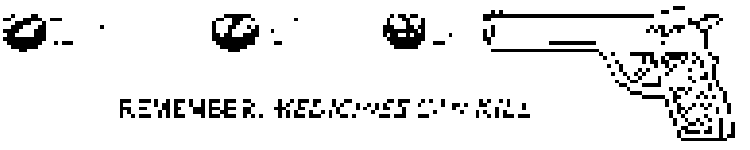
When the background in a photo does not add anything and makes the subject confusing, consider cutting the background away with scissors and mounting the subject on plain paper. (Compare the first two photos on page **12**-2.)

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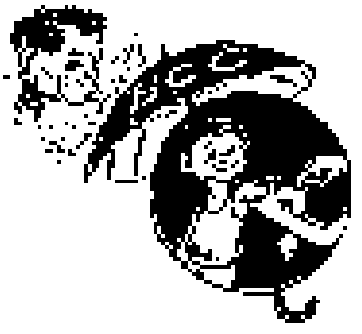
USE OF SYMBOLS IN PICTURES

To make a picture simple, remove all unnecessary details and keep only the main parts.

For example, figure 1 shows visual symbols for a house. Which symbols are familiar to you?



REMEMBER: *MEDICINES CAN KILL*



Here are symbols that can be used to show the dangers of poisonous medicines. (Adapted from *The Control of Tuberculosis. Course of Instruction for Community Aides*. Unpublished.)

CAUTION: When you use pictures, especially symbols, be careful that they mean the same thing to your readers as they do to you. Ask people to tell you what they think the pictures mean. Do not use symbols that they do not understand.

The importance of a sense of humor

A health worker who can laugh at himself is easy to like. The importance of a sense of humor cannot be overemphasized. Humor can make hard work easier and more enjoyable.

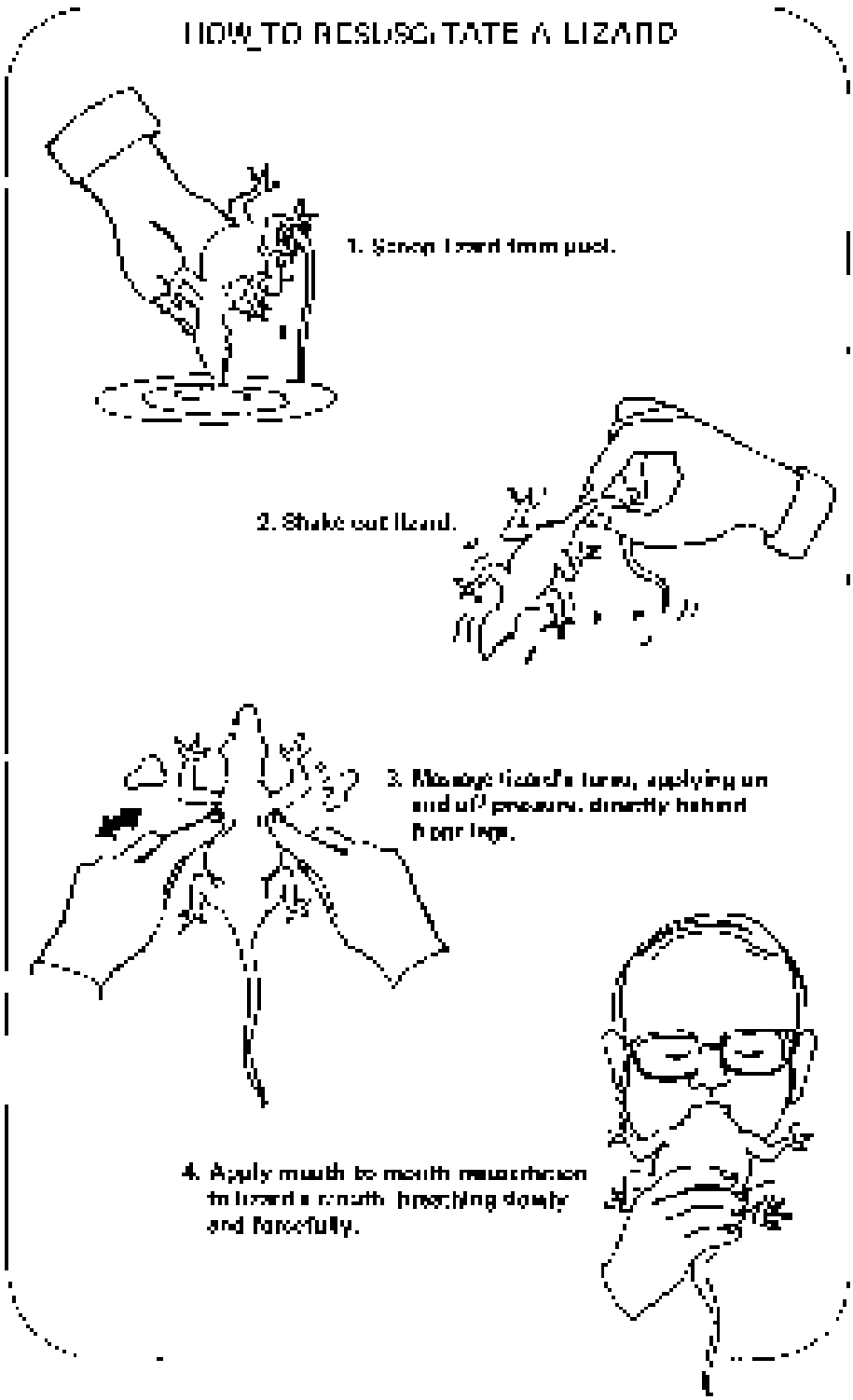
Humor does not always depend on words. Even a picture can be funny. Here is a cartoon from Mexico. Pictures like these can be a valuable tool in health education, as long as they are used properly. Here are some rules for using them:



After you use these pictures with a group, the danger of losing too much liquid with diarrhea or vomiting

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Surprising, no? Once you've learned the basic principles of adult learning, you'll be able to create your own participatory activities that respond to your students' needs and help them learn more effectively. Here's a good example to use with your students:

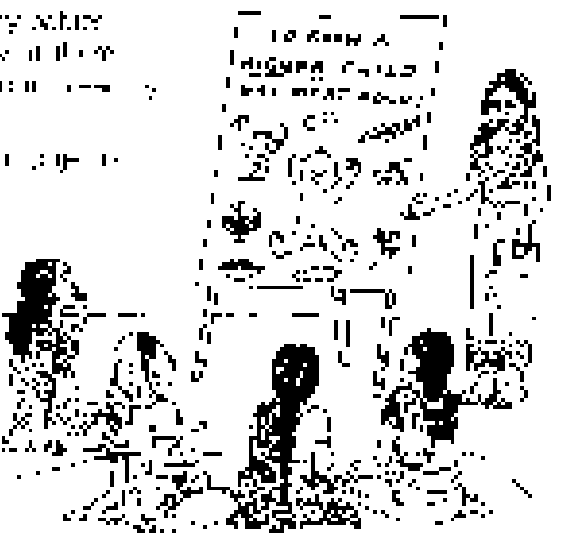


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CHAPTER 13

Story Telling

Janaki and Saraswati: a story from India[1]



[1] Adapted from a story told by Sister Sulochana Nair, Bangalore, India.

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DISCUSSION FOLLOWING STORIES

A story you can use from this book can be useful for many subjects. It can open an interesting discussion or a pair-work activity.

Before telling your story, think of questions you can ask. "In terms of health education, what is important in this story?" "What is the main idea?"

Then prepare a list of questions to ask the learners after the story. Be sure you have prepared answers to your questions. Then you will be ready to lead the discussion.

Important points brought out in the story:

Know local customs. Before becoming involved in health work, it is best for health workers to learn about local customs and beliefs. Most customs and beliefs are not harmful and should be respected.

Build on traditions. Health workers have more influence if they respect people's traditions. Use them as a basis for introducing new ideas.

Avoid imposing outside ideas. The use of teaching aids and role plays can help people think about their own situation and problems. The health worker needs to listen carefully to what people say, and then help them discover how to solve their problems.



Admit your mistakes. People respect and trust health workers who admit their mistakes and who are willing to learn from them. Health workers who pretend to know everything often lose the confidence of the people.

Old people are invaluable resources. Old people can help health workers understand the community. They can help people and health workers.

Set a good example. Behaviour teaches. Health workers can teach by giving an example of a correct way to behave.

A wise relative stays in the background. Sometimes it is better to let people discover things for themselves. Health workers can help people by asking questions that help people discover.

Use compromise. Sometimes people do not like the way health workers do things. They may be using methods that people are already familiar with. For example, they may use herbal medicines for pregnant women with which traditional birth attendants are familiar.

Encourage a questioning attitude. Health workers should encourage people to question why they are told to do things. Only when people begin to question will they be ready to learn.

Stories can be tools for teaching. The whole story or parts of stories can be used as teaching tools. They help to bring ideas to life.

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STORY TELLING AS A TOOL FOR TEACHING

An example from Nigeria



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[illegible]

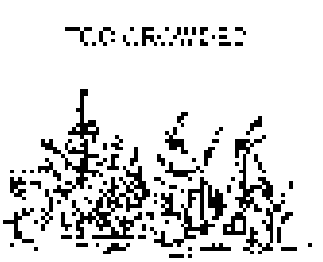
[illegible]

TWO STORIES FROM LARGER GROUPS

Blood pressure (whose is high?)



Child spacing



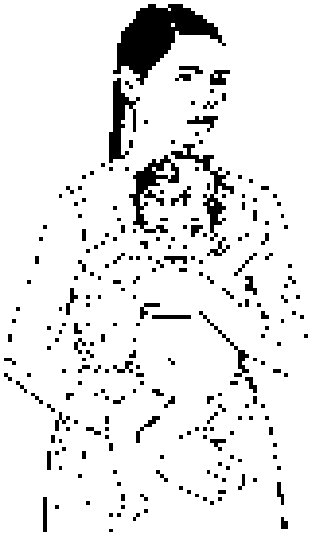


DIFFERENT WAYS TO TEACH WITH STORIES

1. Parables: stories with a moral



2. Stories that help people think about local problems



3. Stories that students help to write

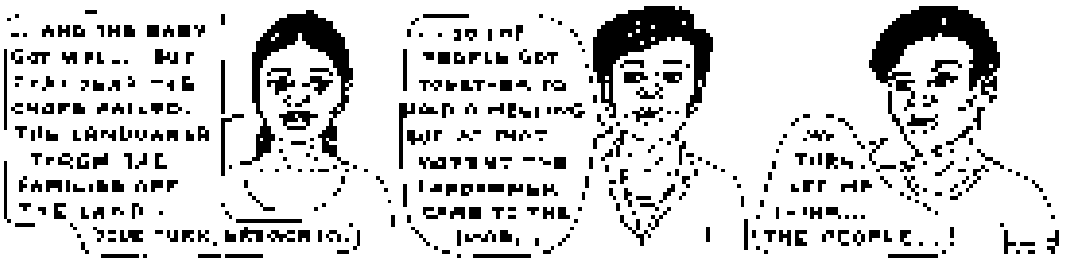


The last training stories of two are those the students tell or complete themselves—based on their own experience.

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4. Stories told by a group

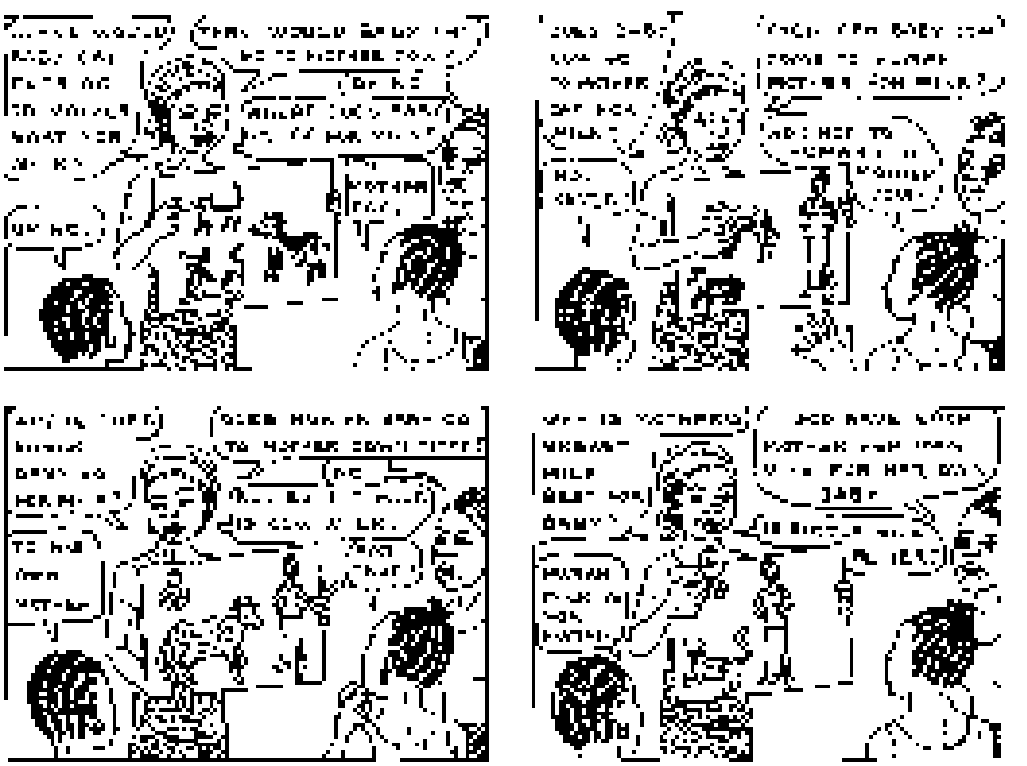
[illegible]



5. Analogies—or comparisons that help people discover healthy answers

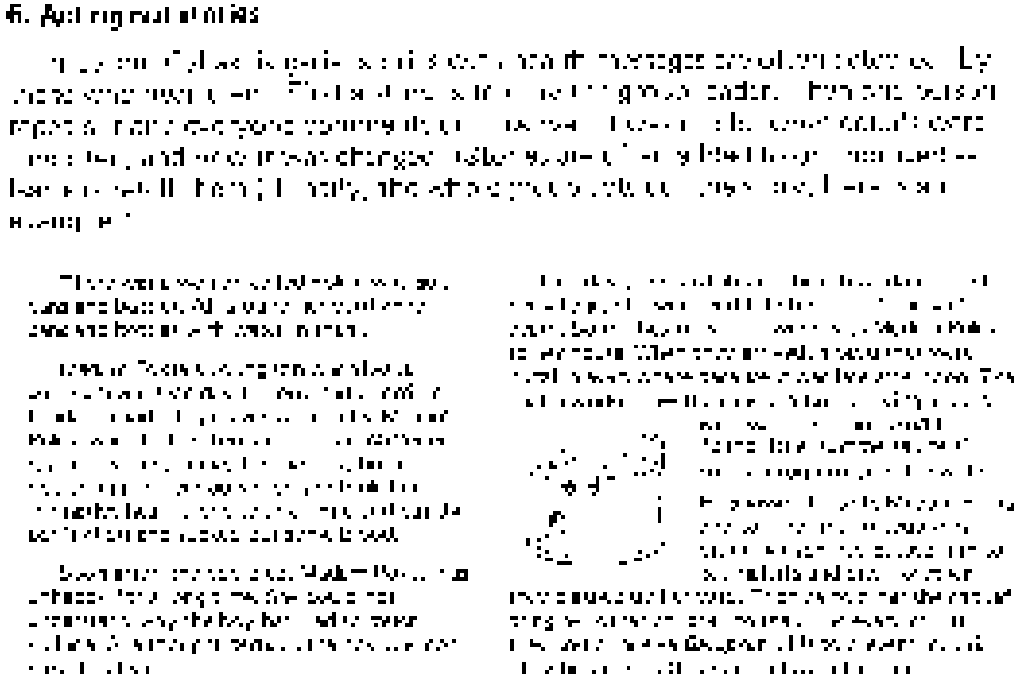
[illegible]

[illegible]



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6. Applying real stories



After the story has been acted out, people in the group can discuss what they have seen. Facilitators can help participants to identify health messages in the story and to decide whether they are helpful or harmful.

7. Analyzing stories for hidden or harmful messages

Some stories have hidden messages that are harmful. For example, a story may be told to encourage people to adopt a new practice, but the story may also suggest that people who do not adopt the practice are stupid or bad. Or a story may suggest that people who do not follow the advice of health workers are ignorant and do not deserve help.

Stories may also suggest that people should not seek help from traditional healers or from doctors working in the private sector. Stories may suggest that people should not seek help from outside health workers, or from health workers at all.

Facilitators can help participants to identify hidden or harmful messages by asking questions such as "What do you think the story is trying to say?" and "Do you agree with the message of the story?" Facilitators can also ask questions that help participants to identify hidden or harmful messages. For example, "Do you think that the story suggests that people should not seek help from traditional healers?"

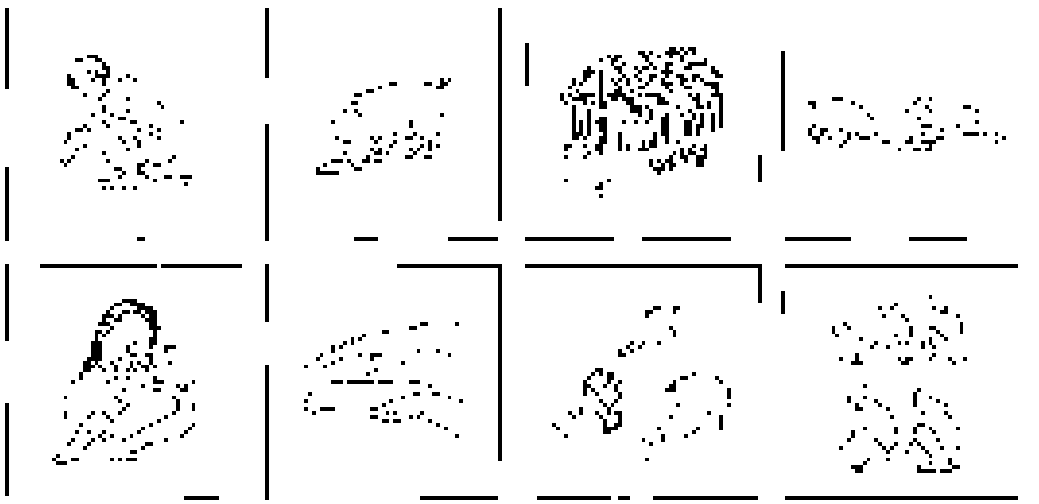
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STORIES TOLD WITH PICTURES

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]



[illegible]

Comics and photonovels

[illegible]

[illegible]

[illegible]

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Teaching ideas

Note: [illegible]

Filmstrips and slides



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[illegible]

Flannelgraph: a small, square piece of cloth or flannel on which people or objects can be placed to tell a story



Flipchart: a series of pictures on large sheets of paper that are bound together and turned over one by one



Flipcharts and other visuals are very different from books. Visuals are not for [illegible]. Many of these flipcharts are [illegible] with an explanation of how to [illegible] stories with [illegible] messages.

Some [illegible] are [illegible] information about [illegible] related to this topic. You might [illegible] from the story [illegible] 27 "Reasons [illegible] to [illegible] and [illegible] problems and [illegible].

Warning. Pictures [illegible] to [illegible] and [illegible]. Some [illegible] are [illegible] [illegible] people [illegible] [illegible] messages—especially [illegible] [illegible] [illegible] family planning. Take [illegible] care in selecting [illegible] and [illegible] that [illegible] and [illegible] [illegible].

Do-it-yourself filmstrips: One [illegible] is [illegible] a filmstrip [illegible] from [illegible]. [illegible] [illegible] [illegible] [illegible] [illegible]. However, you and other [illegible] can make your own [illegible]. [illegible] [illegible] [illegible] *Visual Aids Training Manual* [illegible] [illegible] [illegible].

You will [illegible]

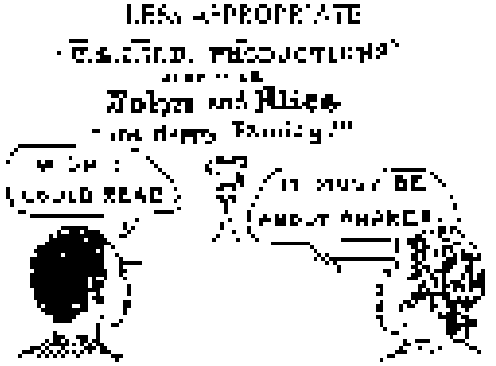
- [illegible] [illegible] [illegible] [illegible]

SUGGESTIONS FOR TEACHING WITH PICTURE STORIES

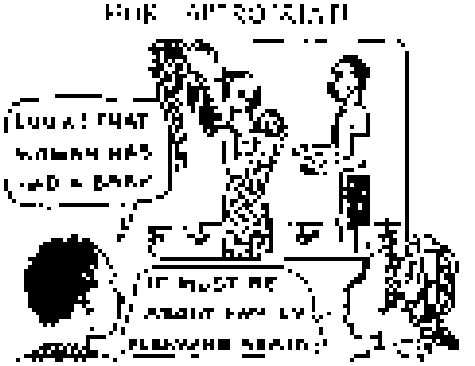
(flash cards, flip charts, illustrations, comic strips, or photonovels)

- [illegible]
- [illegible]
- [illegible]
- [illegible]

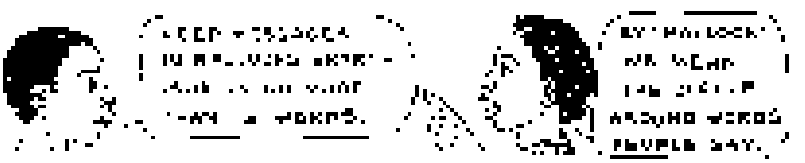
LESS APPROPRIATE



MORE APPROPRIATE



- [illegible]
- [illegible]

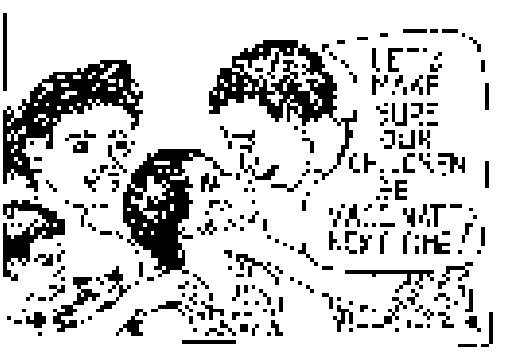


- [illegible]

WRONG WAY



RIGHT WAY



- [illegible]
- [illegible]
- [illegible]

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EXAMPLES OF STORY TELLING IN THIS BOOK



	kind of story	see page
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

The stories in this book can be told or read, or role-played. Each story is followed by [illegible] — the story is told [illegible]. [illegible] page 27.

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CHAPTER 14

Role Playing

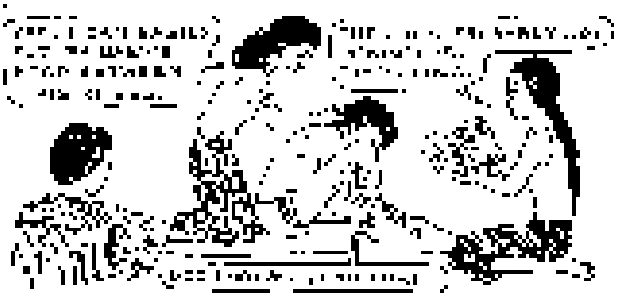
One of the best ways to carry over [illegible] is through **guided practice.** [illegible] Role playing [illegible] [illegible] [illegible]

WAYS ROLE PLAYING CAN BE USED IN THE CLASSROOM

Role playing can be used effectively for:

developing PRACTICAL SKILLS:

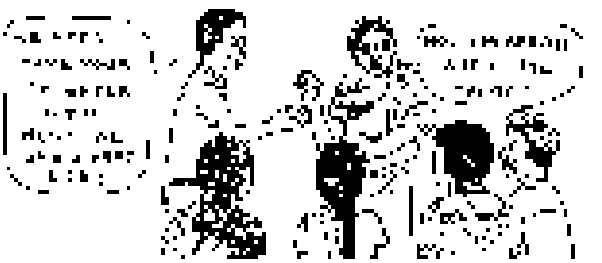
- [illegible]



- [illegible]

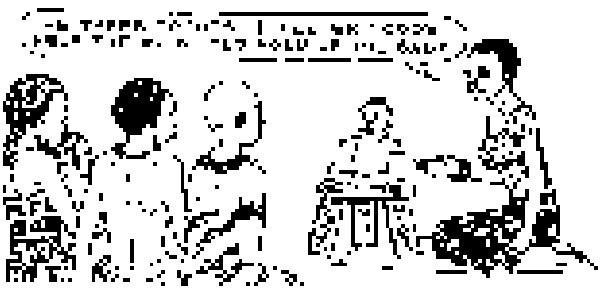
developing SOCIAL SKILLS:

- [illegible]



developing TEACHING SKILLS:

- [illegible]



developing SOCIAL AWARENESS.

- [illegible]



- [illegible]

As you can see from the examples given above, role playing can be used for many purposes. However, it is important to remember that role playing is just one of the learning methods that can be used. It is not always the best method and it is important to consider other methods, such as discussion, demonstration, and practice.

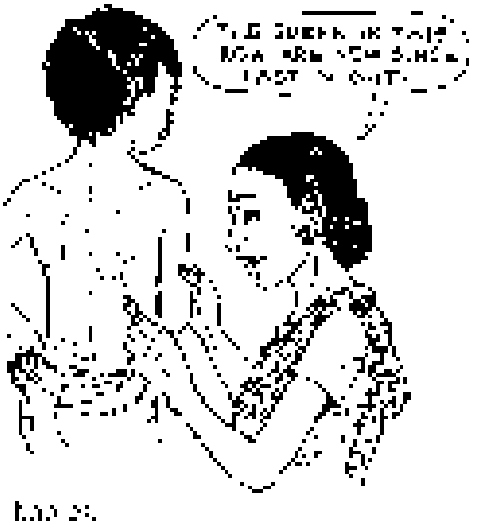
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SIMPLE VISUAL AND PRACTICAL AIDS FOR USE IN ROLE PLAYING

[illegible]

1. PAINTS, COLOURED PENCILS, OR MARKING PENS

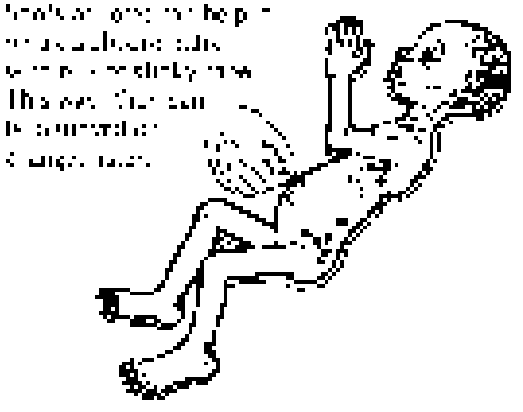
[illegible]



2. CARDBOARD BABIES AND SIMILAR AIDS

[illegible]

[illegible]





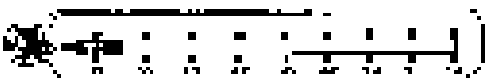
[illegible] pages 11.15, 14.1 and 27.x1.

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3. PRETEND THERMOMETERS

There can be made of cardboard or
[illegible] or transparent
[illegible]





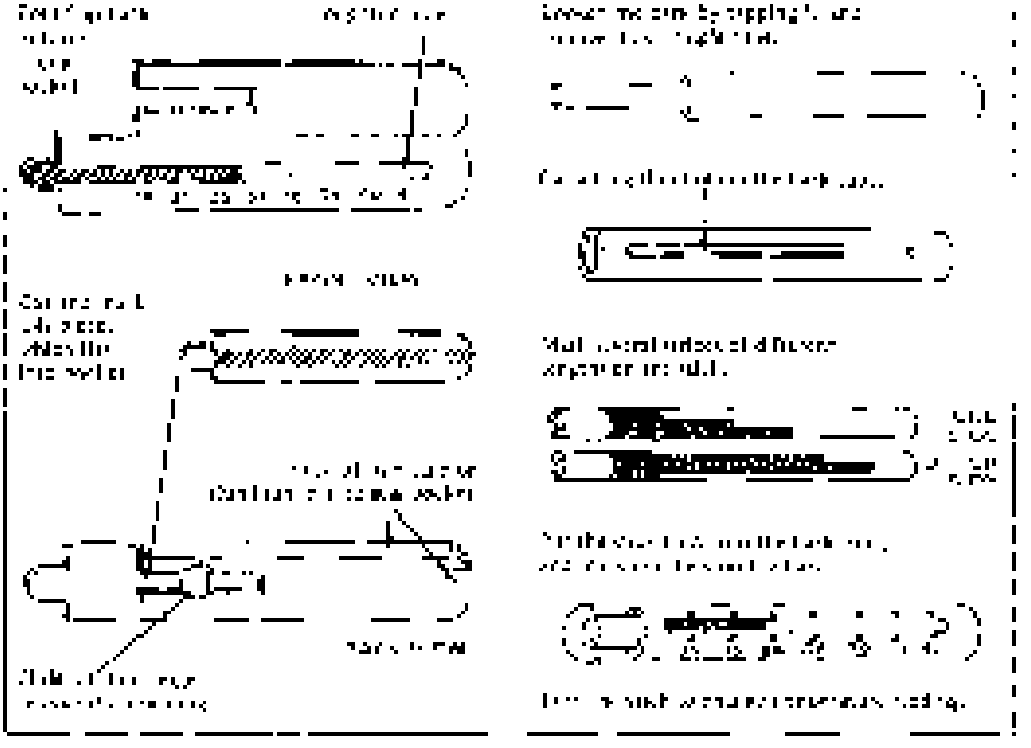


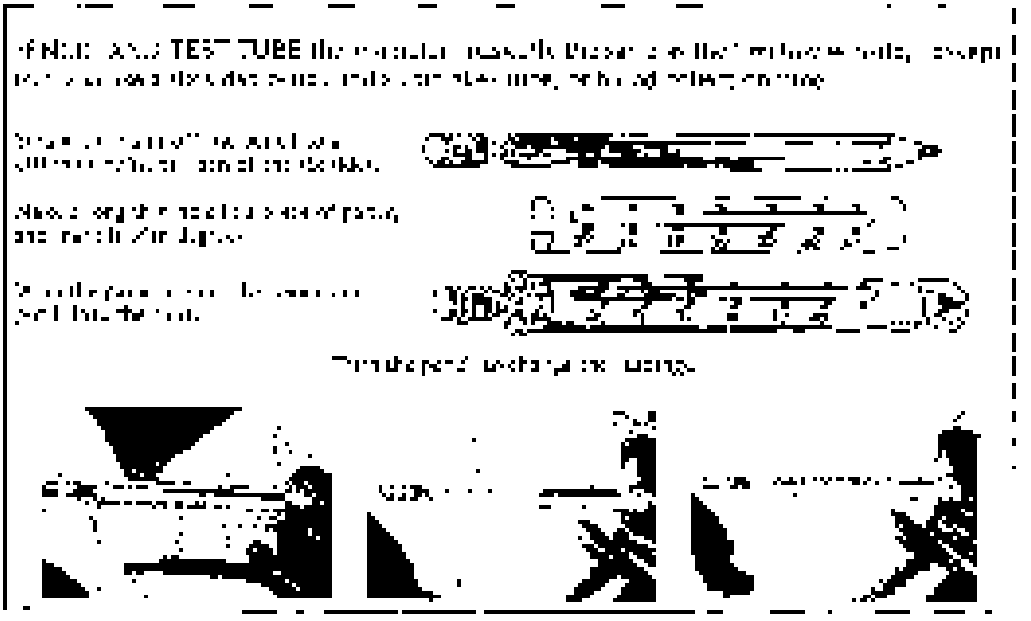
[illegible]

[illegible] problems
[illegible] possible practice
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

EXAMPLES OF ADJUSTABLE THERMOMETERS MADE BY STUDENTS



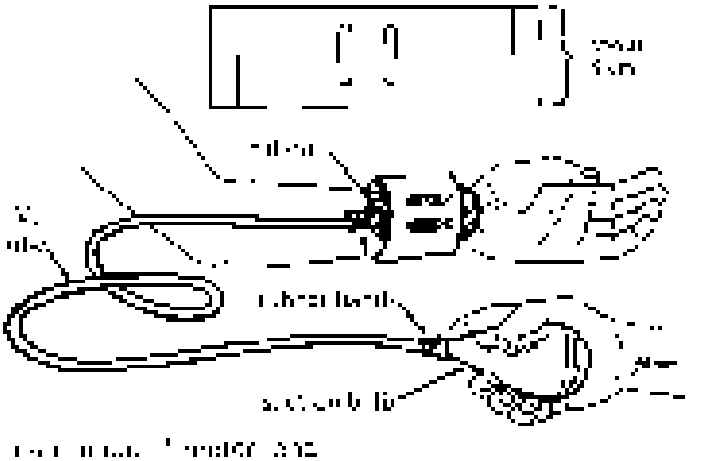


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A. ARTIFICIAL PULSE



Making an adjustable pulse:

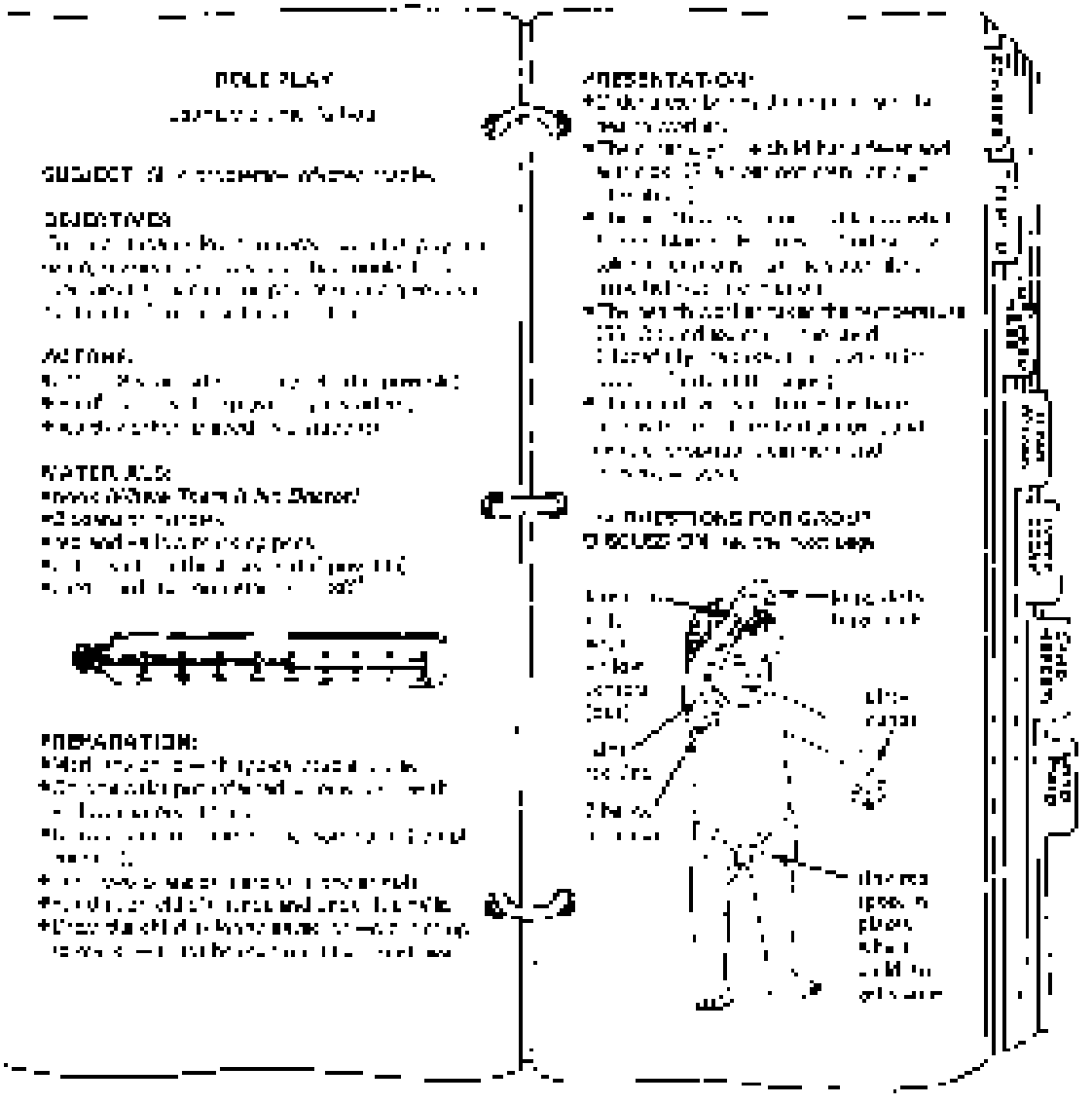




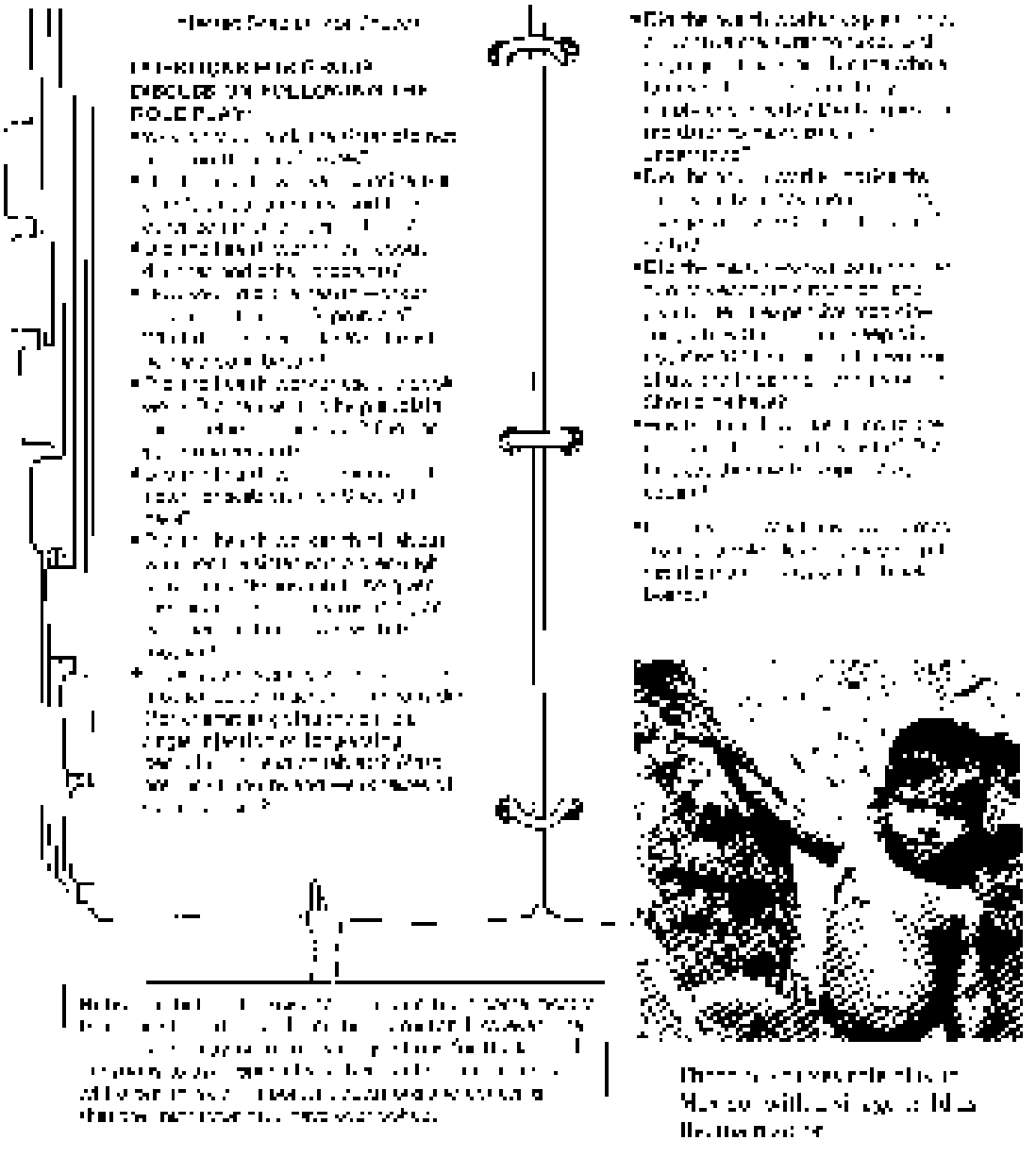
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ROLE PLAYING FILE CARDS OR LOOSE-LEAF NOTEBOOK

[illegible] can be arranged by subjects. On each role play, there is room for listing objectives, materials, and preparations needed, number of participants and questions for group discussion. Here is an example:



CAUTION: [illegible] Role playing can be a powerful learning technique, but it should not be used [illegible]



Fun but serious: role playing should be fun but it should also be serious. It should make people think about their attitudes and behaviour and make changes if necessary. Role plays should not be used to embarrass people.

IDEAS FOR ROLE PLAYS

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EXAMPLE OF ROLE PLAYING PLAN

SUBJECT

OBJECTIVES 1.

2.

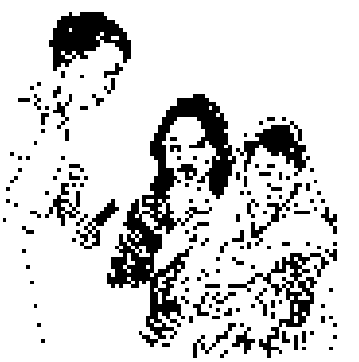
3.

AIDS:



MATERIALS

PREPARATION



PRESENTATION.

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- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]



- [illegible]
- [illegible]
- [illegible]

QUESTIONS FOR GROUP DISCUSSION FOLLOWING THE ROLE PLAY:

- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

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DIAGNOSIS GAMES

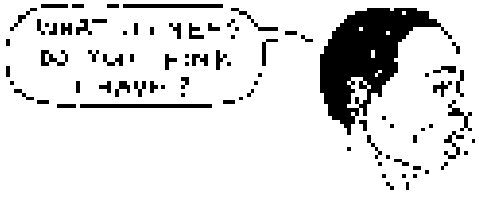
[illegible]

SUBJECT: [illegible]

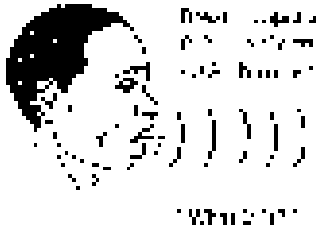
OBJECTIVES: 1. [illegible]
2. [illegible]

USE: [illegible]

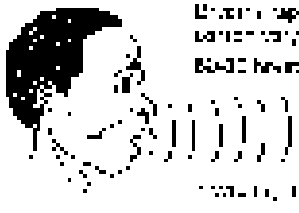
METHOD: [illegible]

1. 

[illegible]

2. 

[illegible]

3. 

[illegible]

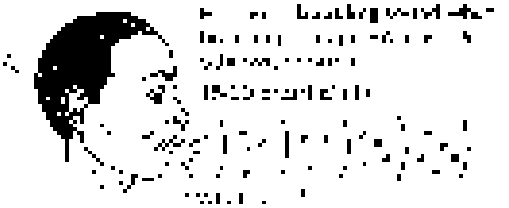
4. 

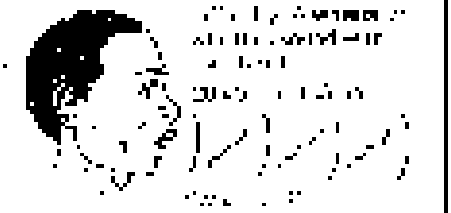
[illegible]

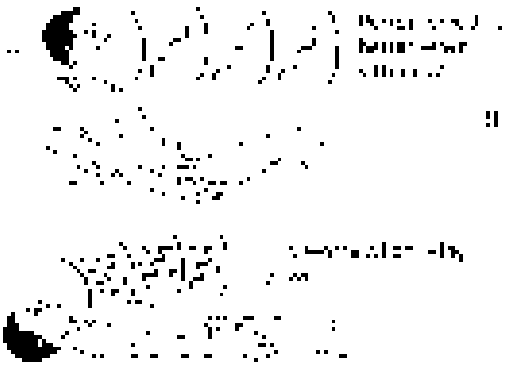
5. 

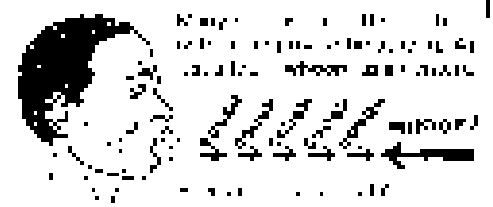
[illegible]

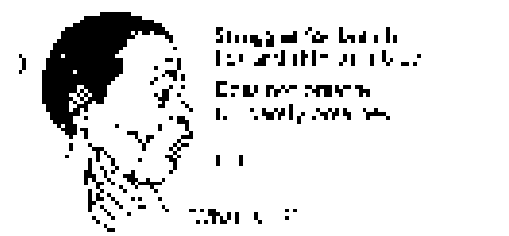
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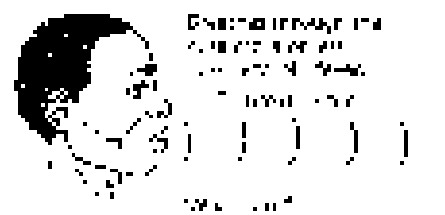












Alhassan
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A GOOD TEACHER NEEDS TO BE A GOOD ACTOR!

RÔLE PLAYING TO MOTIVATE COMMUNITY ACTION

[illegible] role playing can help people to see a problem from different points of view, to understand why people behave as they do, and to find solutions to problems that are acceptable to everyone concerned.

[illegible] role playing can be used in the early stages of a community development project to help people identify problems, decide what action to take, and plan how to carry it out. For example, a group of parents and teachers might use role playing to help them decide how to improve the local school. Or a group of farmers might use it to help them decide how to improve their crops. Or a group of women might use it to help them decide how to improve the health of their children.

[illegible] role playing is a way of helping people to understand a problem by acting out a situation in which the problem arises. The actors play the parts of people who are involved in the problem. They act out their own feelings and attitudes, and they react to the feelings and attitudes of the other actors. In this way, they can begin to understand why the problem exists and what can be done to solve it.

After the role play, all the participants discuss what happened. They talk about the problem that was acted out, and they suggest ways of solving it. Then they may act out the role play again, trying out some of the solutions that were suggested.

The actors and the audience should be encouraged to express their own feelings and opinions freely during the discussion. But they should also be encouraged to listen to the feelings and opinions of others, and to try to understand why they feel as they do. In this way, they can learn to appreciate other people's points of view, and to find solutions to problems that are acceptable to everyone.

[illegible] role playing is a way of helping people to understand a problem by acting out a situation in which the problem arises. The actors play the parts of people who are involved in the problem. They act out their own feelings and attitudes, and they react to the feelings and attitudes of the other actors. In this way, they can begin to understand why the problem exists and what can be done to solve it.



[illegible] role playing is a way of helping people to understand a problem by acting out a situation in which the problem arises. The actors play the parts of people who are involved in the problem. They act out their own feelings and attitudes, and they react to the feelings and attitudes of the other actors. In this way, they can begin to understand why the problem exists and what can be done to solve it.

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In the second role play, a [illegible] and [illegible] explain the [illegible] to the [illegible] and [illegible] the [illegible] [illegible] [illegible]

CHAPTER 15

Appropriate and Inappropriate Technology

'HARD' AND 'SOFT' TECHNOLOGIES

Appropriate technology is a term used to describe ways of doing things that are safe, effective, and cheap enough to help people in their own communities.

Many community workers and health workers are now using appropriate technology to describe simple, low-cost methods and materials that people can use to improve their own health and well-being.

But the term appropriate technology is not very helpful. It is better to talk about specific methods and tools that are adapted to people's needs, customs, and skills.

In this chapter, we will use the term APPROPRIATE METHODS to mean ways of doing things and tools that are adapted to people's needs, customs, and skills.



TWO KINDS OF APPROPRIATE TECHNOLOGY

METHODS



Using an appropriate way of planting seeds in rows so that weeding is easier

TOOLS



Using a hoe with a long handle so that weeding is easier and less tiring

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Unfortunately, some of the technologies commonly introduced by health programs turn out to be less appropriate than they seem. In this chapter, we will look at the strengths and weaknesses of some of the advice, methods, and things that are often assumed to be appropriate.

Chapter 16, which follows, also deals with appropriate technology. In it, we will look at some basic tools and pieces of equipment that health workers can make themselves.

HOW APPROPRIATE IS A SPECIFIC TECHNOLOGY?

To determine whether a certain **thing** or **method** is appropriate for your area, you can ask yourself the following questions:



Photo from Peru by Douglas Botting, from *Questioning Development* by Glyn Roberts (available through TALC).

- Is it acceptable to the local people?
- Do they (or will they) use it effectively?
- Will it help to improve the well-being of those in greatest need?
- Is it low-cost and efficient?
- Does it make full use of local resources, traditions, and abilities?
- Does it take into consideration any local factors such as geography, climate, and traditions, that may affect its usefulness?
- Does it keep a natural balance with the environment?
- Is it something that local people can easily understand, afford, and repair by themselves?
- To what extent were local people involved or consulted in its planning, design, selection, or adaptation?
- Does it provide more local employment? Or does it take jobs away?
- Does it build people's confidence to find their own answers and make their own decisions?
- Will it help close the gap between the rich and the poor? Or widen it?
- Does it help the weak to gain greater control and become more self-reliant?

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RE-EXAMINING SOME COMMON ASSUMPTIONS

All aspects of a health worker's work—planning, programme activities, training and research—should be constantly re-examined. Questions like those on the previous page would be asked again and again. It is important that health workers take an active part in this questioning process.

Much of the information and knowledge that health workers and managers possess comes from training and from standard practices that have been developed over many years. Some of this may apply to your own situation, some may not. And some may even do more harm than good. Often, new information is available which could lead to improvements in health programmes. Health workers, if they are to be effective, need to:

- have access to information on the latest developments in their field;
- have the ability to assess the relevance and usefulness of this information to their own situation.

Before giving people standard health advice, consider the reality of their lives.

Two examples follow of standard health recommendations that need to be re-examined. The boiling of drinking water (to kill germs that cause diarrhoea) and the use of insecticide-treated bednets (to prevent malaria) are both widely recommended and important health measures.

Example 1: Drinking water—to boil or not to boil?

Boiling drinking water is a standard advice in many health programmes. But is it good advice?

Diarrhoea is a major killer. Therefore, advising families to boil drinking water may do more harm than good.

Boiling water takes time, fuel and money. Many families do not have enough of these to spare.

Water-borne diseases, such as diarrhoea, are usually passed on by dirty hands. Washing hands with soap after using the latrine and before preparing food is very important.



Is this an appropriate activity? Policies on clean drinking water should be based on local circumstances.

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Boiling water properly is the best way to make it safe to drink. But boiling water properly requires more time and resources than most families have. Boiling water properly requires a good supply of fuel, time, energy, and other resources. The poor family may use a large part of its limited resources to boil water. Boiling water is usually impractical in hot climates.



Breast-feeding does far more to prevent infection than does boiling of drinking water.

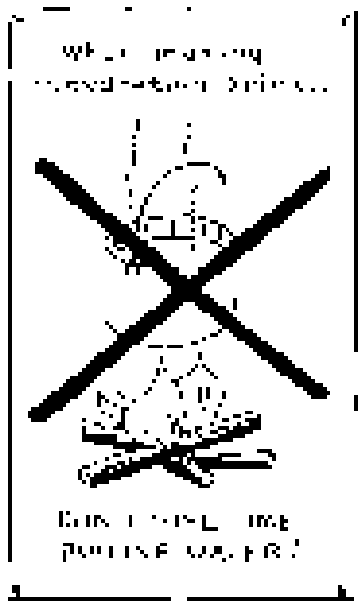


Also, boiling water kills the good bacteria in the water as well as the bad bacteria. In many areas, the boiling of water is causing forests to disappear. When forests are destroyed, the soil is washed away, causing floods and crop failure. In these areas, people who have access to less time-consuming ways to make water safe to drink may be more likely to stay healthy than people who boil their water. Boiling water should be done only when it is the best way to make water safe to drink.

For example, in many communities, health workers tell mothers to boil water when they give Oral Rehydration Therapy. They simply do not have the time to explain to the mothers why they should not boil the water and often add to the mothers' workload for not doing so.

Boiling water for Rehydration Drink: Most people get sick with diarrhea because they do not have enough safe water to drink. Boiling water for Rehydration Drink may actually cause more infant deaths. The reasons are these:

- **Boiling water means extra work and extra cost.** Some mothers will simply not make the Rehydration Drink if they have to boil the water for it.
- **Boiling takes time.** Boiling takes much more time than the few minutes needed to mix Rehydration Drink. The delay caused by boiling increases the danger of dehydration. The more time it takes to prepare Rehydration Drink, the greater the chance that the baby will become dehydrated. Every minute counts when a baby is dehydrated.



In some countries, health workers tell mothers to boil water for preparing Rehydration Drink. It is better to advise them to prepare it with clean, safe water that has already been boiled. For example, in [illegible] mothers are told to boil water for preparing Rehydration Drink. [illegible] has also found that

Because preparing Rehydration Drink takes time, it is also wise to advise mothers of children with diarrhea to give plain water at once, and until the drink is prepared.

Note: The policy of not boiling water should not be adopted in non-emergency situations where people get their water from a safe source, for example, from a well or spring. In these situations, boiling water is necessary. Water in rivers, streams, and ponds should be boiled for at least 3 minutes. Water in deep wells usually does not need to be boiled.

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Example 2: Native grains or hybrids—which are more appropriate?



A technique or material, such as other grains, developed in one country or region may not be appropriate for another. Native grains may not meet the needs of the area because of the following: Local farmers and consumers may prefer the native grains. Native grains may have characteristics that make them more suitable for local conditions. Also, native grains may be more resistant to pests and diseases. Before introducing hybrid grains, possible benefits must be weighed against possible harm.

Consider hybrid grains. Hybrids are grains produced by crossing two closely related plants, in order to increase the amount of harvest. Under the right conditions, hybrids can produce higher yields than native grains. But they usually require more fertilizer, water, and pesticides to do well. To obtain the maximum benefit, all of these must be used in the right amounts.

Another danger of hybrids is that a new kind of plant disease could suddenly appear and in one season destroy all the hybrid grain planted in the entire region. This could not happen with native grains. The reason can be illustrated easily. Let us say that in a certain area there are 10 different types of native grain. Each type is resistant to a number of diseases, but only a part of the crop is likely to be killed by a certain epidemic.

Governments, banks, agricultural experts, and governments in some parts of the world have spent a great deal of money to introduce hybrid grains. Many hybrid grains are high-yielding, but they require large amounts of fertilizer and water. Many people lose land because they cannot pay their debts. The people lose their land because when an epidemic destroys a hybrid crop, the native grains that were grown in the area have been replaced by hybrids and cannot be replanted.

In one case in Latin America, a government official, with the best of intentions, decided that hybrid corn should be introduced to the area. The hybrid corn was high-yielding, but it required large amounts of fertilizer. Farmers, who had never used fertilizer before, could not afford it. Many farmers lost their land. Although the yellow maize has been a success in some areas, it has failed in others. Many people still prefer the native white corn, which is more drought-resistant and has a better taste.

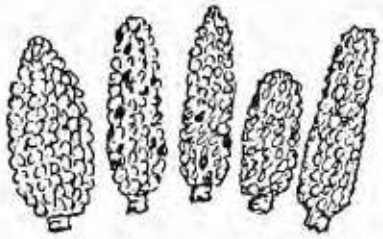
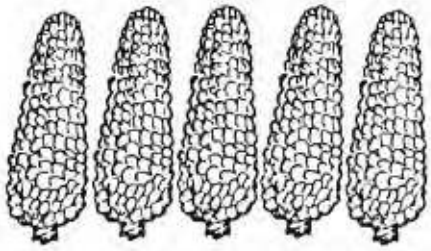
For the disadvantages and risks of growing the hybrid are especially great for the poor farmer. The poor farmer cannot afford to buy fertilizer, pesticides, or irrigation water. He cannot afford to lose his crop to disease. And he may not be able to buy seed every year. He must save some of his own seed from the harvest to plant the next season. Hybrid seeds do not produce true seeds. Only the native grains will produce seeds for the next planting.

The poor farmer's problems are not unique. Similar problems have arisen in many countries. Often the new seeds make only small gains in production. Sometimes they actually cause a decrease in production. But because of the many other factors involved, it is difficult to say whether the hybrid seeds are responsible.

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Unfortunately, the training of many agricultural advisers has been designed to meet the needs of large landholders and decision makers who can afford meat and cheese. As a result, village health and development programs are often advised to grow high-yield hybrids instead of native grains. In areas where hybrid crops are being introduced, it is important that program leaders study these questions carefully. They can then help health workers gain enough understanding of the issues to be able to give people sound advice.

A COMPARISON BETWEEN NATIVE AND HYBRID MAIZE

MORE APPROPRIATE	LESS APPROPRIATE
	
Native yellow or *criollo* maize has great variation, so it resists epidemic disease. It also matures faster, resists drought more easily, and is more nutritious than white hybrid maize. Although it often produces less grain, it is more sure to yield a harvest under difficult and variable conditions. For small farmers who lack irrigation and eat mostly maize, growing traditional yellow or ***criollo*** maize is a safeguard to health . . . now and in the future.	**White hybrid maize** has very little variation. All plants and ears are similar. So a crop of this maize can be destroyed completely by sudden epidemic disease. It matures slowly, and requires irrigation, fertilizers, and pesticides for good harvests. It also has less protein and vitamins than the native yellow maize. Because of its higher yield, the hybrid is attractive to large landholders. Its white flour appeals to commercial mills and sellers. But in the long run, if it replaces native maize completely, its destruction from sudden disease may cause widespread starvation.

Problems similar to those with hybrid maize in Latin America have occurred in many parts of the world. In **Zambia,** a mold called ***fusarium*** destroyed hybrid maize on big farms, while small farms with traditional maize were not affected. In the **Philippines,** epidemics have destroyed huge crops of hybrid rice. In **Indonesia,** 200,000 hectares of hybrid rice were lost in 1974 and 1975 because of a new virus disease spread by insects. Now the Indonesian government is trying to improve the old local varieties of rice, instead of using hybrids from outside the area.

Note: We are not suggesting that all hybrid grains are bad and should not be used. As long as care is taken to maintain a reserve of native grain, certain hybrids can be of considerable benefit. In a just political climate, they may even help to improve the well-being of the poor. Also, some hybrids—such as *Opaque 2* maize—are more nutritious than the native grains, although there have been major problems with rot, fungus, etc. The point we are trying to make is this.

Health workers should not simply accept hybrids—or anything else introduced by outsiders—without first checking to see if they will really meet the needs of the local people.

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Raising social awareness using the example of couple and hybrid vision:

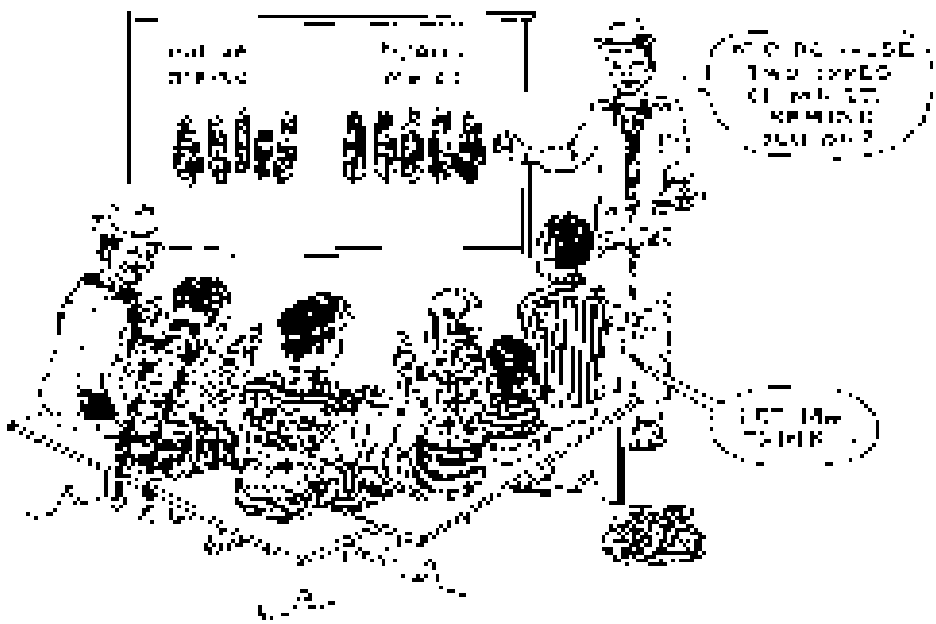
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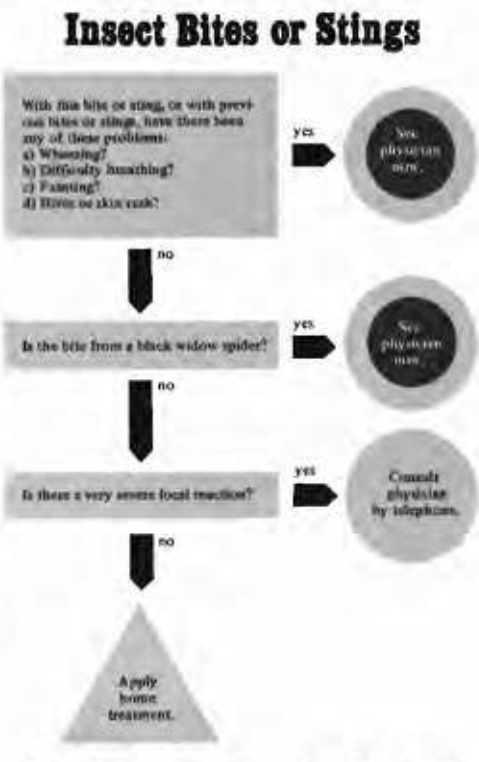
Example 3: Flow charts

Some health programs make extensive use of flow charts, or *algorithms.* These are charts designed to help health workers diagnose illnesses by guiding them through a series of yes-or-no questions.

A few studies done under ideal conditions have shown that health workers make more accurate diagnoses with flow charts than when using more conventional methods. However, some programs have had disappointing results with flow charts. They have found that the charts often make for a less personal relationship between the health worker and the sick person. Also, some health workers with limited formal education find flow charts difficult or confusing.

Our biggest objection to flow charts has to do with the question of who has control. **Flow charts provide a means of keeping control over diagnosis and treatment in the hands of the professionals** who design the charts. Little decision making or clinical judgement is expected of the health worker. The hidden message in most flow charts seems to be, "We don't trust you. Your role is to follow instructions. Not to think. Not to lead!"

This lack of trust is also reflected in the fact that the most frequent final command of many flow charts is "Refer to doctor at once." Often no other information or advice is provided, even though early emergency treatment by a community health worker might save the person's life.



A TYPICAL FLOW CHART—from *Take Care of Yourself,* by Donald M. Vickery, M.D. and James F. Fries, M.D., Addison-Wesley, 1976.

In spite of the fact that they are sometimes used to limit the health worker's diagnostic role to one of mechanically following instructions, **flow charts can be a helpful learning tool.** Some programs have successfully used flow charts to help health workers learn to ask appropriate questions and approach diagnosis in a logical, step-by-step way. But many have found that once those skills are learned, their health workers work just as accurately with, and greatly prefer, simple lists of signs (as in *Where There Is No Doctor).*

As with any other health technology, the appropriateness of flow charts must be judged on social as well as medical grounds. A key question to ask is, **"Does the use of this technology encourage or discourage initiative, critical thinking, and problem-solving skills?"**

As we have seen, flow charts can be used to help health workers develop independent mastery of the problem-solving process. Or they can be used to keep the health worker dependent on the decisions of professionals. Which way they are used will depend largely on the program's trust and respect for health workers and whether they want them to be followers or leaders.

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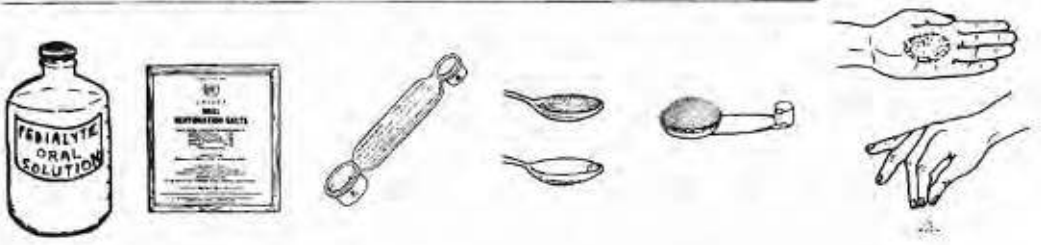
Example 4: Inspection of food and market place—equipment or set-up?

A government health worker comes to a market to check on food and drink sold there. She finds that the stalls are dirty, flies are present, and the food is not covered.

A worker with a similar job in a different country decides to clean up the market place. He gives each stall holder a bucket of water and a cloth and tells them to wash their stalls. He also tells them to cover their food with cloths. The stall holders do not understand why they should do this. They do not have enough water for washing their hands, let alone for washing their stalls. They do not have enough cloths to cover their food, and they do not understand why they should do this.

The health worker then tells the stall holders that they will be fined if they do not do what he has told them to do. The stall holders are angry because they have been told to do things that they do not understand and that they do not have the means to do. They refuse to pay the fines. The health worker then tells the stall holders that they will be arrested if they do not pay the fines. The stall holders are still

Example 5: Oral rehydration—which method is most appropriate?



Diarrhea is one of the main causes of death in small children. However, most of these children actually die from ***dehydration***—the loss of too much water. It is generally agreed that the most important way to manage diarrhea is to replace the liquid that the child is losing. But there is less agreement about how to do this.

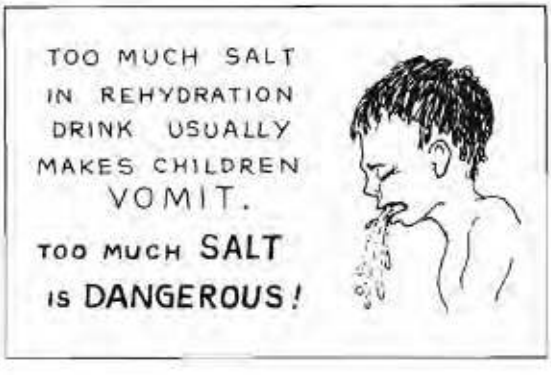
A few years ago, most doctors treated even mild dehydration by giving intravenous (I.V.) solution. But this was expensive, and many children died in diarrhea epidemics because there was not enough I.V. solution, or not enough skilled workers to give it.

Today, most health planners recognize that ***oral rehydration***—or giving liquid by mouth—is the best way to manage most cases of diarrhea and dehydration. **Even in clinics where I.V. solution is available, it usually makes more sense to replace liquids by mouth.** This way parents learn how to prepare and give liquids so they can begin treatment early, at home, the next time a child gets diarrhea.

A Special Drink or Rehydration Drink can be made from water mixed with small amounts of sugar and salt. It is even better if the drink contains a little ***baking soda*** (bicarbonate of soda) and a mineral called ***potassium***—found in orange juice, coconut water, banana, and other foods.

- The **salt** in the Special Drink replaces the salt lost through diarrhea, and helps the child's body to keep liquid.
- The **sugar** provides energy and also helps the body absorb liquid more quickly.
- The **baking soda** prevents 'acid blood', a condition that causes fast, heavy breathing and shock.
- The **potassium** helps keep the child alert and willing to drink and eat.

The amounts of sugar and salt in the Special Drink do not have to be very exact. In fact, there is great variation in the amounts recommended by different experts. However, too little sugar or salt does less good, and too much salt can be dangerous.



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1. "Packets" or homemade mix?

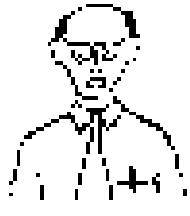


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[illegible]

[illegible]

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[illegible]



[illegible]

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"Put your mother-in-law in charge. She knows how to make rehydration drink. Her only problem is too much salt. That can be corrected."



"Hey, see the cross marks. But people in this country can't read. Let's use pictures instead. Can be applied during storage. Put a cross on the packet. Don't forget to add instructions. A study will be done to see if this is successful."

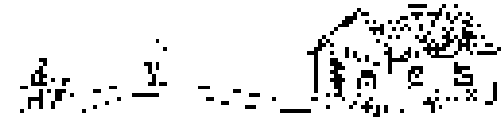
The study showed a slightly higher number of mothers prepared dangerously salty drinks when using the packets.

Some of the arguments that are given by those who favor packets are similar to those that are given by those who favor the use of commercial drinks. They may be true. But in many countries they are not true. Many people, especially poor people, are suspicious of anything that is new. Many people will not buy a packet of salt and sugar if they can buy a bottle of Coca-Cola. Many people will not buy a packet of salt and sugar if they can buy a bottle of Coca-Cola. Many people will not buy a packet of salt and sugar if they can buy a bottle of Coca-Cola.

The best way to find out is to try it. Then you will know for sure. If you do not have the time or money to do a proper test, you can still make a good guess. Only you can decide. But you will make a better decision if you think about the arguments for and against packets.

The main thing is to remember that, in most circumstances, the arguments in favor of the home-made drink are strong. Do not be too quick to abandon it in favor of a packet or a commercial drink.

What about packets for use in clinics?



Some health programs plan to give packets of Special Drink to be used by families in their homes, but they use packets of a more complex mixture in their clinics. This is wrong. If packets are to be used in the home, they should be used in the clinic. If you want mothers to use packets in the home, then you must teach them how to prepare and use Special Drink in the clinic. Let them do it themselves.

In the health post or clinic, use the same rehydration methods you want families to use in their homes.

On the following page is a diagram showing many different methods of rehydration. They range from those that are completely supervised to those that require the least supervision. Which is the best method for the people in your area? Which is the best method for the people in your area? Which is the best method for the people in your area?

Turn to page [illegible] and read about the kind of rehydration drink you should use. Then read about how to prepare and use it.

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2. What amount of salt should be used in Rehydration Drink?

[illegible]

[illegible]

[illegible]

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3. Worldwide understanding or local adaptation?

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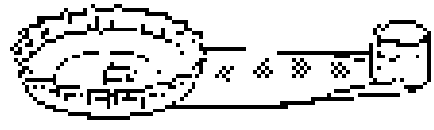
[illegible]

Special spoons [illegible] to slightly different sizes and shapes. Some of these spoons are [illegible] and [illegible]. Others are [illegible] to suit [illegible]. The [illegible] spoon [illegible] is [illegible] below.

LESS APPROPRIATE



MORE APPROPRIATE



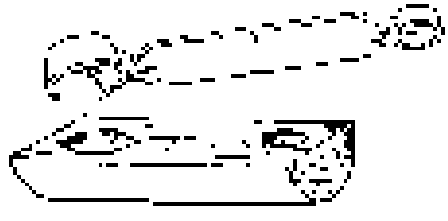
Plastic spoons are [illegible] for feeding special ORS packets because [illegible] accept [illegible]. They are [illegible] to [illegible]. Because [illegible] is [illegible] to [illegible].

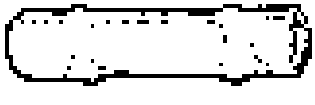
Unfortunately, these spoons have some of the same disadvantages as the packets of [illegible] and also may be [illegible] to [illegible]. Also, [illegible] is usually a simple process. [illegible] the [illegible] and [illegible] the [illegible] [illegible] [illegible]

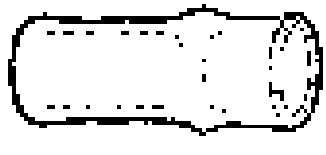


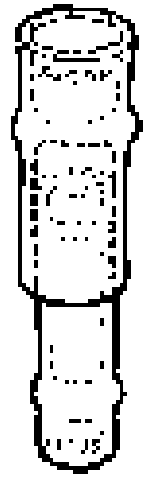












Helping people use local resources to meet their needs means they will not have to depend as much on outside supplies and assistance. Their increased self-reliance will give them more control over the things that affect their well-being.

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APPROPRIATE USE OF LANGUAGE

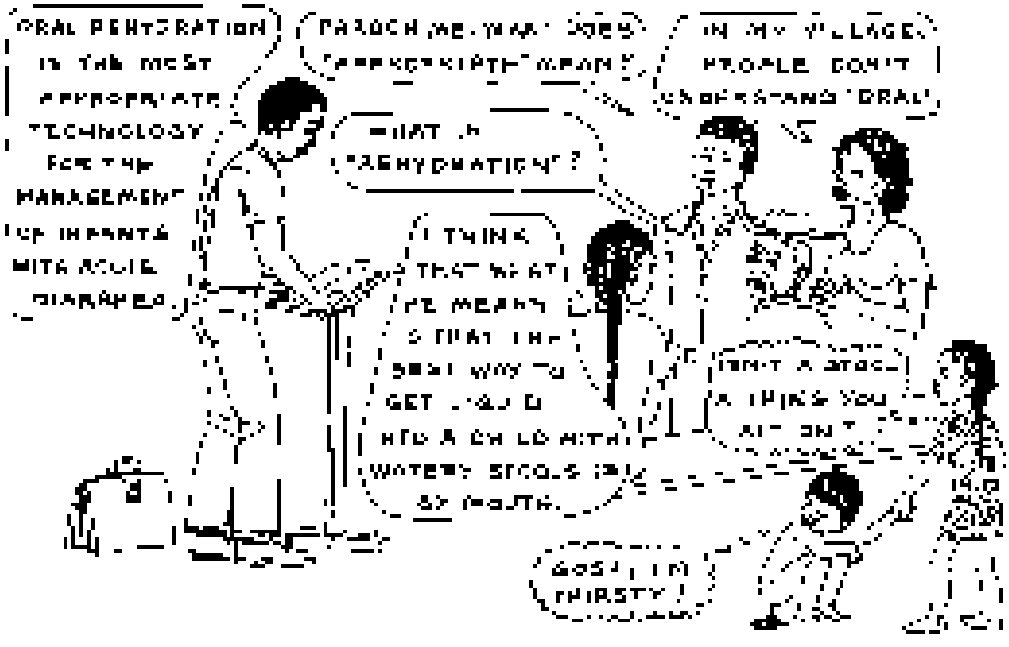
[illegible]

[illegible]

[illegible]

> It is the job of the instructor, not the health worker, to translate the big words of textbooks into ordinary language.

[illegible]



The first rule for any 'appropriate technology' is to explain it in words that people can understand!

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CHAPTER 16

Homemade, Low-Cost Equipment and Written Materials

Many of the tools that health workers need are costly to buy. But some can be handmade with local materials by the health workers themselves, blacksmiths, or other local craftsmen.

Homemade equipment can be simple or complex. It can be made from local materials only, or from a combination of local and outside resources. The dental drill shown here combines a high-technology drill with appropriate local power sources—people and bicycle.



This high-speed dental drill runs on air compressed by bicycle power. It is used by village dental workers in Verano, Mexico.

Most of the homemade equipment we describe in this chapter can be made quickly and easily with materials on hand.

During training, encourage health workers to invent and make some of their own equipment. This develops the imagination and creativity needed to help people solve their problems in their own way.

HOMEMADE SCALES FOR WEIGHING BABIES

During training, health workers can make their own simple scales for weighing babies. Although less accurate and less easy to use than store-bought scales, they have several advantages:

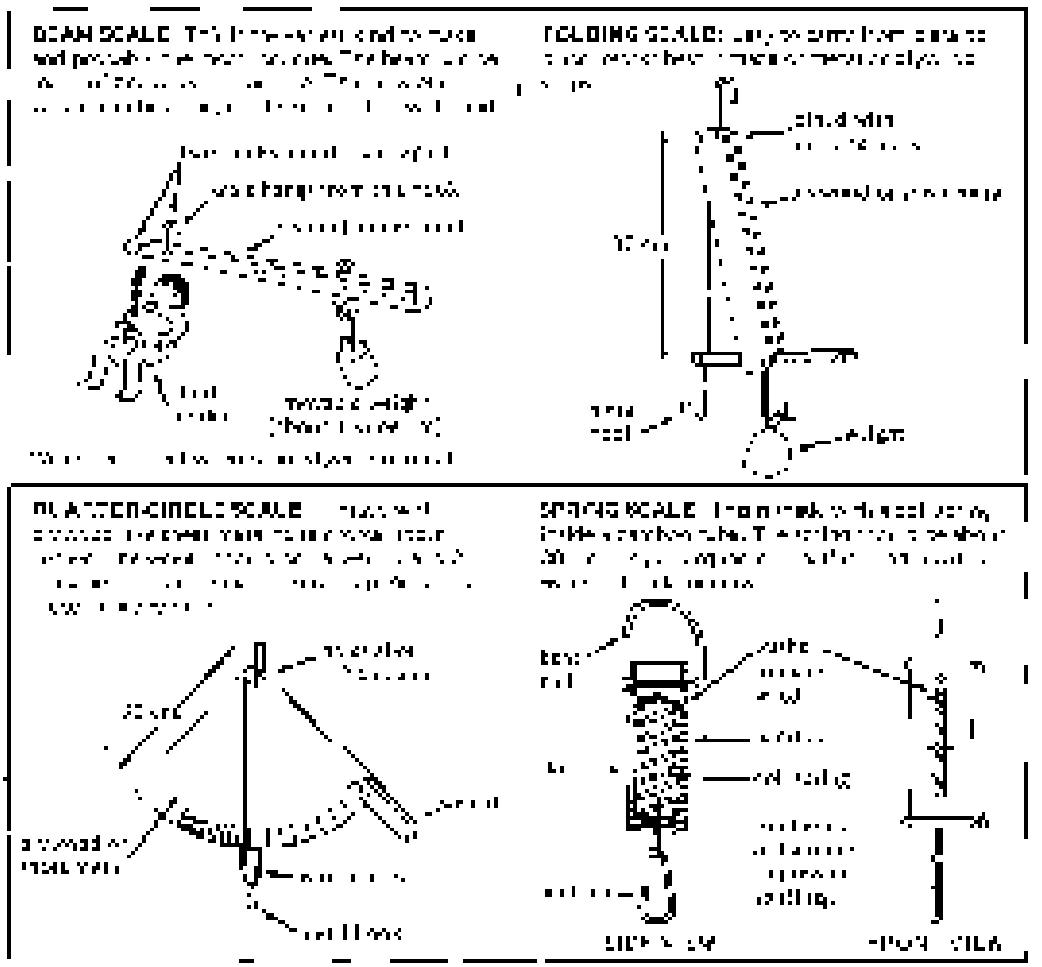


- They are **cheap and easy to make.**
- They can be **made of local materials.**
- By building the scales themselves, the **health workers gain new understanding and skills.**
- By getting the local people to help them, **they extend that knowledge and skill to others.**
- **This gets people, including fathers, to take a more active part.**
- Midwives or parents can make their own scales using the health worker's as a model.
- Homemade scales make the baby-weighing process less mysterious.

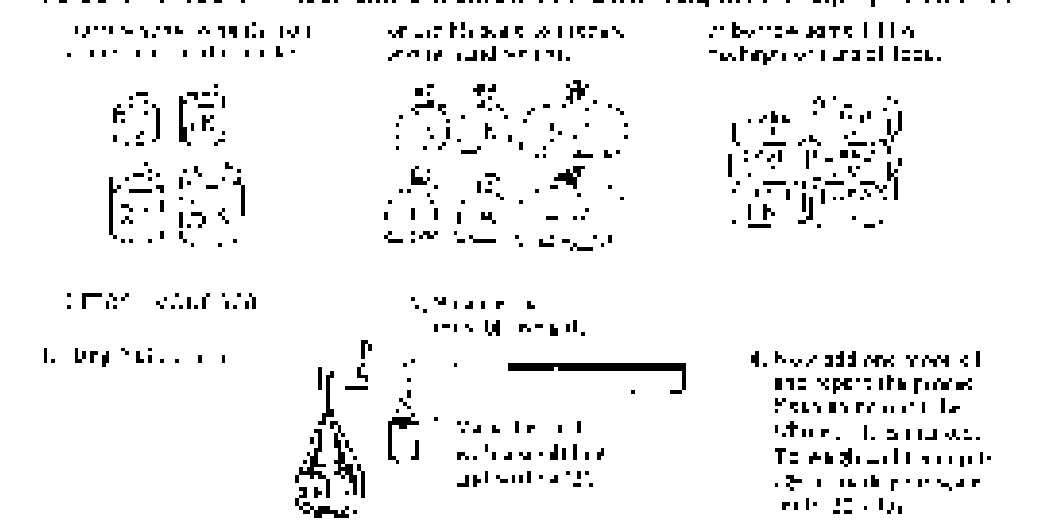
Ideas for several types of homemade scales are given on the next page. Be sure to check the accuracy of your scales from time to time, using objects of known weight.

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EXAMPLES OF HOMEMADE SCALES



How to mark or calibrate the scales:



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AVOIDING THE PROBLEM OF SPOILED VACCINES

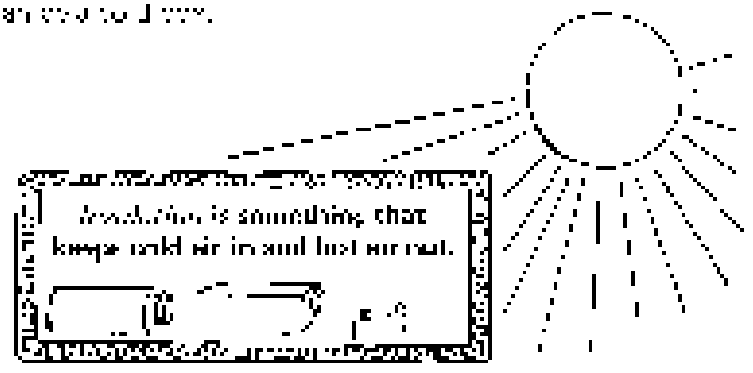
Keeping vaccines cold is important. If they get warm before being used, they spoil and will not protect children against disease.

[illegible] to be kept cold [illegible] [illegible] [illegible]

HOW MADE COLD BOX FOR KEEPING VACCINES COLD

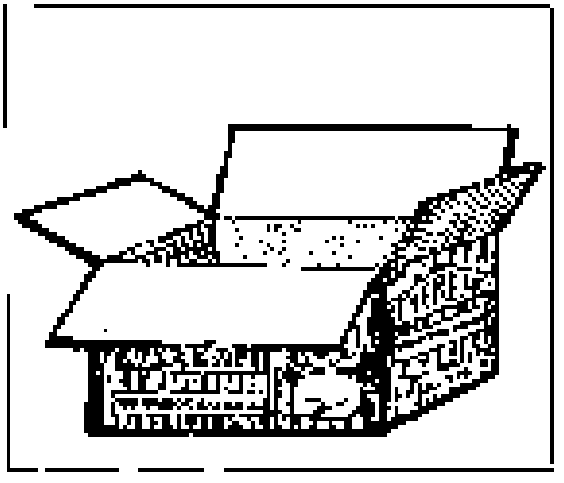
Some health workers in [illegible] have made cold boxes to keep vaccines cold. These cold boxes are very useful for health workers who travel to villages.

Some people think that a refrigerator is a cold box. But a refrigerator is not a cold box. A refrigerator is a machine that makes cold. A cold box is not a machine. It is only a box that keeps cold things cold.



Here is a way that you can make your own cold box:

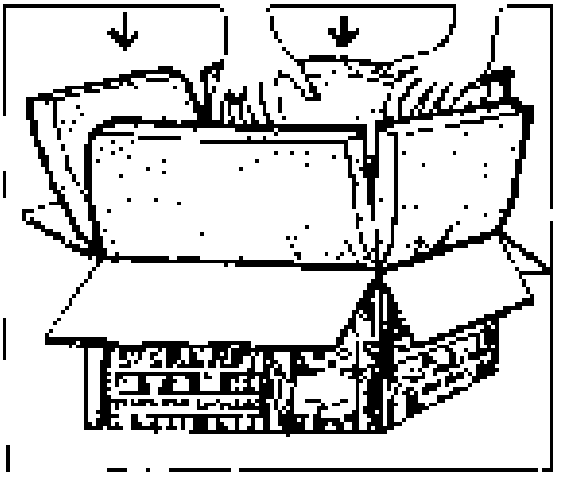
1. Find a carton that can be closed and sealed. It should be clean.



Put a thick layer of [illegible] in the bottom of the carton. This gives the vaccines extra protection from the heat.

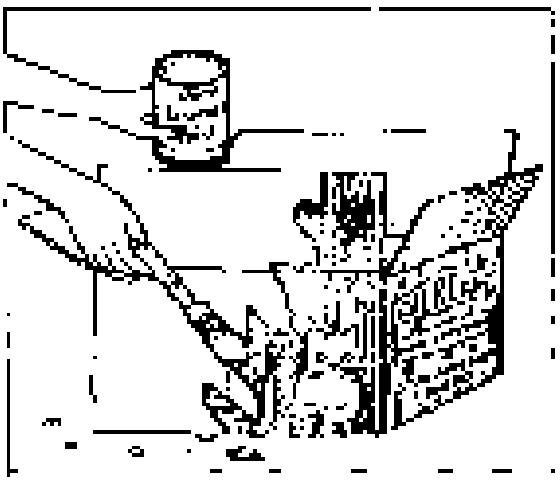
Put in as many vaccines as you can:

- [illegible] bottles of BCG vaccine (each bottle is 2 inches high and 1 inch wide)
- [illegible] packets of measles vaccine
- [illegible] rolled up tightly so that it is about 3 inches thick
- [illegible]



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3. Turn the outside of the carton over the milk to protect it from the sun and keep it cool.



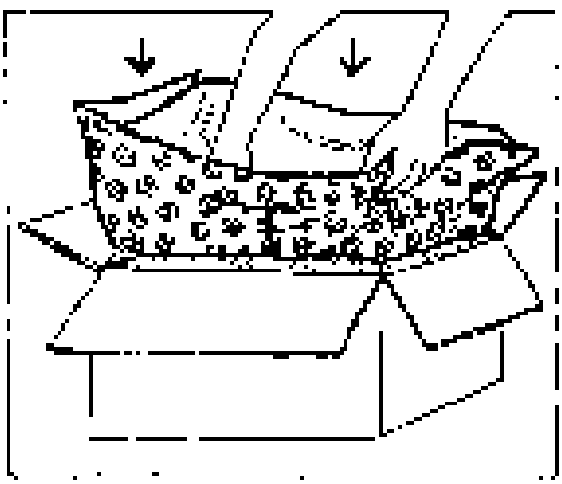
4. Cover the milk carton with a piece of cloth or a towel. Make sure the cloth touches the milk carton.

Never put milk cartons in direct sunlight or in a hot place. Milk will spoil quickly in a hot place.

Put the milk where it can stay cool and where flies cannot get to it.

Put the milk in the shade, not in the sun.

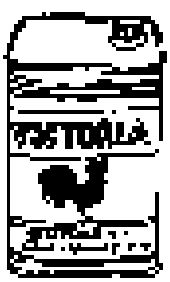
Always keep your milk box in a cool, shady place



HOW TO DO THESE ACTIVITIES WITH GOOD NUTRITION

Young children need to eat small meals often. They need to eat more than once every three hours. They can get sick from eating too much food at one time. Here are some ideas for making good meals.

- Feed children foods that have a lot of energy and protein. DO NOT FEED THEM FOODS THAT ARE HIGH IN FIBER. (Fiber is hard to digest.)
- Feed children fresh foods. Avoid canned foods and sugary foods.
- Prepare foods in the cool part of the day. Store them in the shade and cover them with cloth.
- Wash the hands and utensils with soap and clean water. Make sure you wash your hands after using the toilet.



- Always keep plenty of clean water for drinking. Boil water for 5 minutes before you drink it to kill germs. Store it in a clean, covered container. Keep it away from animals. Never use dirty containers to store water.

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HOMEMADE STETHOSCOPES

A stethoscope is a tool used to listen to the sounds inside a person's body. It helps you hear the heart and lungs more clearly and helps you find out if they are working properly.



The best stethoscope is one that you make yourself. It is cheap and can be easily repaired.



To keep noise out and sound in, you must make a good seal between the stethoscope and the person's body.





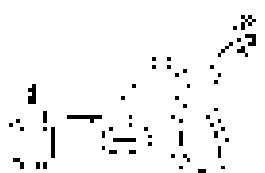
Breathing sounds you may hear with the stethoscope: Long, soft or short sounds are made when air moves in and out of the lungs. Some sounds are normal, like a deep breath. Other sounds, like wheezing or crackling, are not normal and may be a sign of illness. To hear breathing sounds clearly, you must be very still and quiet. Ask the person to breathe deeply and slowly through the mouth.

Heart sounds: Each heartbeat makes two sounds. Count the number of heartbeats you hear in one minute. This is called the pulse rate. To find the person's pulse rate, you must be very still and quiet. Ask the person to breathe deeply and slowly through the mouth. Count the number of heartbeats you hear in one minute. This is called the pulse rate.

Belly sounds: You can also use the stethoscope to listen to the sounds inside the belly. This helps you find out if the baby is growing properly. See page 93.

OTHER KINDS OF HOMEMADE STETHOSCOPES

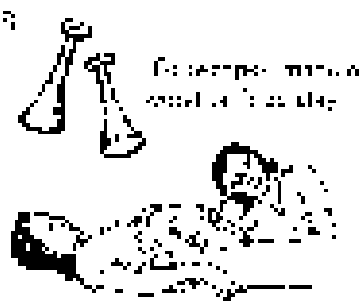
You can find other homemade stethoscopes described in books and pamphlets about health care.



This stethoscope can be used for checking a person's pulse.



To compare normal sounds and the sounds



This stethoscope is useful for finding problems in the baby's heart. See page 93.

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HOMEMADE TIMERS

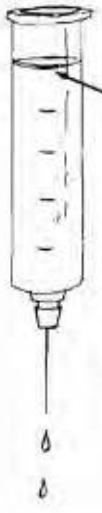
Health workers, midwives, and parents at times need to measure the number of heartbeats (pulse) or breaths (respirations) per minute. But they may not be able to afford a clock or watch with a second hand.

However, simple instruments for measuring time can be made by the health workers themselves. Encourage them to invent and make their own timers. When you first make the timers, be sure you have a watch to 'set' the time. Here are some ideas that have been tried and work fairly well.

WATER TIMERS—easy to make, but less accurate

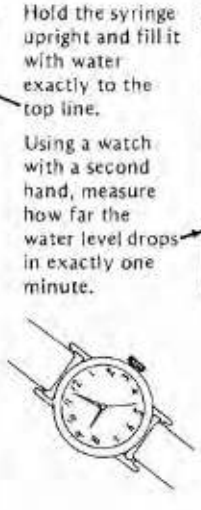
1.

Use an old or disposable syringe with an 18 or 20 gauge needle.



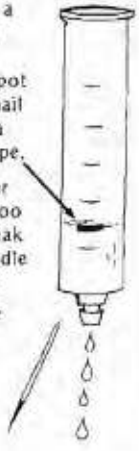
Hold the syringe upright and fill it with water exactly to the top line.

Using a watch with a second hand, measure how far the water level drops in exactly one minute.



Check this a few times, and then mark the spot with ink, nail polish, or a piece of tape.

If the water drips out too slowly, break off the needle to make it drip faster.



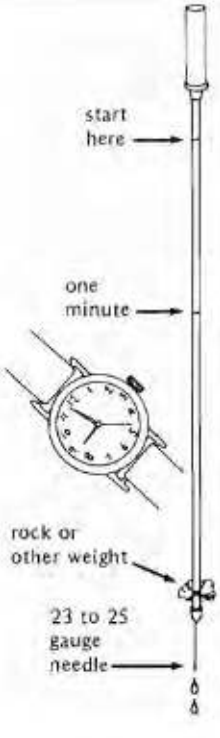
2.



Instead of a syringe, you can use a glass or plastic tube.

The longer and thinner the tube, the more accurate a timer it will make.

To form a narrow hole in a glass tube, hold it over a hot flame, then stretch, cool, and break it. (See the next page.)



3.

A fairly accurate timer can be made from an old I.V. (intravenous solution) administration kit.

Open the wider tube at the top to serve as a funnel.

Fill the tube with water. (Be sure there is no air in the tube.)

Using a watch with a second hand, mark the distance the water drops in 1 minute. Check it several times to be sure.

To help keep the tube straight, tie a weight at the lower end.

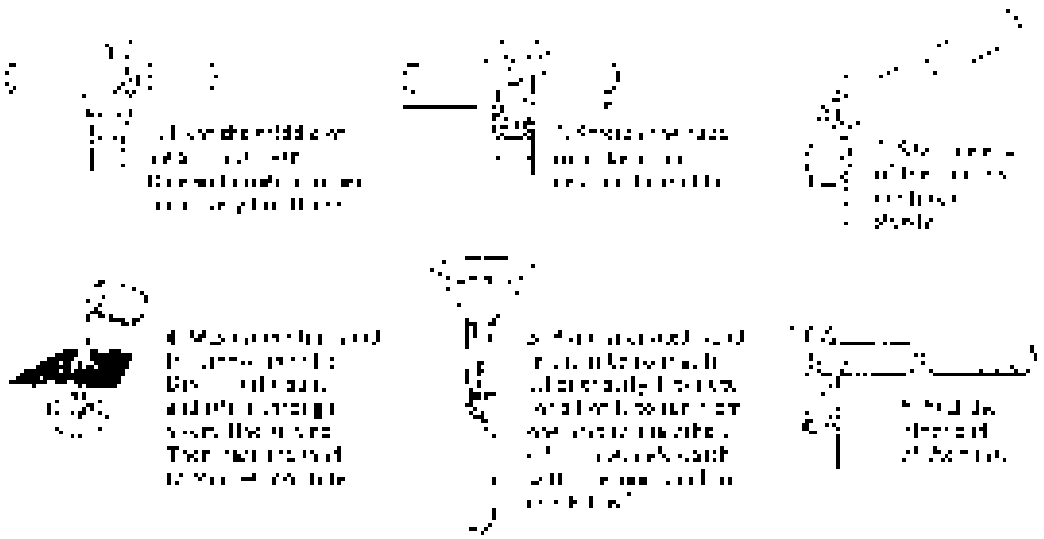


Counting the pulse using an I.V. tube timer.

The I.V. tube timer has the advantage of being fairly accurate and easy to make, and it can be made at no cost from old I.V. sets.

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M. MEASURING WITHOUT INSTRUMENTS— A TEST FOR SHOCK

■ [illegible] p. 25-12

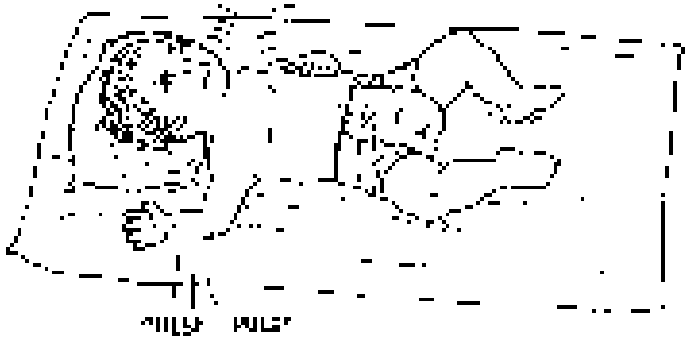
■ [illegible] p. 11

■ [illegible] p. 25-15.

■ [illegible] p. 25-14 and p. 25-18

[illegible] of testing for shock without using instruments:

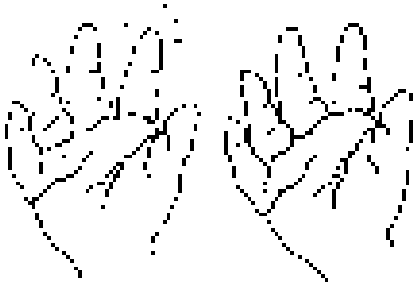
[illegible]



[illegible]



[illegible]



[illegible]

[illegible]

[illegible] p. 33

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MINOR SURGERY IN THE FIELD

[illegible]

FOR STERILIZING INSTRUMENTS AND BANDAGE MATERIALS:

Instruments and supplies are placed in a pan. Bandage materials, instruments and other objects that must be kept sterile are wrapped in [illegible] and placed in the pan. Bandage towels, or clean cotton cloth, may be used. Bandage materials are wrapped in [illegible] to keep them clean.





Pan may be sterilized in a pressure cooker or pan

Instruments must be completely covered with water before boiling

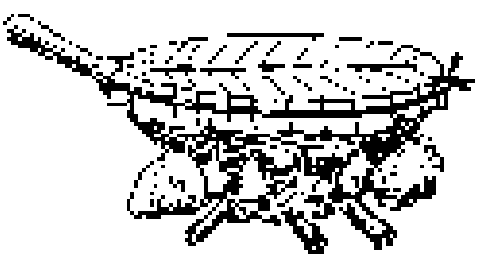




Pan can be covered with 2 layers of paper. Tape edges to pan to keep out dust. Pass an autoclave tape strip across the paper to show that the pan has been sterilized.

[illegible]

After boiling for 20 minutes, carefully remove the pan and place it on a clean surface to cool. Do not use your equipment until it is completely cool.



FOR SURGICAL DRAPES:

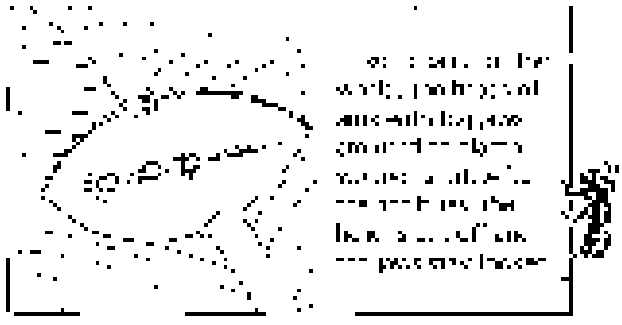


After removing the [illegible] from the autoclave, [illegible]. The [illegible] will remain sterile until [illegible]

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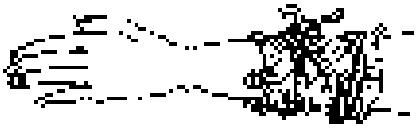
FOR SUTURING WOUNDS:

You can use silk or cotton sewing thread and a sewing needle. See WOUND, p. 352.



FOR SURGICAL PADS AND BANDAGES:

Banana leaves are used in the Philippines and called *lagundi*. They are said to be antiseptic and to help stop bleeding. The leaves are first washed in soapy water.



For other bandages, the Filipinos use pandanus leaves. Also called *pandan*, these leaves are soaked in soapy water, and then boiled in plain water until they turn a bright green.

ACUPUNCTURE AND ACUPRESSURE ANESTHESIA

A number of health programs in the Philippines, including the Medical Mission Sisters, encourage the use of acupuncture and acupressure for treating many different health problems. Acupuncture and acupressure have also been used successfully in many countries to relieve pain during surgery.

Acupuncture is a Chinese system of healing that has been used for many thousands of years. This system believes that the body has a life force called *chi* that flows through the body along certain pathways called meridians. Illness is said to be caused by a blockage of the flow of *chi*. Acupuncture is used to unblock the flow of *chi* and restore health.





Acupressure, or "finger pressure," is the use of acupuncture points without needles. Pressure is applied to the points with the fingers, hands, elbows, or feet. Filipinos sometimes call this type of healing *pihit*, meaning "pressing."

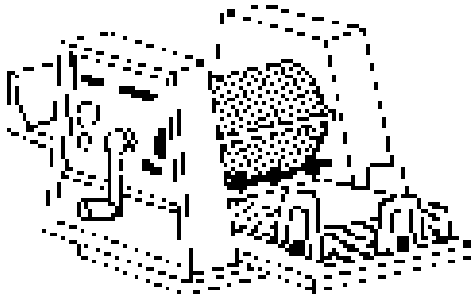
The Medical Mission Sisters recommend acupuncture or finger pressure for many illnesses. They say that it helps to relieve pain during childbirth, and that it helps to relieve the anxiety of patients undergoing surgery. They also say that it helps to relieve many other problems, including the anxiety of illness. They do not work for all illnesses or for all persons. They say that it helps with headache, backache, sinus trouble, and asthma. They say that it helps with many other illnesses.

Basic techniques for acupuncture and finger pressure may be learned by health workers in a few days. However, the practice of these techniques should be supervised. Many people in the Philippines and in other countries are trained in both acupuncture and acupressure. However, the best way to learn is from someone who knows how.

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LOW COST DUPLICATION

[illegible]



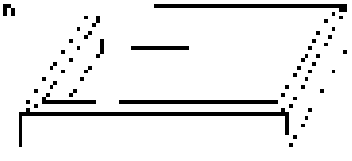
Equipment needed for stencil duplicator

STENCIL DUPLICATOR

Making the stencil

- [illegible]
- [illegible]
- [illegible]
  [illegible]
- [illegible]
- [illegible]
- [illegible]

1. Place a sheet of stencil paper on a hard, flat surface with the wax coating facing upwards.



2. Write or draw on the stencil paper with a stylus. Press hard enough to cut through the wax coating but not through the backing sheet.



3. Spread glycerine over the back of the stencil with a roller to prepare it for printing. The glycerine will soak through the cuts in the wax coating.

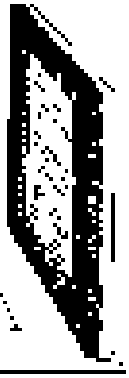
4. When the stencil is dry, put it on the printing frame with the wax coating facing downwards.

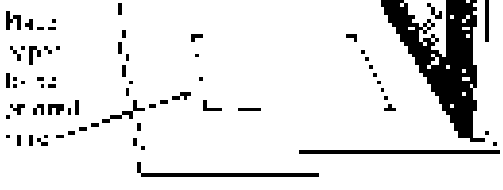


Printing the stencil

- [illegible]
- [illegible]
- [illegible]
  [illegible]
- [illegible]
  [illegible]

[illegible]





5. Put a sheet of paper on the printing frame.



6. Press the stencil down onto the paper. Roll the ink over the stencil.



7. Remove the stencil and the paper. Clean the stencil with [illegible]

A NOTE ON SQUEEGEES



SILKSCREEN PAINTS AND INKS

POSSIBLE USES FOR SILKSCREEN COPIER

You can make mimeograph or silkscreen copies of:

- key information covered in classes (to hand out to students)
- tests, exams, or questionnaires
- lists of health priorities and decisions discussed in group meetings
- notices with health information for the public (see example below)
- a monthly news sheet or 'health bulletin' for health workers or the whole village (see next page)
- information sheets for school children, mothers, midwives, or other groups
- health education posters drawn by school children

Have students help with copying information sheets so they will know how to do this when they return to their villages.



Here Pablo Chavez (a village health worker who drew some of the pictures for this book) teaches students how to use a silkscreen copier.

A HEALTH INFORMATION NOTICE:

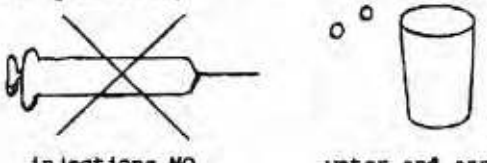
The notice shown here was produced with a silkscreen copier by health workers in a Mexican village. They did this example in English so it could be used in this book. The original Spanish notice was distributed to people in their village because many villagers were wrongly using antibiotic injections to treat an epidemic of the 'flu', or common cold.

Notice

A lot of people in our village are sick with a severe form of flu. They have cough, runny nose, fever, and sometimes diarrhea.

The best treatment is to rest, drink lots of liquids, and take aspirin. No other medicine is needed. The flu goes away by itself in a few days.

DO NOT INJECT ANY MEDICINES FOR THE FLU. They won't do any good, and may be harmful. Penicillin, Lincocin, Terramycin and other antibiotics do not help. So don't waste money on them.



injections NO **water and aspirin YES**

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A COMMUNITY NEWSSHEET OR HEALTH BULLETIN



[illegible]

[illegible]

[illegible]

Suggestions for good writing

[illegible] book called *Letter to a Teacher*. In this book, three years of [illegible] the process of [illegible] [illegible] [illegible]

[illegible] [illegible] [illegible] [

PREPARING TRAINING AND WORK MANUALS FOR HEALTH WORKERS

[illegible] [illegible] [illegible] [

6. **Emphasis.** [illegible] dark print. [illegible]



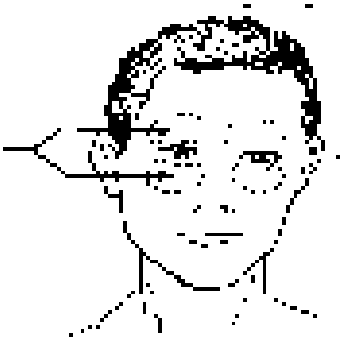


7. **Pictures.** [illegible]

SINUS TROUBLE (SINUSITIS)

Signs:

- [illegible]
- [illegible]
- [illegible]



8. **Type and layout.** [illegible]

[illegible]

[illegible]

22.2 POISONING

a) Kerosene poisoning

This is a common poison drunk by young children. It is kept in houses in tins for lamps or primus stoves and is often kept in unlabelled squash or beer bottles. A child usually does not drink more than a mouthful before spitting it out.

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9. Do not break words at the ends of lines.

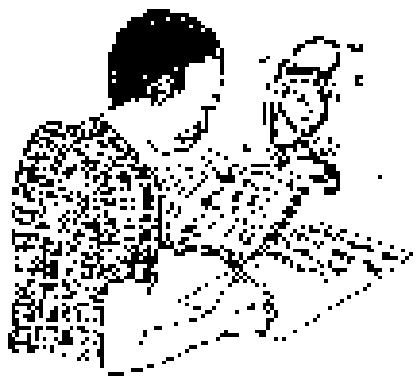
Hyphenated text	Non-hyphenated text
To make writing clear for non-native readers, try to avoid dividing words at ends of lines.	To make writing clear for non-native readers, try to avoid dividing words at ends of lines.

10. Make information easy to find and use.

- Include a clear and complete table of contents at the front of your manual. (See *Power Tools for Your Computer*.)
- Include a glossary, a section at the back of the manual that explains the meanings of special words. (See *Signs, Symptoms, and Prevention*.)
- Use clear headings and subheadings throughout the manual. (See *Make Your Writing Clear*.) Many readers will read only the headings and subheadings. Make sure that they give enough information to help readers find what they want. (See the headings in this section.)

11. Field testing. Before you finish your manual, try it out with the kind of people it is written for. Ask them questions like these:

- Can you understand every word in this manual?
- Do you find the subject interesting?
- Does it answer your questions and provide the information you need?
- Do you find any words or pictures offensive? Are there any words or pictures that you think are inappropriate?
- How could it be improved?



12. Show your drafts. Ask your colleagues, supervisors, and community members to look at your drafts. Ask them to tell you what they like and what they do not like. Ask them to suggest ways to improve your manual. Ask them to check your facts and to make sure that you have not left out important information.

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CHAPTER 17

Solving Problems Step by Step (Scientific Method)





Problem-solving skills are among the most important skills that health workers can learn. By this we mean the ability to look carefully at a situation, analyze what problems exist, and determine steps to improve the situation.

> The main focus of health worker training needs to be on learning problem solving skills.

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[illegible]

[illegible]

The focus of health worker training has been changing:

from memorizing facts	to	mastering specific skills
from studying about problems	to	practice solving real problems
from classroom learning	to	field and village experience





[illegible]

Suggestions for helping develop thinking and problem-solving skills in the classroom:

- Teach [illegible] through role plays and [illegible] to the [illegible] [illegible] [illegible]

[illegible] group [illegible] the steps involved in a scientific approach to solving problems. The group can then [illegible] methods they learn to the real world situations of problem solving they confront every day. [illegible]

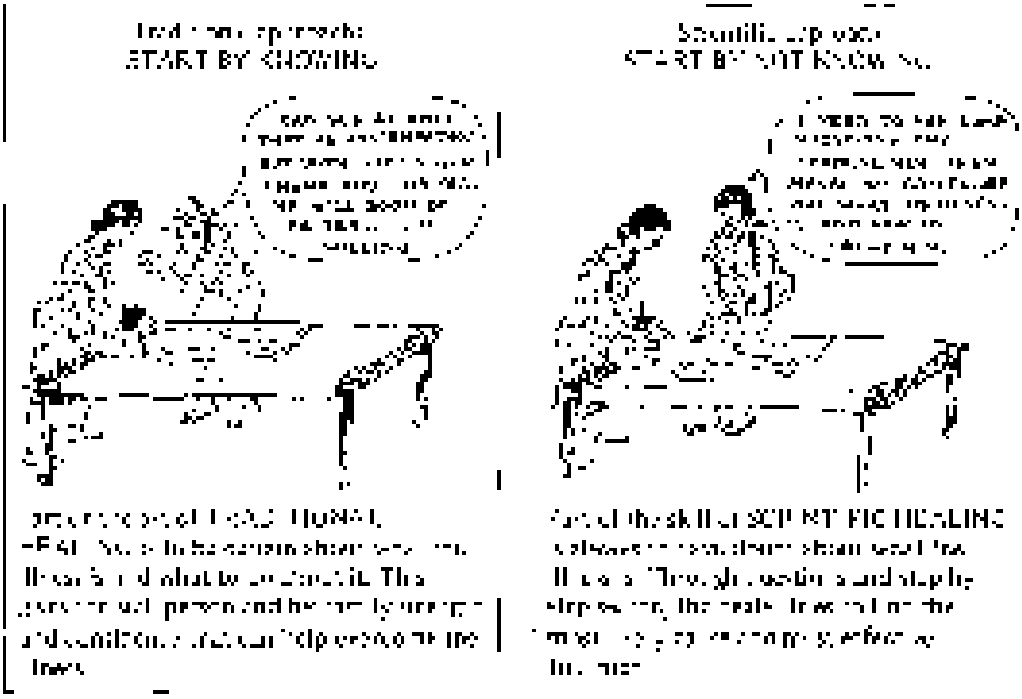
[illegible] ways to help participants [illegible] by relating learning to familiar experiences.

SCIENTIFIC METHOD—
A STEP-BY-STEP APPROACH TO PROBLEM SOLVING

A careful, step-by-step approach is essential [illegible]

To take a scientific approach, the health worker needs to start by asking searching questions rather than by jumping to quick answers. At first this may be difficult [illegible] by [illegible] and [illegible] on faith, magic, and the power of suggestion. A large part of their curative art is based on the [illegible]

But while the traditional healer tends to accept [illegible] the scientific healer starts with uncertainty or doubt about [illegible]



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NOT THIS

In scientific problem solving, it is important to start with doubt and then systematically gather information to figure out the most probable answer.

BUT THIS

[illegible] [illegible] [illegible] [

A discussion story: "WHO'S TO BLAME IN JAMOJA?"

[illegible] helping [illegible] [illegible] [illegible]

Comments: The [illegible] are [illegible] you

Instructor: How [illegible] [illegible]

Assignment: [illegible]

Assignment: [illegible]

Assessment: [illegible]

Assessment: [illegible] [illegible]

Information: [illegible] [illegible]

Assignment: Test.

Assessment: [illegible] [illegible]

Instructor: [illegible] [illegible]

Assistant: [illegible]

Instructor: [illegible] [illegible]

Assistant: [illegible] [illegible]

Instructor: [illegible] [illegible]

Assistant: [illegible] [illegible]

Assistant: [illegible] [illegible]

[illegible]

[illegible]

1. [illegible]

2. [illegible]

3. [illegible]

[illegible]

[illegible]

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Instructor: Tie a knot in a piece of string or cord for each student. Tell students to tie a knot in their piece of string or cord. Ask students to explain why they tied a knot in their piece of string or cord.

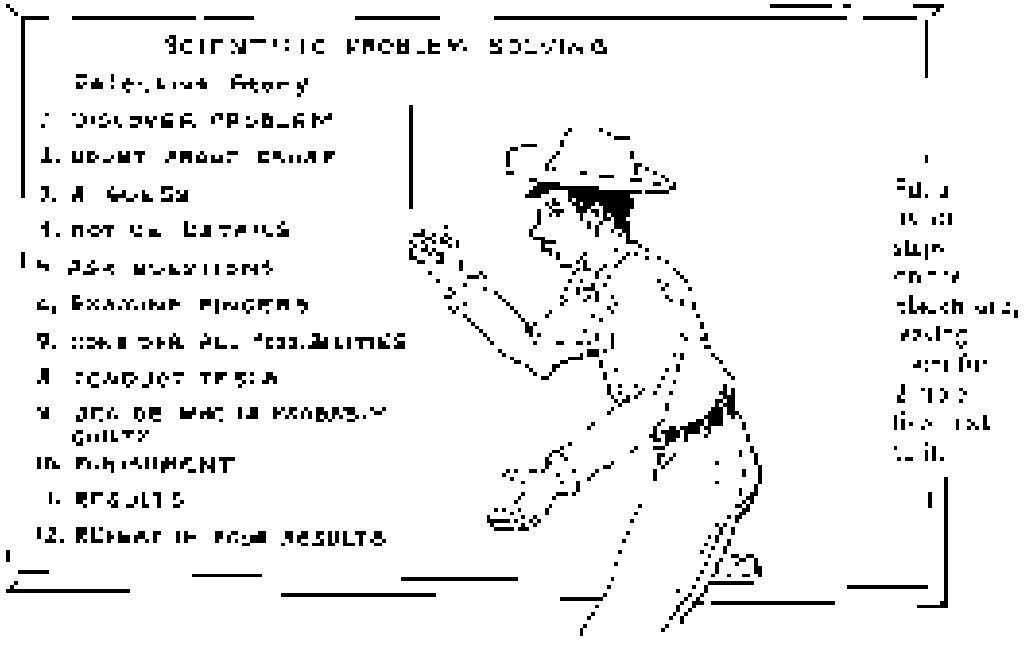
Students: Answers will vary.

Instructor: Ask students to explain how scientific problem solving is like tying a knot in a piece of string or cord. Tell students to explain why they tied a knot in their piece of string or cord.

Students: Answers will vary.

Refer to the illustration to complete the activity. Use the illustration to help you write a story about the scientific steps Dr. Jones took to find out who stole the pie. The steps are somewhat like this:

1. Dr. Jones examines the evidence.
2. She is uncertain about the facts.
3. She guesses that she can find answers in research.
4. She studies the situation carefully.
5. She asks questions.
6. She examines each of the clues.
7. She considers all possibilities.
8. She conducts tests to prove or disprove the different possibilities.
9. She decides what is probably true.
10. She provides punishment.
11. She gives the results: Whether or not the criminal is convicted.
12. She starts over again or chooses the punishment, and notes the results.



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A general history-taking and physical examination

After discussing the above steps, the group could practise the questions and techniques by role-playing. Students can compare notes with one another in small groups. Some students can be asked to present their findings to the whole class.

A diagram showing a person's body with various parts labelled for history-taking and examination.

1. Main complaint. What bothers the sick person most?
2. Duration or intensity of the illness (how long, how severe).
3. Any ideas or guesses about the possible cause of the illness. (What does the person think is wrong?)
4. Observation of the person. (Appearance, skin colour, etc.)
5. Questions relating to the main complaint. For example:

   Appetite. (Has the person lost weight?)

   Fever. (Has the person had a fever?)

   Abdominal pain. (Is the person in pain?)

   Bowel habit. (Has the person had diarrhoea? Other symptoms?)
6. General physical examination. (Check the pulse, temperature, blood pressure, etc.)
7. Consider carefully all the possible causes. Ask questions if they are necessary. For example:
   - pain in the abdomen: ulcer, appendicitis, gallstones, etc.
   - diarrhoea: dysentery, cholera, etc.
   - swelling of the abdomen: liver disease, tuberculosis, cancer, etc.
   - pain in the chest: pneumonia, tuberculosis, heart disease, etc.

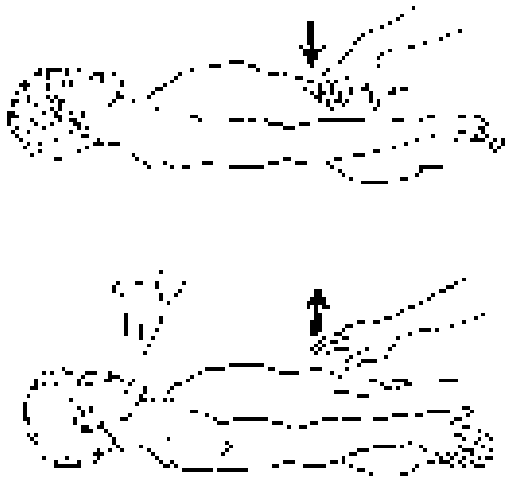
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6. **Specific tests and examinations.** Ask more questions to help confirm or exclude the most likely problem. Select only those tests that are necessary.

Do not order any test or examination that is not absolutely necessary. Tests are costly, and they may be unpleasant or even dangerous for the patient. Whenever possible, base your decision on the results of simple tests rather than on guesses.

For the person who has [illegible] some tests may help. For example, a urine test for sugar can help confirm a diagnosis of diabetes. A blood test for malaria can help confirm a diagnosis of malaria. (See Sections 5.8 to 5.10 for more details.) Tests are also necessary before certain kinds of treatment. For example, before giving an injection of streptomycin, you must test the patient's urine for albumin.



Some tests that you may want may not be available in your community. Ask the person to go to a clinic, laboratory, or hospital that has the facilities. Be sure to explain why the test is necessary.

7. **Diagnosis.** Decide what is the most likely problem or problems.

It is important to make a diagnosis for two reasons: to be certain, but not to the point of being unreasonable, based on all information and tests. Be ready to reconsider the diagnosis as more information becomes available.

8. **Management or treatment.** Your decision may be to refer the person to a clinic or hospital. Or you may decide to treat the problem yourself. Treatment may include:

- [illegible]
- [illegible]
- [illegible]

Be sure to include **preventive information** or **health education** along with treatment, when appropriate.

9. **Results.** Carefully observe the results of your management or treatment of the problem. If there is no progress, change your decision and treatment.

10. **Repeat** the steps as necessary. If treatment fails

To help find a diagnosis, [illegible] many [illegible] the person understands [illegible] supply [illegible] and [illegible] to [illegible] the [illegible] [illegible] [illegible]

For each photo, choose one problem statement from the list below that best describes the problem you see in the photo. Write the letter of the problem statement you choose in the box under the photo. Then write a problem statement of your own in the box under the photo.

SCIENTIFIC PROBLEM SOLVING





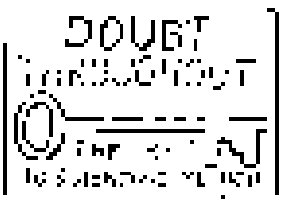


Tinyerkin Story	Rough Problem	Example
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]

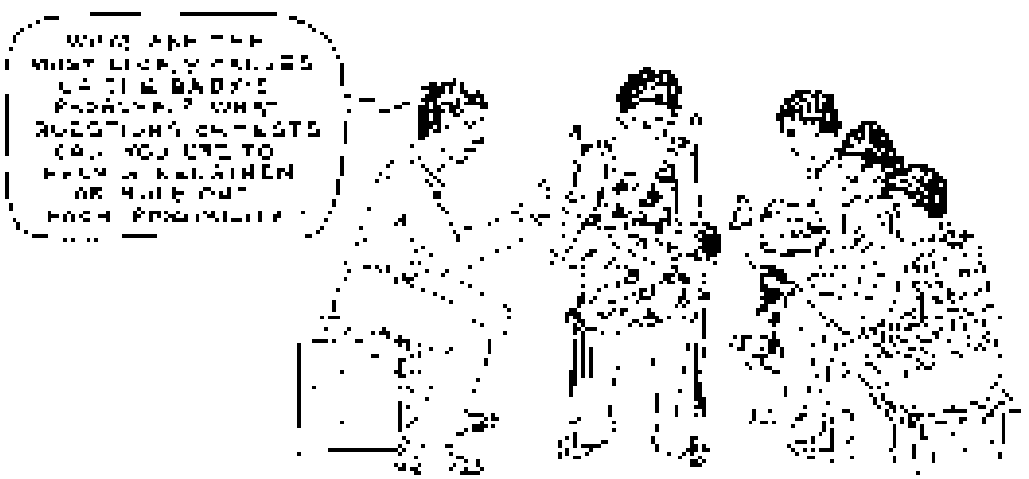
Follow-up to the two 'detective stories'

After the first detective story, a group of health workers began to learn about how to use the problem-solving method. Before the second detective story, the group was given additional information to help them to develop a diagnosis and a treatment plan for the baby's problem.

Encouraging students to make a habit of asking themselves, "What else could be causing this problem?" before they come to their conclusion about what is wrong with a patient is basic to the scientific method. This process of systematically eliminating different possibilities is basic to the scientific method.



Some health workers find it difficult to apply problem-solving skills to their own work. They may always follow the steps systematically.



The instructions for the medicine have been translated into Spanish, and are given in full on page 218.

Problem-solving is a skill that can be learned. See Chapter 28.

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SUGGESTIONS FOR HELP NG ST JDENTS LEARN STEP-BY-STEP SKI LLS

Like s in this book, you may want to help students learn skills or procedures in which they must follow a set of steps in order. Here are some suggestions for helping students learn such skills and for testing to see if they have learned them well.

1. Do and say—You do and say.

First, show the student how to do the skill. As you do each step, say what you are doing, and why.



Let the student watch you do it. Have the student also say each step as he does it.



2. Mixing up and sorting out the steps.

Let the student look at the list of steps and ask him to put the steps in the right order. Here is a list of steps for making a plaster cast:

- REMOVE CAST SCRAPS WITH WET HANDS
- SQUEEZE OUT EXTRA WATER
- HEAT OVER BROKEN BONES ARE PUSHED BACK INTO PLACE
- CHECK THE CIRCULATION IS GOOD IN LEG
- PUT ON A LAYER OF SOFT PADDING, AVOIDING WRINKLES
- WRAP ON CAST MATERIAL (5 TO 7 LAYERS THICK)
- GET ALL THE SCRAPS READY
- MAKE SURE YOU ARE PROPERLY DRESSED AND CAN BE COMFORTABLE
- PUT ON STOCKINGS (IF YOU HAVE ONE)

Then ask the student to put the steps in the right order. This can be done individually, by the student alone, or with a group of students working together.

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RECOGNIZING THE HUMAN LIMITATIONS OF SCIENCE

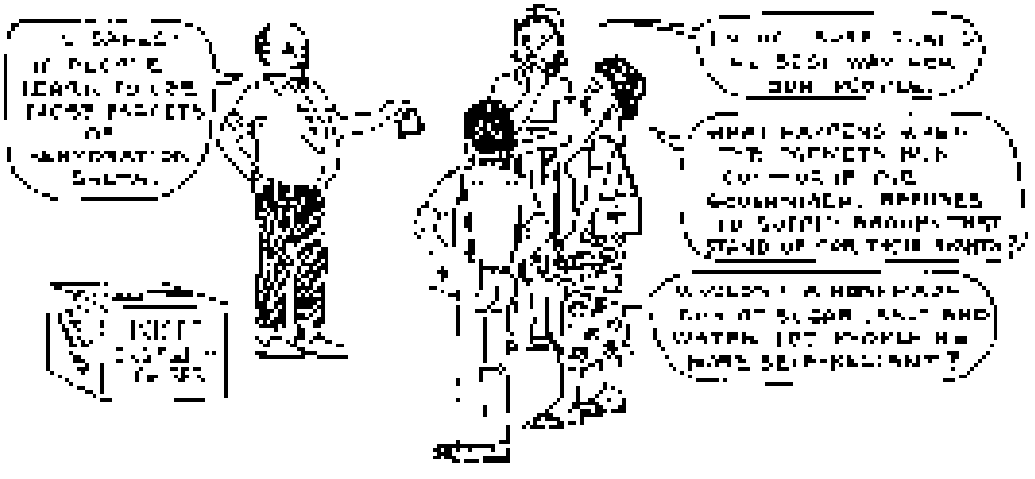


It is important that health workers learn how to approach problem solving scientifically. But it is equally important that they recognize and help others to see the human limitations of science. What is 'right' today may be 'wrong' tomorrow.

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- [illegible]
- [illegible]
- [illegible]
- [illegible]

[illegible]



The need to be honest about mistakes and changes in knowledge

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

> To learn is to question.

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CHAPTER 18

Learning to Use Medicines Sensibly



studies show that a great many doctors consistently misuse medicines.

Health workers should discuss these facts and help make everyone aware of them.

SOME REASONS FOR THE WIDESPREAD MISUSE AND OVERUSE OF MEDICINES.

1. Big business.

2. False advertising.

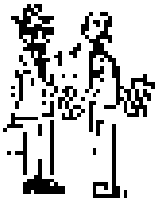
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3. "Dumping". [illegible]



4. Lack of adequate controls. [illegible]

5. Bribes and corruption. [illegible]



6. Sale of prescription medicines without prescription. [illegible]

7. People not adequately informed. [illegible]

8. Health workers not adequately informed. [illegible]

[illegible]

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8. Use of medicine to gain priority and power. [illegible]



[illegible]

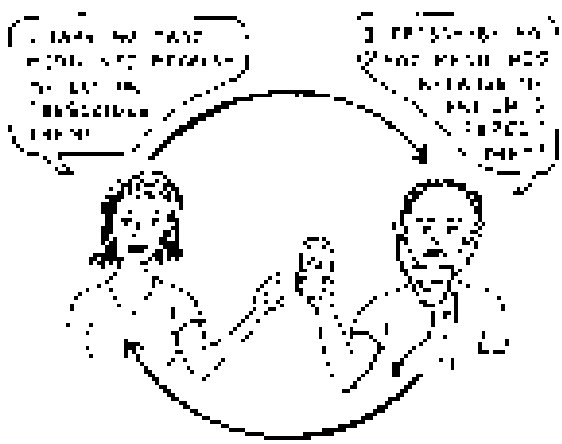
Medication as a substitute for caring

[illegible]

When taken, the medicine becomes a symbol of caring.

Medication can be a symbol of caring and performing. This is why people often want medicine. Most health problems can be better managed without any medication. What often will help people most is friendly advice and understanding support. (See Learning Activity 46 at the end of this unit.)

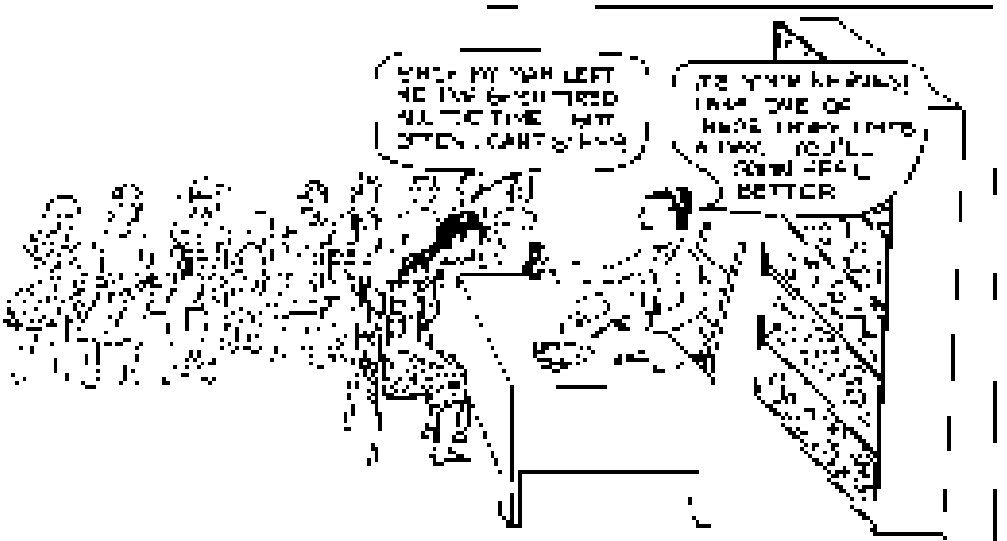
[illegible]



[illegible]

[illegible]

[illegible]



HELPING HEALTH WORKERS LEARN ABOUT THE MISUSE OF MEDICINE IN THEIR AREA

[illegible] to help stop the overuse and misuse of medicines, they must understand the problem clearly and must be able to explain it to other people. But it is not enough simply to tell them what is wrong. They need to find out for themselves just how serious the problem is in their own area. And they need to learn ways of solving the problem that will be acceptable to the people they work with.

1. Finding out the extent of the problem

Health workers can help find out how serious the problem is by asking simple questions. They can ask questions like these:

How many prescription medicines do people in the community buy and use without a prescription?	[illegible]
How often do doctors prescribe too many medicines or the wrong medicines?	[illegible]

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What evidence is there of physical harm caused to people by overuse or misuse of medicines?

What evidence is there of economic harm to people caused by the overuse and misuse of medicine?

How often do health workers, doctors, or instructors in the health sector agree to give medicine simply to please people—not because it is necessary?

2. Looking at the causes of local misuse of medicines

The larger causes—national, international, economic, and political—are important, but it is usually the small, personal causes that have the greatest effect on the overuse and misuse of medicines in the local community. It is the people and the events of their daily lives and relationships that will finally decide how much harm and misuse there will be.

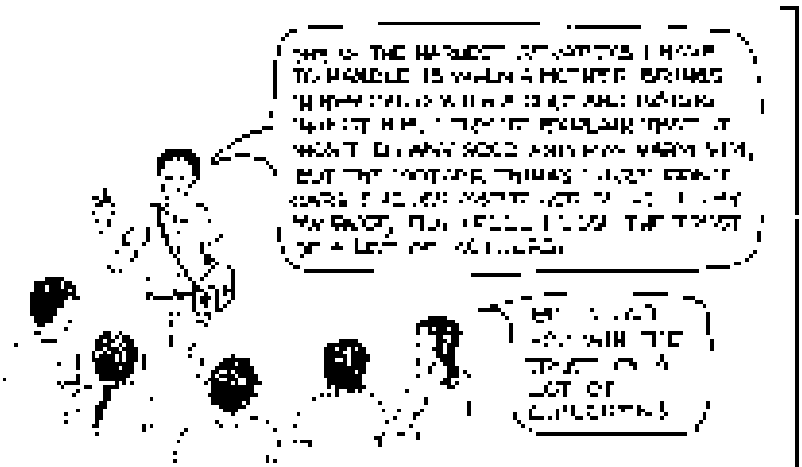
The most immediate personal causes of misuse and overuse of medicines are:



Overuse of medicines, when the supply is limited, causes increased illness and death.

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[illegible] to invite experienced health workers to talk with those in training about the difficulties and obstacles they have run into.



3. Trying to solve the problem

[illegible]

- Give good examples. [illegible]
- Encourage role plays and [illegible]
- Invite [illegible] to identify the uses of modern medicines [illegible]
  - looking through their books, together with the [illegible]
  - explaining [illegible]
  - helping [illegible]
- Help [illegible]
- Help [illegible]
- Help people to become aware of how much they spend on medicines and why, and to plan for [illegible]

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Health care as a cause of poor health—and what to do about it

An example from the Philippines:

[illegible]

[illegible]

[illegible]

PAGES IN *WHERE THERE IS NO DOCTOR* THAT DISCUSS THE MISUSE, OVERUSE, AND CAREFUL USE OF MEDICINES

page

w18 to w19 . . . Sensible and limited use of medicines

45 to 48 . . . **Chapter 5,** Healing without medicines

49 to 53 . . . **Chapter 6,** Right and wrong uses of medicines, especially:
49 . . . . . Guidelines for the use of medicine
50 to 52 . . . . . The most dangerous misuse of medicine
53 . . . . . When should medicine not be taken?

55 to 58 . . . **Chapter 7,** Antibiotics: what they are and how to use them, especially:
56 . . . . . Guidelines for the use of all antibiotics
56 to 57 . . . . . Guidelines for the use of certain antibiotics
58 . . . . . Importance of limited use of antibiotics

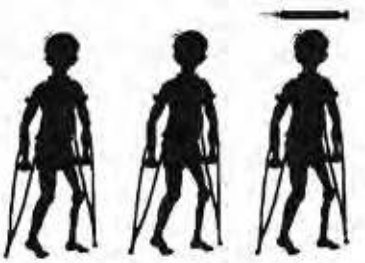
59 to 64 . . . **Chapter 8,** How to measure and give medicine

65 to 73 . . . **Chapter 9,** Instructions and precautions for injections, especially:
65 . . . . . When to inject and when not to
65 . . . . . What to do when the doctor prescribes injections
67 . . . . . Medicines not to inject
68 to 69 . . . . . Risks and precautions
70 . . . . . Dangerous reactions from injecting certain medicines
71 . . . . . How to avoid serious reactions to a penicillin injection

119 . . . Where to get vitamins: in pills, injections, syrups—or in foods?
156 . . . Medicines not to use for diarrhea
247 . . . How to stay healthy during pregnancy—avoid taking medicines
266 . . . The correct use of oxytocics: ergonovine, oxytocin, *Pitocin,* etc.
272 . . . Care in giving medicines to the newborn
288 . . . Who should not take birth control pills?
338 . . . Words to the village storekeeper or pharmacist
Green Pages . . . Risks and precautions for each medicine are listed.



Boy with abscess from an unnecessary injection.



Today 1 of every 3 cases of crippling polio is caused by injections given to children. These children already have mild, undiagnosed polio, which is often mistaken for a severe cold. The injected medicine irritates the surrounding muscles, and can cause paralysis in the arm or leg.



REMEMBER: Teaching health workers to help people use medications sensibly is a vital part of preventive medicine.

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ANOTHER PROBLEM: USING THE WRONG DOSAGE

[illegible] to the problem of [illegible] using the wrong dosage. Using too little medicine may [illegible] and encourage the [illegible]. Using too much medicine can cause [illegible], especially in small children. Too [illegible] can [illegible]. The [illegible] the amount.

[illegible] [illegible] [illegible] [

Learning to look up medicine dosages

In *Where There Is No Doctor*, every section has a list of medicines for problems in that section. Look in the Green Pages.

To find the medicine you are looking for, look in the table of contents. Find the page number of the section where you would look for the medicine. Then look on that page.

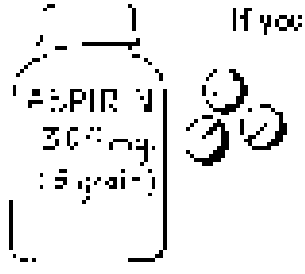
For each medicine, you will find the information you need, such as the name of the medicine, the dosage for children and adults, and how often to take it.

Read the information about how to measure each dosage on page xiii and on page xiv.

Some medicines have more than one name. Look for other names in parentheses ( ).

If you do not find the medicine you are looking for, look for the problem. For example, if you want to find out the dosage for aspirin, look for "fever" or "pain." Or look for the name of the medicine.

Now look at the medicine you have.



If you have 300 mg (5 grain) tablets, read here.

How much for the baby or child you are treating

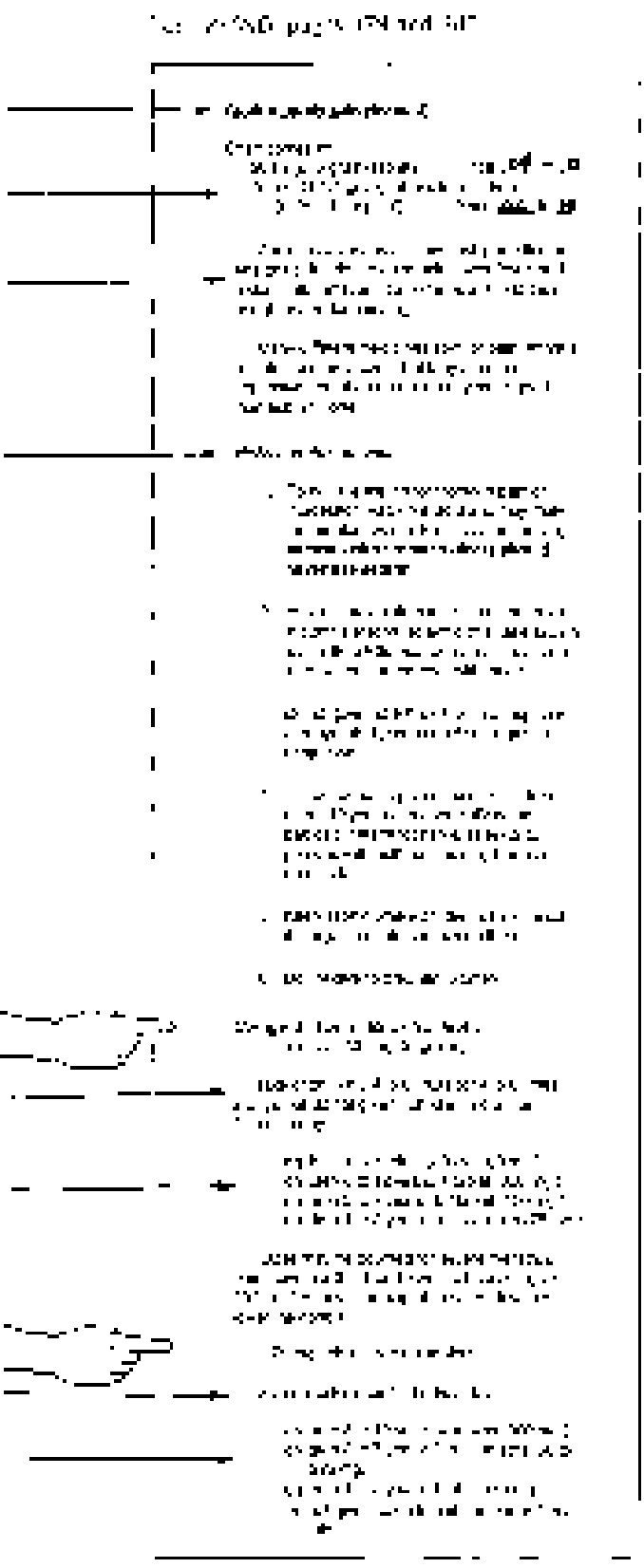
How often to take it

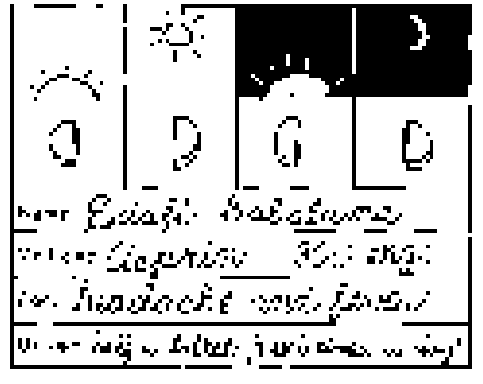
If you have 75 mg "children's aspirin", read here.

How much for the baby or child you are treating

How often to take it

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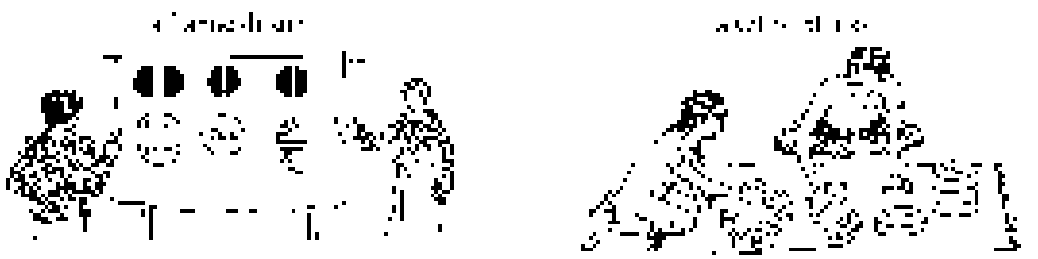
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Calculating the dosage



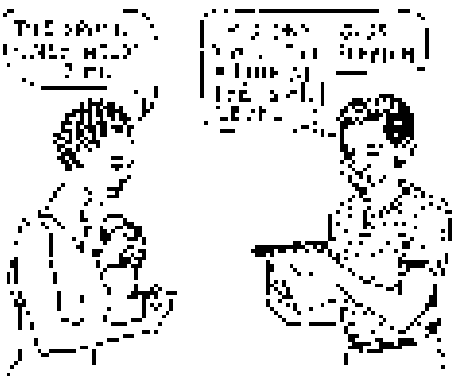
...Magnification, page 62

Teaching aids for learning about fractions and milligrams



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If you have a local health worker, ask him or her to help you with the following exercise. Two volunteers should play the roles that should be clear from the pictures of different ages.





Each student should then give the correct medicine for each problem listed. Ask the student to explain how often the medicine should be given and for how long. For example, the correct answer for problem 1 is: Give 1 tablet of ASPIRIN. A standard teaspoon should measure 5 ml, but it can vary in many areas.

Practice in giving medicines to people

Students can practise in pairs. Provide a list of problems and the medicines that should be given. The student should then explain to the other student how the medicine should be given. Students should practise giving medicines to people in their own village. They should explain how often and for how long.

Many medicines must be taken for a long time. Some medicines must be taken for the rest of the person's life. Some medicines must be taken only when the person has a problem. Some medicines must be taken only when the person does not have a problem.

- Decision to take the medicine
  - Person's own decision
  - Someone else decides (e.g. mother, doctor)
- Does the person have to remember to take the medicine, or is someone else responsible for giving the medicine? (e.g. mother, husband)



Many medicines will have more than one problem they can help. Many medicines have more than one problem they can help. Many medicines have more than one problem they can help. Many medicines

For many types of infections it is important to keep taking the medicine for a few days after the signs of illness have gone. For example, if someone with malaria stops taking the medicine too early, the illness may return.

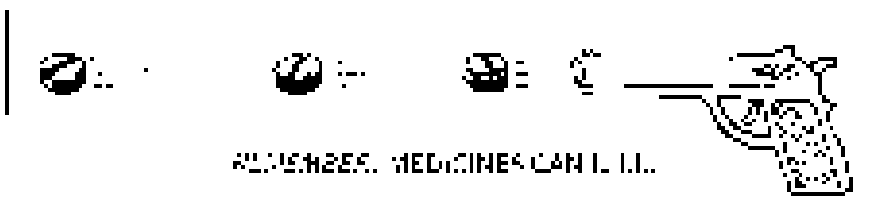
Malaria	3 days
Amoebic dysentery	5 days
Typhoid	7 days
Bacterial dysentery	5 days
Bronchitis	7 days
Tuberculosis	at least 1 year after signs have disappeared
Tetanus	at least 2 weeks



It is also important to check that everyone understands how to take the medicine. Ask people what they have been told about the treatment. Here are some questions you could ask to check that they understand:

- "How often do you take this medicine? And for how many days?" If they say "three times a day for three days", they may stop taking the medicine too soon.
- "Can pregnant women take this medicine?" (Some medicines are not safe for pregnant women.)
- "Can breast-feeding women take this medicine?" (Some medicines can harm a baby.)
- "Is it safe to take this medicine with food or drink, or with other medicines?" (Some medicines do not work well if taken with certain foods.)
- "Does this medicine have any side effects?" (Some medicines can cause problems if taken for too long.)
- "What other medicines should not be taken at the same time as this medicine?"

During training — both in role playing and in clinical practice — be sure health workers give all the necessary advice for each medicine they recommend.



WITH A LITTLE KNOWLEDGE, SOME MEDICINES CAN PREVENT SUFFERING AND SAVE LIVES.

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CHAPTER 19

Aids for Learning to Use Medicines and Equipment

This chapter describes methods for demonstrating practical skills and knowledge about the use of antibiotics and the measurement of blood pressure.

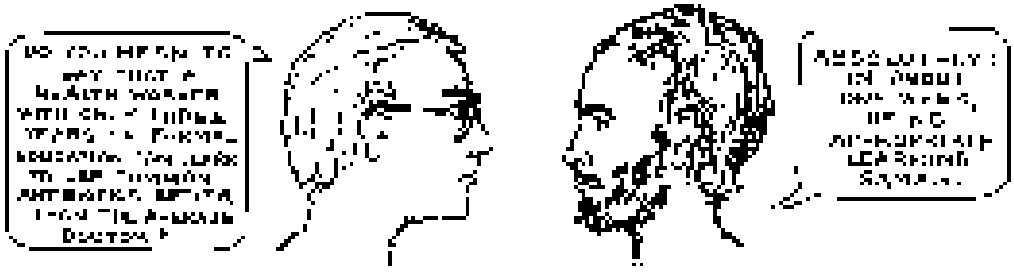
Many health workers have received little or no training in how to use medicines and equipment. Instead, they learn by watching and copying other health workers. Unfortunately, this method of learning often leads to poor practices being passed on from one health worker to another. Training health workers in the correct use of medicines and equipment can greatly improve the quality of health care.

LEARNING TO USE ANTIBIOTICS WISELY

In Chapter 18 we discussed the misuse of medicines. For example, antibiotics are often used to treat illnesses that usually cannot be improved by antibiotics. In addition, many health workers prescribe antibiotics for too short a time. This encourages the development of resistant germs (see Box 17.2, p. 301). In addition, many health workers do not know how to use antibiotics correctly. As a result, they often choose the wrong antibiotics, inadequate doses, or the wrong way to give them.

Teaching health workers to use antibiotics correctly presents challenges. Lectures and demonstrations can help, but they are not enough. Practice and feedback are essential if health workers are to learn new skills. Some programs have found that it is helpful to have health workers sign a form promising to use antibiotics correctly. Then, after training, they are given a copy of the form to remind them of their promise.

You can help health workers after a few days of appropriate training and practice, village health workers can select and use common antibiotics more wisely than the average doctor.



The training described in this chapter was developed by Dr. Tony Smith and Dr. Alan Lloyd. Both worked for the Leprosy Mission in Nepal. The training was tested in Nepal and Bangladesh. Dr. Smith and Dr. Lloyd have written a book for health workers called *Where There Is No Doctor*.

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THE TEACHING METHODS AND AIDS

It is important not to use medicines when they are not needed. But for certain infections caused by bacteria, the correct use of antibiotics is of great benefit and can even save lives. Health workers need to have a clear understanding of . . .

- when antibiotics are needed
- when they are not needed or are likely to be harmful
- which of the common antibiotics to use for different infections and why
- the relative advantages and disadvantages of different antibiotics (effectiveness, risks, side effects, and cost)
- how to give them and with what advice

On the following pages, we describe a set of teaching aids that has been used very successfully for learning games about antibiotics. They help health workers understand the basic principles behind the proper use of these medicines. The aids were developed by Project Piaxtla, in Mexico, and can be made by the students themselves (although this takes a good deal of time and is perhaps best done in advance).

Two learning games have been developed. The second follows from the first. Both require sets of cards and figures, which can be made by following the patterns we show on these pages. Or you can adapt them by using local symbols. If you prepare the figures for use on a large flannel-board, everyone will be able to see them clearly.

A set of color slides showing these teaching aids will soon be available from TALC or the Hesperian Foundation (see p. **Back**-3). It is possible that TALC will also distribute a flannel sheet on which the figures for the games are printed, ready to cut out.

After using these games to learn the basic principles for the use of antibiotics, students can play with the games to test each other.

The first learning game helps health workers understand how common antibiotics work and what their effects are—both beneficial and harmful. These different effects are summarized on the next page.



THE FIRST ANTIBIOTIC LEARNING GAME—
demonstrated by Pablo Chavez of Ajoya, Mexico

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Beneficial effects

[illegible]

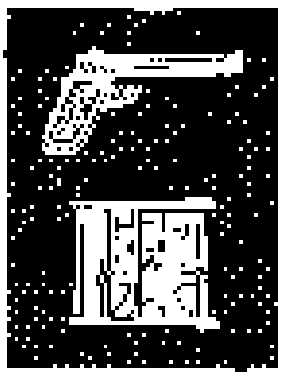
1. [illegible]

ANTIBIOTICS THAT ATTACK FEW KINDS OF BACTERIA:	ANTIBIOTICS THAT ATTACK MANY KINDS OF BACTERIA:
NARROW-RANGE ANTIBIOTICS	BROAD-RANGE ANTIBIOTICS

2. [illegible]

Some germ-killing substances kill bacteria ——

Other substances only capture them or slow them down ——



Soldiers can use all of these weapons, but figures like these remind us that only some kill outright.

[illegible] only capture them.

Other germ-killing substances kill some germs and only capture or weaken others.

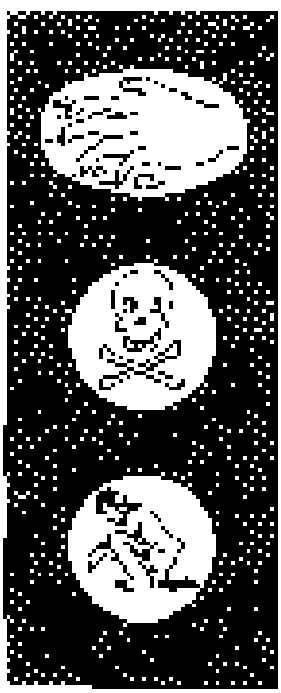
Harmful effects

Avoiding unhelpful effects of antibiotics and other medicines

1. Some antibiotics cause allergic reactions in certain persons. These reactions do not depend on the amount of medicine given, but on whether the person is allergic to it (see WTWD, p. 85).

2. Some antibiotics cause poisoning or 'toxic' reactions, especially if more than the recommended amount is taken (see WTWD, p. 86).

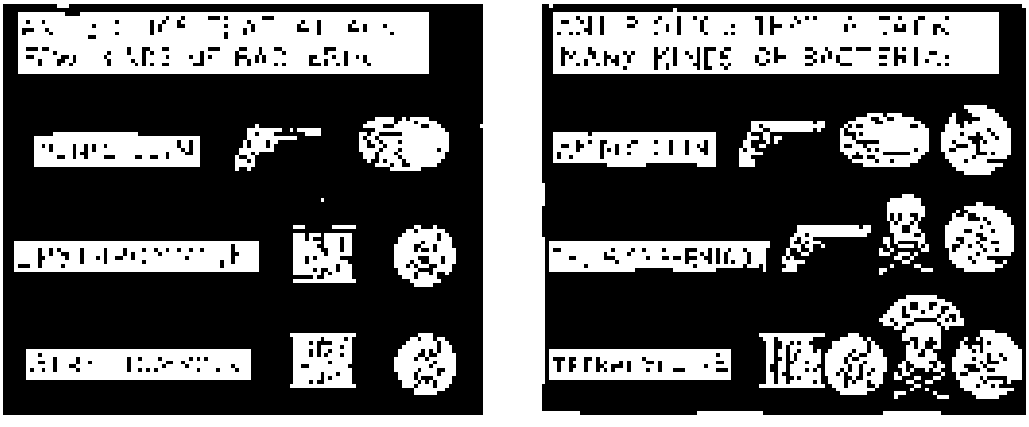
3. Broad-range antibiotics sometimes cause diarrhea, 'thrush', and other problems. This is because they kill [illegible] (see WTWD, p. 86).



Anything that represents a skull and crossbones is a warning.

Avoid [illegible] poisonous medicines. If there is a risk of [illegible] [illegible] [illegible]

THE FIRST LEARNING GAME



Now [illegible] antibiotic [illegible]

[illegible]

Developing guidelines for choosing antibiotics

[illegible]

First guidelines: [illegible]

1 USE AN ANTIBIOTIC THAT KILLS BACTERIA RATHER THAN ONE [illegible]

2 USE AN ANTIBIOTIC THAT CAUSES FEWER SIDE EFFECTS AND [illegible]

3 [illegible]

4 USE A BROAD RANGE ANTIBIOTIC [illegible]

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Additional guidelines for further learning:

> Take care not to burden students with too much at once. These additional guidelines can be introduced little by little when playing the games and discussing the uses of different antibiotics.



5. USE ANTIBIOTICS ONLY FOR BACTERIAL INFECTIONS! Do not use them for viral infections, because **antibiotics do nothing against viruses** (common cold, measles, chicken pox, etc.).



6. BE CAREFUL NEVER TO GIVE MORE THAN THE RECOMMENDED DOSE OF A TOXIC (POISONOUS) ANTIBIOTIC. However, it is usually not dangerous to give higher doses of an antibiotic that is not poisonous (penicillin or ampicillin). For example, it is all right to use penicillin for months or even years after it has expired, and to increase the dose to allow for any loss of strength. (But **tetracycline becomes more poisonous when old. It should never be used beyond the expiration date or in more than the recommended dose.)**



7. DO NOT USE AN ANTIBIOTIC THAT SLOWS DOWN BACTERIA TOGETHER WITH AN ANTIBIOTIC THAT KILLS THEM. The combination is often less effective than one alone. (Once the bacteria are captured or slowed, they stay hidden where the other antibiotics cannot kill them.) For example, never use tetracycline in combination with chloramphenicol.



8. WHENEVER POSSIBLE, AVOID USING A TOXIC MEDICINE FOR A PERSON WITH DIARRHEA OR DEHYDRATION. A dehydrated person's body cannot get rid of poisons as quickly in the urine. Even normal doses of a toxic medicine may build up and poison the person. (Sulfas are especially risky for treating diarrhea. Unless the person is making a lot of urine, sulfa can form crystals in the kidneys and cause damage.)



9. DO NOT USE TOXIC MEDICINES DURING PREGNANCY—ESPECIALLY DURING THE FIRST 3 MONTHS. Some medicines can cause severe birth defects.



10. USE A MEDICINE THE FAMILY CAN AFFORD. When choosing between medicines, always consider the relative cost, and weigh this with other advantages and disadvantages.

THE SECOND LEARNING GAME

This game helps students use the guidelines from the first learning game to practice choosing antibiotics for specific infections.

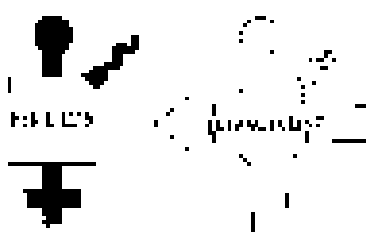
This photo of the second antibiotic learning game was taken in Ajoya, Mexico. The game is discussed in detail on the pages to follow.



THE SECOND ANTIBIOTIC LEARNING GAME

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1. THE ANTIBODIES: [illegible]



[illegible]

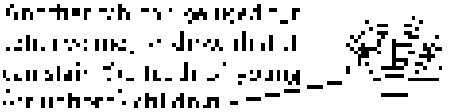
[illegible]

[illegible]

[illegible]



[illegible]

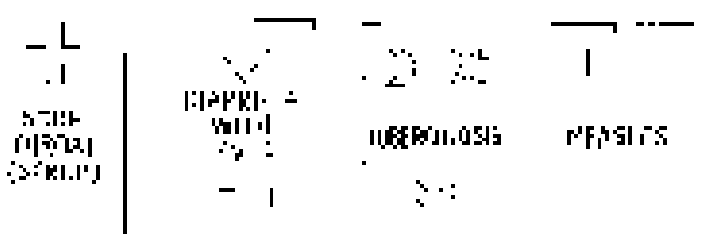


[illegible]



[illegible]

2. [illegible]: After preparing the antibody [illegible] cards to represent [illegible] you have in your [illegible] each card, cut out shapes to match the receptors of the [illegible] that can fight that infection.



[illegible]

In this way, the receptors of an [illegible]

As each child [illegible] Figure out [illegible] gets [illegible] by [illegible] 191 [illegible] as appropriate for your [illegible] to make up new ones as needed.

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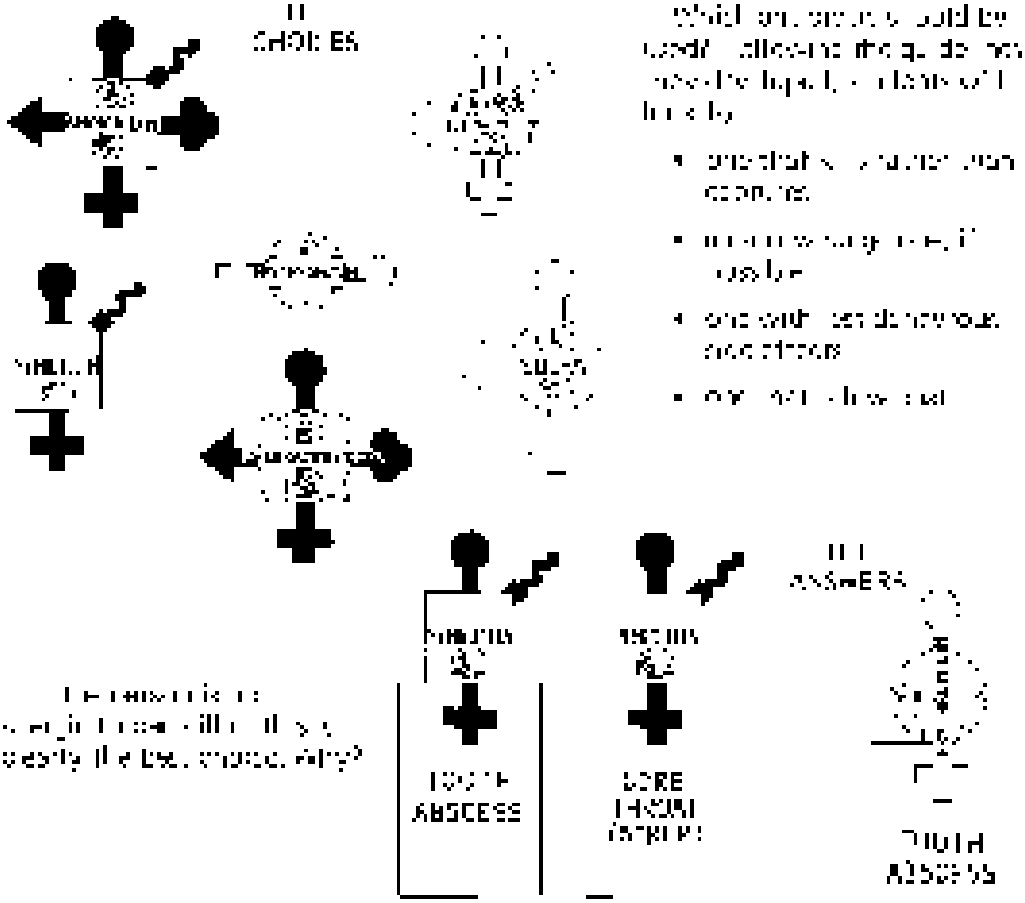
Choosing the most appropriate antibiotic

Students can now play a game of choice, deciding what antibiotic they would prescribe for each of the problems and how they would administer it.

THE PROBLEMS

EXAMPLE 1: Choosing an antibiotic for a tooth abscess or mouth infection.

The cards below show the 8 different antibiotics listed on page 19.6. Choose the one which is the most appropriate for the tooth abscess.



Which antibiotic would be best because it kills the bacteria that cause the infection?

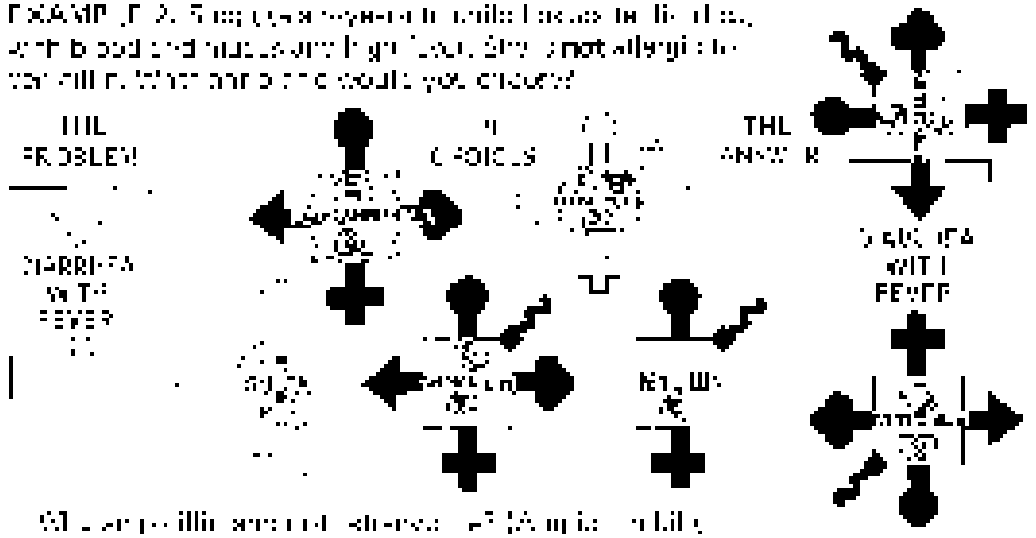
- is inexpensive
- is given by mouth if possible
- is not destroyed by stomach acid
- [illegible]

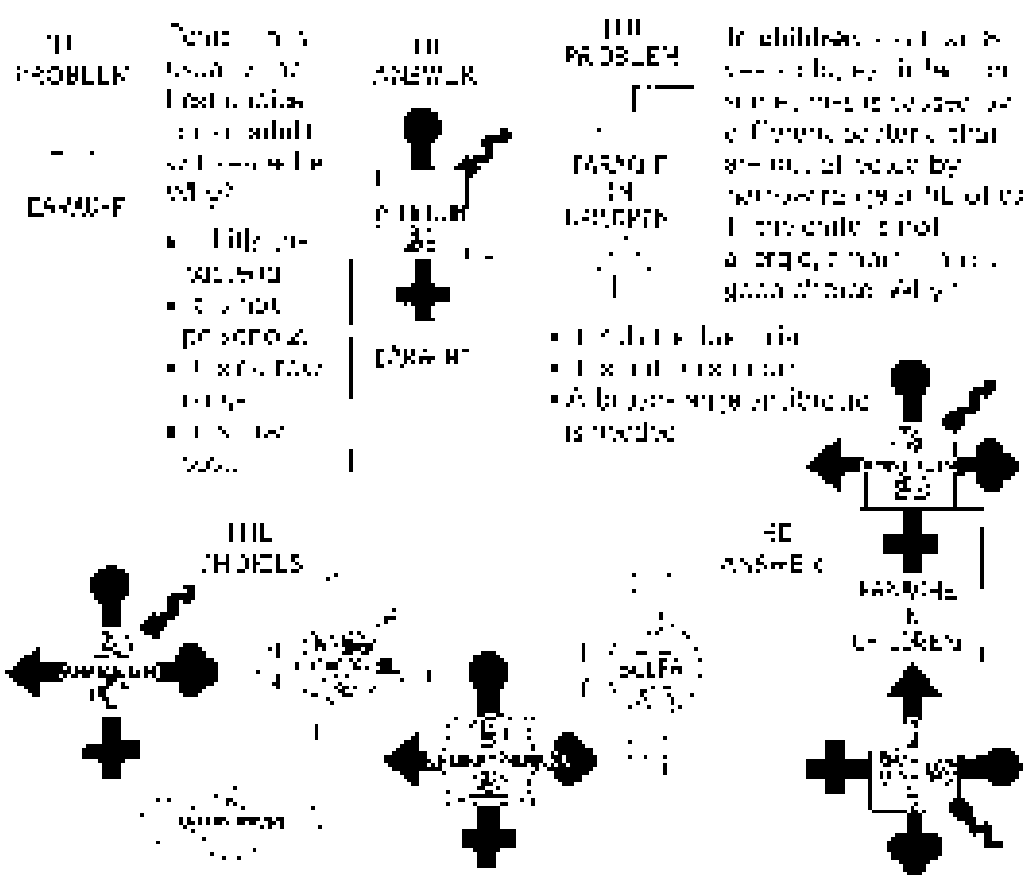
The person is allergic to penicillin. Which antibiotic is now the best choice? Why?

The person is allergic to penicillin and has a stomach ulcer. Which antibiotic is now the best choice? Why?

Why is erythromycin the best choice for a sore throat? Because it kills the bacteria that cause sore throats. It is inexpensive. It is not destroyed by stomach acid. It can be given by mouth if the person is unable to swallow. [illegible] Which is the best choice? Why?

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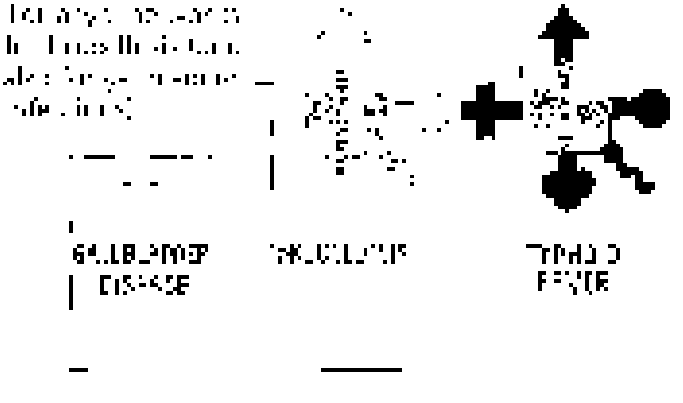




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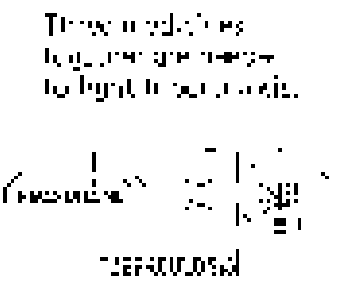
Antibiotics with special uses

Some antibiotics are especially effective for certain diseases.



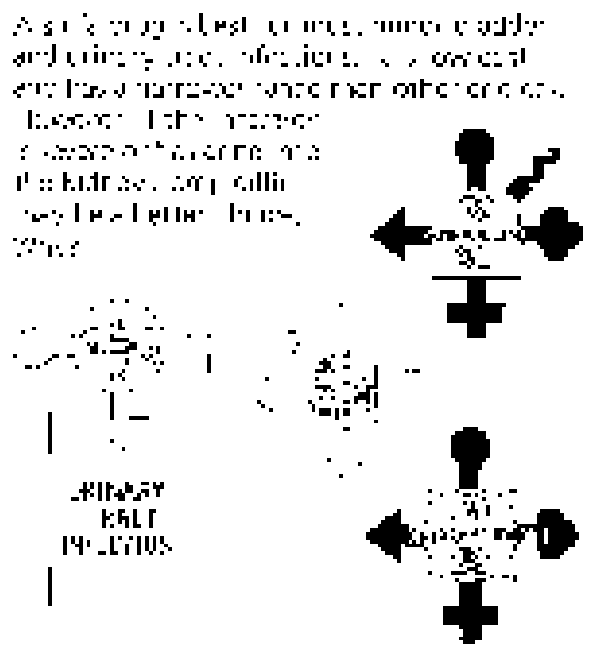
GALLBLADDER DISEASE

TYPHOID FEVER

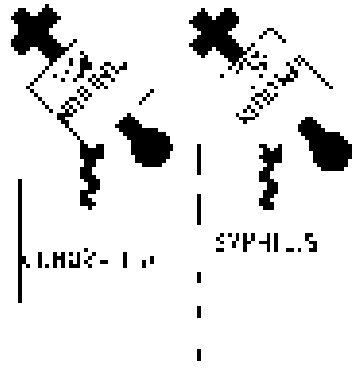


TETANUS





URINARY TRACT INFECTIONS



SYPHILIS

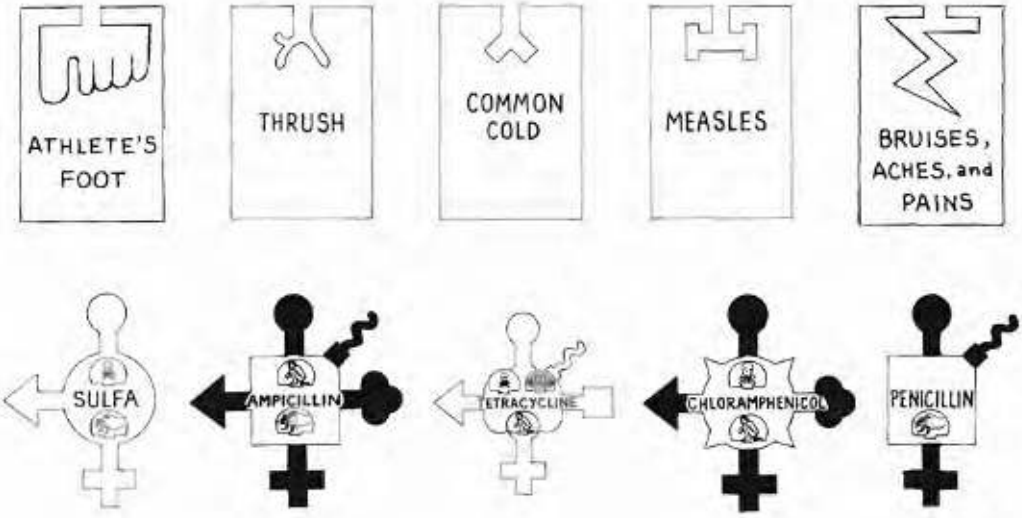


When not to use antibiotics

No antibiotic helps the common cold or measles, as these infections are caused by viruses.

Nor do antibiotics work for fungus infections (thrush or moniliasis). In fact, the opposite is true. Using a broad-range antibiotic for several days can actually cause a fungus infection. If this happens, the person should usually stop using the antibiotic.

To help students realize the limitations of antibiotics, include cards for viruses, fungus infections, and other problems in the game. Students will search for antibiotics to fit them—and find none. That way, they will discover which diseases are not helped by antibiotics. This is an important lesson!



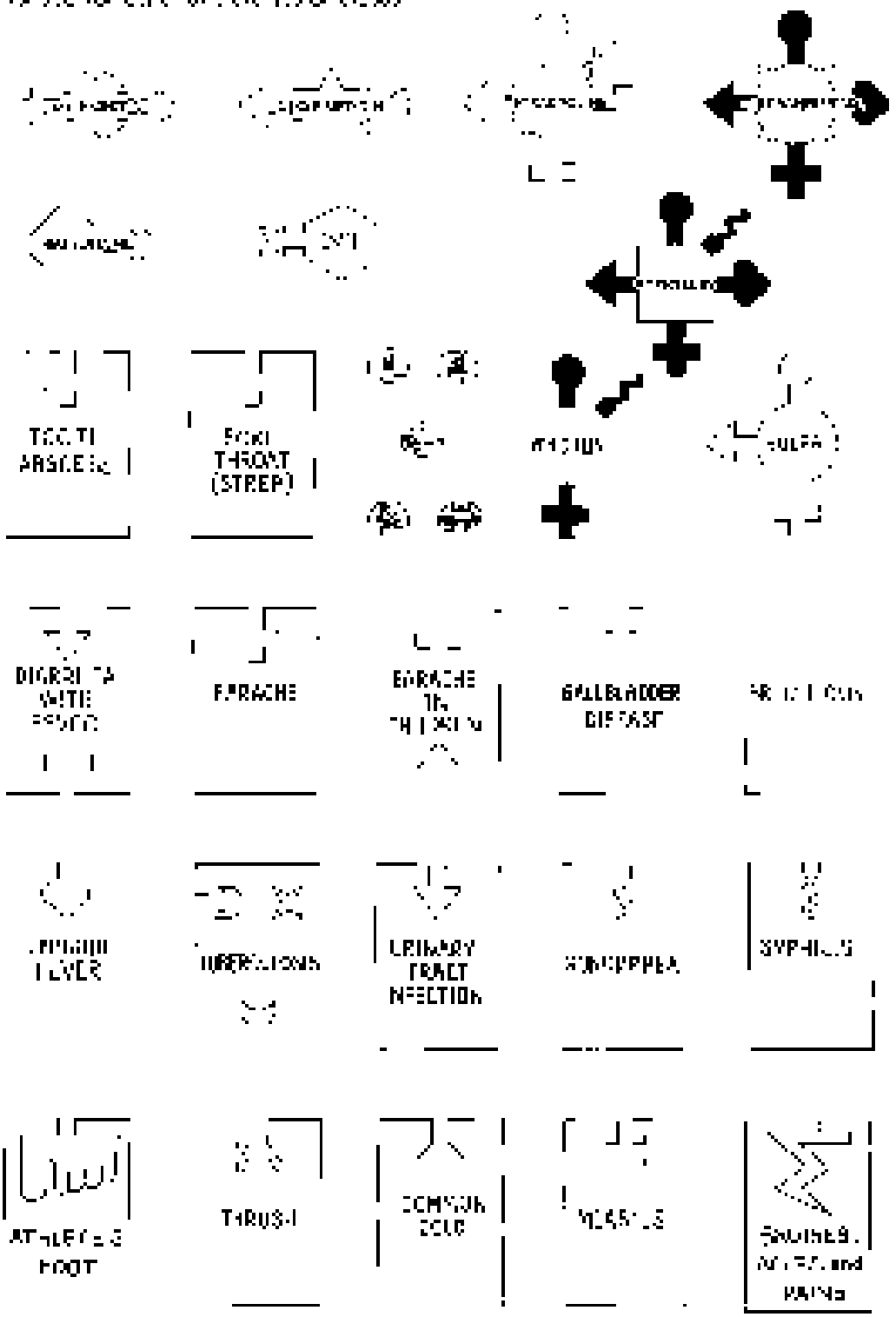


A student tries to find an antibiotic that will work for 'thrush'. At last he gives up—because there is none.

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PICTURES NEEDED FOR THE SECOND ATTRIBUTE LEARNING GAME

Use the pictures on this page for your second game. You will need pictures for other attributes as well.

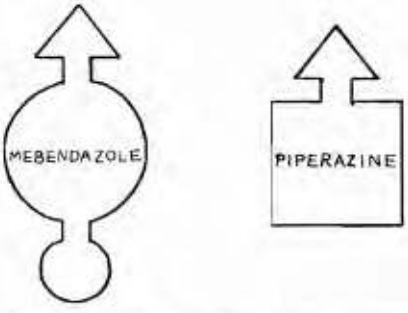


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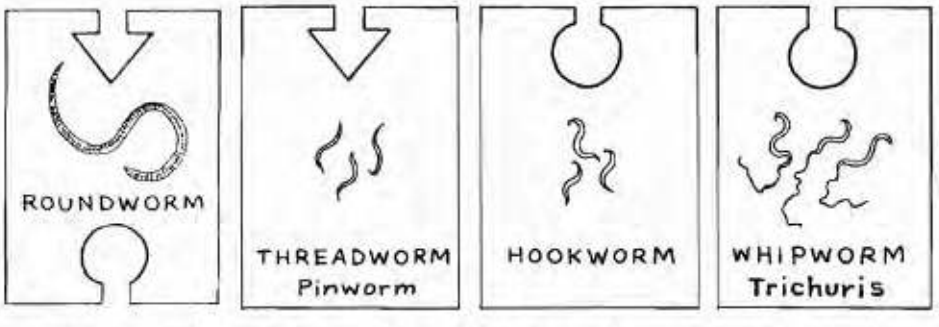
THE USE OF MEDICINES FOR WORMS AND PARASITES

Teaching aids like the second antibiotic game can also be used for learning about the medicines that fight different parasites and worms in the gut. Again, students can make a set of cards to use on a flannel-board.

Each medicine is represented by a figure with projecting 'weapons' that indicate the worms or parasites it can fight. For example:



Cards representing the different parasites and worms have cut-out shapes to match with the projecting 'weapons' of the appropriate medicines. For example:



To be sure things are clear, use the common names of worms along with drawings.

By making up games and testing each other with these cards, students have fun and at the same time learn the correct use of worm and parasite medicines.



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LEARNING TO MEASURE BLOOD PRESSURE

Some health programs [illegible] blood pressure. [illegible] pressure [illegible] pregnancy, [illegible] high blood pressure [illegible] pregnancy [illegible] pregnancy [illegible] high blood pressure [illegible] pregnancy [illegible] pregnancy [illegible] pregnancy

2. Continue to slowly release the pressure while watching the dial. Take the second reading when the sound of the pulse begins to fade or disappear.
   This is when the pressure in the cuff is just below the pressure in the artery (diastolic pressure). This is the pressure between pulses. It is normally 60 to 90 mm.

When you record a person's blood pressure always write down the top and bottom numbers. For example, if the top number is 120 and the bottom number is 80, you write "BP 120 over 80" and you say "one twenty".

BP $\frac{120}{80}$ or BP 120/80 — 120 is the top (systolic) reading.
80 is the bottom (diastolic) reading.

For the rest of this unit we will refer to blood pressure as the "top" and "bottom" numbers. (TN and Rbp = The illustrations in this unit were drawn by Rbp.)

A SIMPLE AID FOR LEARNING ABOUT BLOOD PRESSURE

The following explanation of the top and bottom blood pressure numbers is difficult for many people to understand. Because it is important, you may need to spend a great deal of time helping people understand it. Practice using the blood pressure machine and how the pressure cuff works.

Materials needed: 1 rubber tube (about 1 meter long)
1 small bottle (about the size of a soft drink bottle, 2 to 3 cm wide, with a piece of rubber glove cut to cover the top)
2 identical clumps of equal size (bring a small rock)

Method: In the rubber of the bottle and the clump of rock. Put the other end in the bottle.



The person holding the bottle will feel the pressure in the bottle.

Each time the bulb is squeezed, the pressure in the bottle will increase. The person holding the bottle will feel the pressure increase. The bulb will pop back to its original shape. The pressure in the bottle will decrease. The person holding the bottle will feel the pressure decrease.

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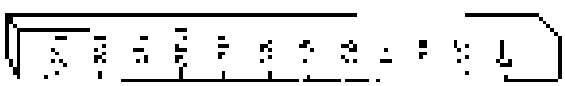
DOES NOT LIFT



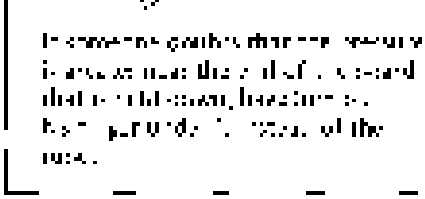
LIFTS WHEN PULLED



STAYS LIFTED







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Points to cover when teaching about blood pressure:



- Before health workers begin to measure blood pressure, they must know how to use a stethoscope. [illegible] to find the pulse at the wrist before putting the stethoscope on the arm. [illegible]

- [illegible] Blood pressure rises when a person is afraid or excited. It also rises when a person is angry or in pain. [illegible] Blood pressure is usually taken after the person has been sitting quietly for a few minutes. [illegible]

- Measure blood pressure when the person is not [illegible] Blood pressure is [illegible] [illegible] [illegible]

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PART THREE

LEARNING TO USE THE BOOK, *WHERE THERE IS NO DOCTOR*



[illegible]

[illegible]

[illegible]

- [illegible]
- [illegible]

[illegible]

LEARNING TO USE BOOKS RATHER THAN RELYING ON MEMORY



[illegible]

[illegible]

Training should not focus on memorizing a lot of information, but on LEARNING HOW TO LOOK THINGS UP

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Combining literacy training with health skills: Because being able to read things on signs and writing important words correctly is so important to people's health, it is a good idea to combine literacy training with health training. Students can learn to read and write health words while they are learning about health. Books like *Where There Is No Doctor* and *Where Women Have No Doctor* will help you do this. Health workers who are literate can also help their patients learn to read and write health words.

SCHEDULED CLASSES ON 'USE OF THE BOOK' DURING HEALTH WORKER TRAINING



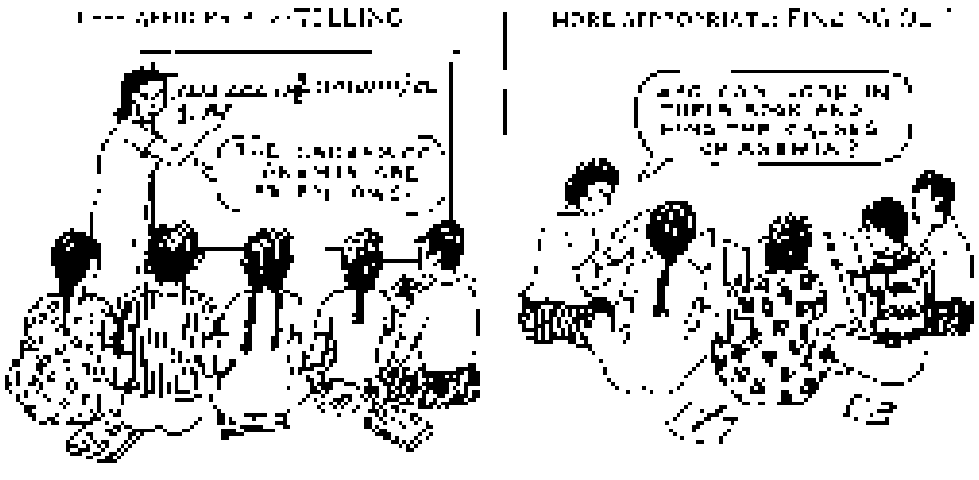
In the first training course in Ajoya, Mexico, the staff of the local health project used *Where There Is No Doctor* throughout the course. They scheduled regular classes on how to find information in the book and how to use it. They put numbers on the pages of the book and made a table of contents. They gave students practice in looking up things in the table of contents. They also had students read aloud from the book in class. They gave students practice in looking up things in the table of contents. They also had students read aloud from the book in class.

As much as possible, these classes on 'Use of the Book' are coordinated with the other subjects being taught, and connected to daily work. They should not be isolated study periods, and should not be too frequent. Scheduling is important, but it is also important to be flexible. Use your judgment to decide when to have these classes.

Building 'Use of the Book' into other classes and activities

It is important that students not only learn how to look up information in the book, but also that they learn to use the book as a tool to help them in many parts of their daily work. This means that:

> During any class, if you have a choice between telling students something or having them find and read it out loud from their books, have them read it from their books!



- you tell students things that they can learn to look up for themselves

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WAYS HEALTH WORKERS CAN USE THIS BOOK

1. As a reference book for diagnosis, treatment and other advice on how to solve problems

2. As a tool for teaching yourself and others



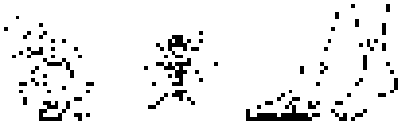
- Find exercises for people teaching others that relate to the illness



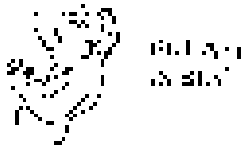
- Prepare a lesson plan based on a problem discussed in the book



- Choose pictures and discussions about the illness to use for classroom work



- Find exercises for health workers and others to do in groups



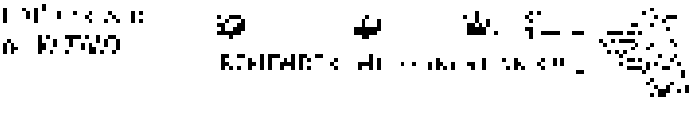
- Find exercises to help people learn new skills



- Find ideas for simple equipment that health workers can make



- Find ideas for songs, games and stories to help people learn



4. As a guide for discussions and role plays and to find other ways of teaching



- As a source of information on community health illness and injuries
  - Accident first aid
  - Child health and pregnancy problems
  - Nutrition problems
  - Simple medical treatments



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SHARING THE BOOK:

EXAMPLES FROM DIFFERENT COUNTRIES

By looking things up in her book together with people, a health worker takes some of the mystery out of medicine. This puts the health worker and other people on equal terms, and gives people more control over their own health.



A health worker in Ajoya, Mexico shows two children the pictures of worms in *WTND* and asks them what kind they have.



Pictures from *WTND* have been used for posters in the CHILD-to-child program (see Ch. 24). Here a child shows the importance of keeping poisons out of reach.



Here health workers in the Philippines use *WTND* to learn about fractures, bleeding, and shock in a role play.





A health worker from Guatemala uses his book in preparing a poster about 'oral rehydration'. A group of curious school children look on. Together they learn about health problems, drawing, teaching, and sharing of ideas.

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HELPING OTHERS LEARN TO USE THE BOOK

Where There is No Doctor was written to help people who live far from medical help, who have little money, and who have little formal education. It is meant to be used by people who have had no training in health care. It is also meant to be used by people who have had some training, but who want to learn more. It is not meant to be used by people who have had a lot of training in health care. Such people usually have other books that they prefer to use.

Where There is No Doctor was written by people who live in a village. It is not written by people who live in a city. It is not written by people who live in a country. It is not written by people who live in a continent. It is not written by people who live in a planet. It is not written by people who live in a solar system. It is not written by people who live in a galaxy. It is not written by people who live in a universe. It is not written by people who live in a multiverse. It is not written by people who live in a metaverse. It is not written by people who live in a omniverse. It is not written by people who live in a nullverse. It is not written by people who live in a anti-verse. It is not written by people who live in a pluriverse. It is not written by people who live in a uni-verse. It is not written by people who live in a duo-verse. It is not written by people who live in a tri-verse. It is not written by people who live in a quadri-verse. It is not written by people who live in a penta-verse. It is not written by people who live in a hexa-verse. It is not written by people who live in a hepta-verse. It is not written by people who live in a octo-verse. It is not written by people who live in a ennea-verse. It is not written by people who live in a deca-verse. It is not written by people who live in a hendeca-verse. It is not written by people who live in a dodeca-verse. It is not written by people who live in a trideca-verse. It is not written by people who live in a tetradeca-verse. It is not written by people who live in a pentadeca-verse. It is not written by people who live in a hexadeca-verse. It is not written by people who live in a heptadeca-verse. It is not written by people who live in a octodeca-verse. It is not written by people who live in a enneadeca-verse. It is not written by people who live in a icosa-verse. It is not written by people who live in a henicosa-verse. 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5. Some learners may not [illegible] Ask [illegible] whether they have questions or comments about the [illegible].



Practice: Ask [illegible] whether they have questions or comments about the [illegible].

7. **Page references:** For [illegible] the page number [illegible] look at the table of contents at the beginning of the book [illegible] page [illegible] the table of contents [illegible] the table of contents [illegible] page [illegible] the table of contents [illegible] page [illegible] the table of contents [illegible] page

- **Avoiding mistakes.** [illegible] *Where There Is No Doctor*, using [illegible] Chapter 2, "Sicknesses that are Different Diseases" and Chapter 3, "Diagnosis: Finding Out What Is Making You Sick." Look especially at the parts that tell how to avoid common mistakes in your area. You may even [illegible]  [illegible]

- **Prevention.** [illegible] *Where There Is No Doctor*, especially [illegible] Chapter 4, "Preventing Sickness" and Chapter 5, "Helping Children Grow Well." Then, [illegible]

- **Avoiding mistakes.** [illegible] Chapter 2, "Sicknesses that are Different Diseases" and Chapter 3, "Diagnosis: Finding Out What Is Making You Sick." Look especially at the parts that tell how to avoid common mistakes in your area. You may even [illegible]  [illegible]

- **Knowing when to seek help.** [illegible]
  - [illegible]
  - [illegible]
  - [illegible]

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ADAPTING *WHERE THERE IS NO DOCTOR* TO THE LOCAL SITUATION

The original Spanish edition of ***Where There Is No Doctor*** was written specifically for use in the mountain area of Western Mexico. In the English version, we tried to make the book so it could be used in many different countries. But clearly, a book that can be used in many areas will not be completely appropriate to any single place. Therefore, some of the information and ideas in the book will apply to your area. Others will not. And some basic information will certainly be missing.

Health workers should recognize the limitations of the book and never use it as their 'bible'. (Unfortunately, this has happened in some health programs.)

Ideally, ***Where There Is No Doctor*** (or any reference book) should be adapted or rewritten for each area. This has already been done in some parts of the world.



SENEGAL
(French)



TANZANIA
(Swahili)

The editions in Senegal and Tanzania have been adapted and the pictures redone to fit the local people and customs.

In the Philippines, a completely new book has been written, using ideas from ***Where There Is No Doctor.***



PHILIPPINES
(Ilonggo)

Unfortunately, not every area will have the time and money to write their own villager's health care handbook, or to adapt the whole of ***Where There Is No Doctor.*** Where complete adaptations are not possible, we suggest that training programs produce mimeographed sheets or pamphlets to be used along with the book. These can cover additional information that relates to local needs, problems, and customs. Such information sheets might include:

- Local names of illnesses, and ways of looking at sickness and health.
- Examples of traditional forms of healing: beneficial and harmful.
- Names (including brand names and comparative prices) of medicines that are available locally. Or at least have students write this information into the Green Pages of their books.
- A list of commonly misused medicines and mistaken medical practices in your area, with explanations and warnings.
- Information about the diagnosis, treatment, and prevention of health problems that are important in your area but are not included in ***Where There Is No Doctor.***

Discuss with your students which parts of their books are appropriate to your area and which are not. Encourage them to question the truth or usefulness of anything they read.

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CHAPTER 20

Using the Contents, Index, Page References, and Vocabulary

Many health workers have had little experience using the contents, index, page references, and vocabulary in books. Some may not even know that books have these features. Others may know about them but not realize how useful they can be. Even if you already know how to use these features, you may find it helpful to review them. Then you will be able to help your students learn how to use them.

LEARNING HOW TO LOOK THINGS UP

People who have had little experience using books may find it difficult to look up information in books. In addition to not knowing how to use the contents, index, page references, and vocabulary, some people may not understand why they should learn how to use them. Others may not like to read. Still others may not have the habit of looking things up in books. Because they do not know how to look things up in books, they may not see the importance of learning how.

Early in the training course, take time to show students how to use their books. Help students who have no experience. Students can guide others in practicing how to look things up. The following are some points you may want to explain.

Page numbering

The pages in most books are numbered. Look at the bottom of this page. You will see the number 200. This is page 200. Each page has a different number. The first page is usually page 1. The last page is the highest number in the book. Look through the pages in this book.

Open the book somewhere in the middle. Look at the page number. Find another page. Look at its number.



Turn to the first page. Look at the number. Turn to the last page. Look at the number.



Now open the book to page 130. Turn to page 130.



Many people do not look at the numbers. They open books to the middle. They look at the pictures. They look at the first few words on the page. They look at the last few words on the page. They look at the words in the middle of the page. They do not look at the page numbers. They do not look at the numbers at the top of the page.

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Alphabetical Lists

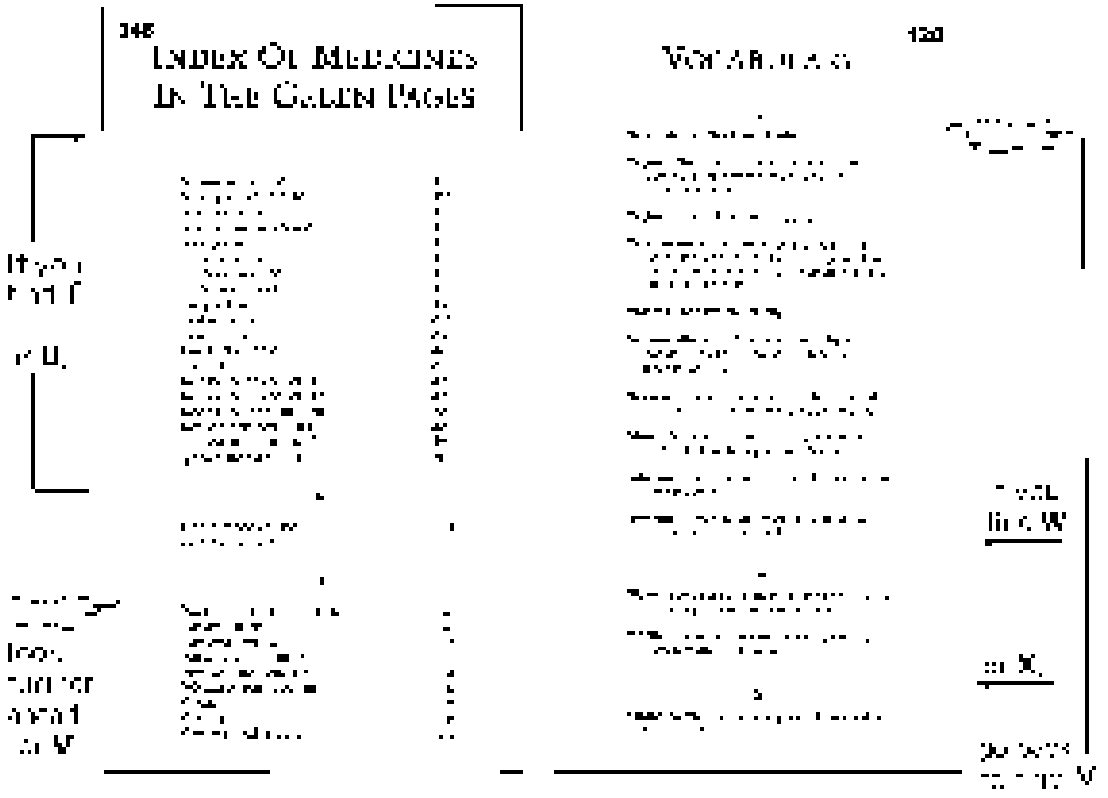
Where There is No Doctor has several reference lists that may be helpful when you look for information. These lists are arranged in alphabetical order:

- The INDEX (on pages [illegible]) lists many topics and the page numbers where they can be found.
- TI – INDEX OF MEDICINES in the YELLOW PAGES to help you find the page on which a medicine, drug, or treatment can be found. This tells you what it is used for and what to know about it.
- TI – VOCABULARY to look up the meaning of words that are used in the book. Other words are explained as they are used.

In each of these lists, the words are arranged as they are in the alphabet, from A to Z. For example, A comes before B, and B comes before C.

Suppose you want to look up "Vomiting". Decide what letter you will look under. If you are interested in medicines, a definition, or a full discussion of vomiting, you can find it in the YELLOW PAGES in the VOCABULARY or in the INDEX.

First look for the large dark letters in the corner of each page. You will see that each page has two letters because it is near the end of the alphabet.



After you find W, start reading for "Vomiting" or "Vaccination" and "Vitamins".

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Using the INDEX (yellow pages) of *Where There Is No Doctor*

When you look up a word in the Index for example, page numbers are the dark numbers in bold type, such as the word "diarrhoea". For example:

page 147 for "Diarrhoea"

page 241-242 for "Vaginal discharge"

and

page 175 under "Worms"

What numbers do you find for "Worms"?

If you find several words listed in the Index under one item, these are usually listed in the order of importance. For example, for "Vomiting" you find:

If you do not find the word you are looking for in the INDEX, look for a similar word. For example, if looking for "Worms" and you find "Roundworms", look under "R" for "Roundworms". Practice looking for words in the INDEX.

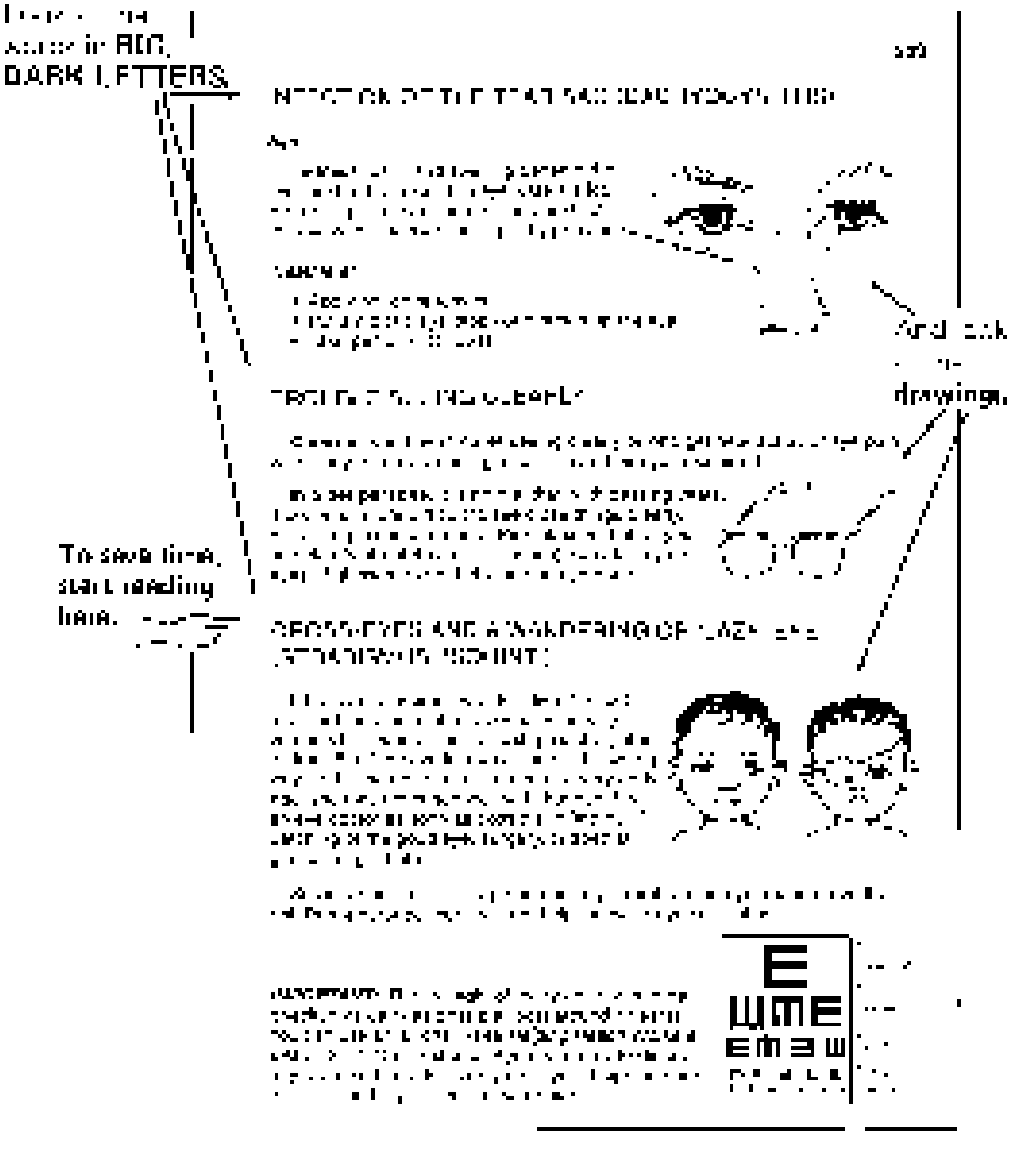
Practice at finding things in alphabetical lists will make it easier for health workers to use the INDEX and VOCABULARY.



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Finding what you are looking for on a page

When you look for something in a book, you usually look over the whole page. To find what you are looking for, you must look at the page with your eyes moving. You must look at the INDEX to find the page number. Then you look at that page number on page 223. But, where on page 223 should you look? Here are some hints.



When you get to the bottom of the page, be sure to check if there is more on page 223.

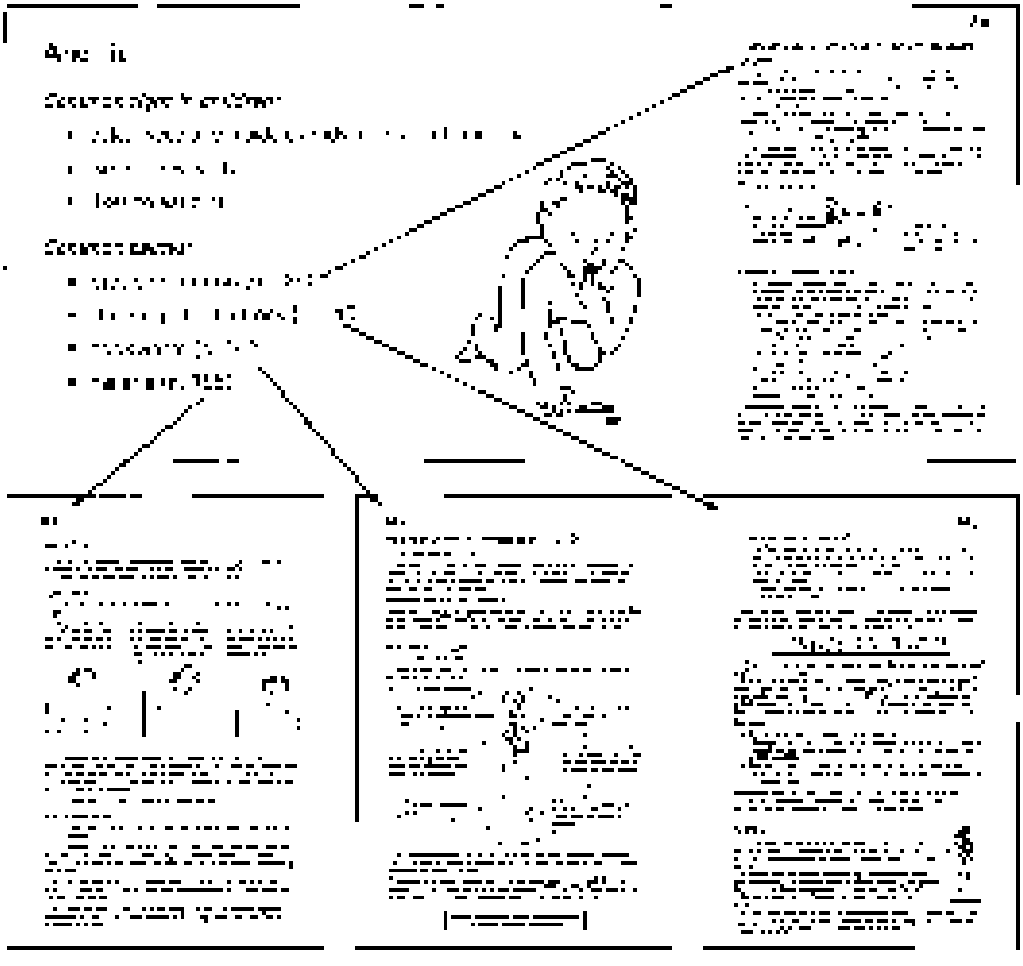
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Looking up page references

Since you have read about the books you will be looking up, you may want to find other pages mentioned in the text. These are usually referred to in parentheses (inside curved brackets), for example, "(see page 142)" or simply "(p. 142)". Do not skip over these. They will help you find more information, such as:

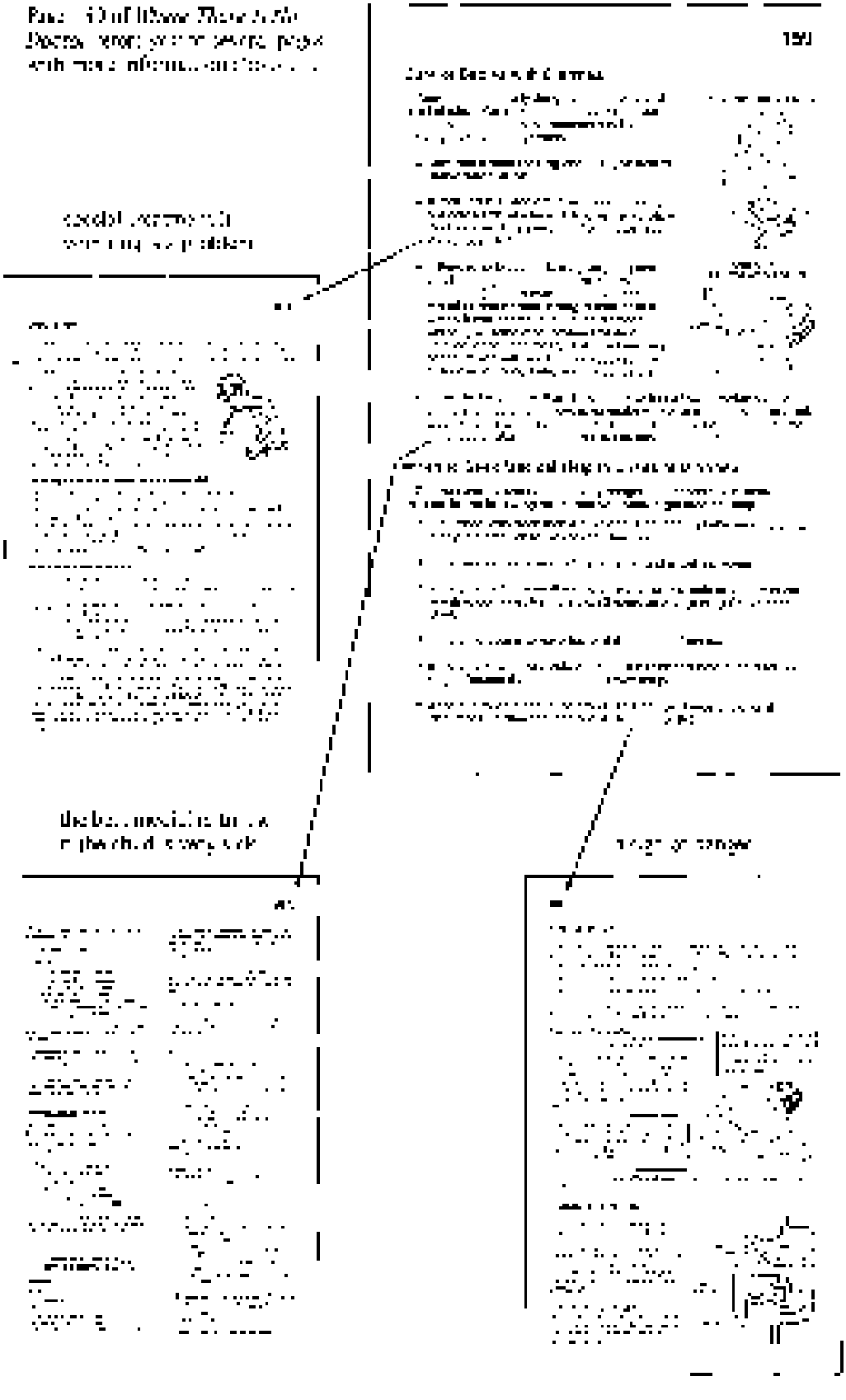
- a number of different ways to look up a topic in the table of contents
- how to find a topic in the table of contents
- how to find a topic in the table of contents, then in the table of contents
- how to find a topic in the table of contents, then in the table of contents
- how to find a topic in the table of contents, then in the table of contents
- how to find a topic in the table of contents, then in the table of contents

Page 207 of How Users Are Developing Their Own Solutions (Illustrated Edition)



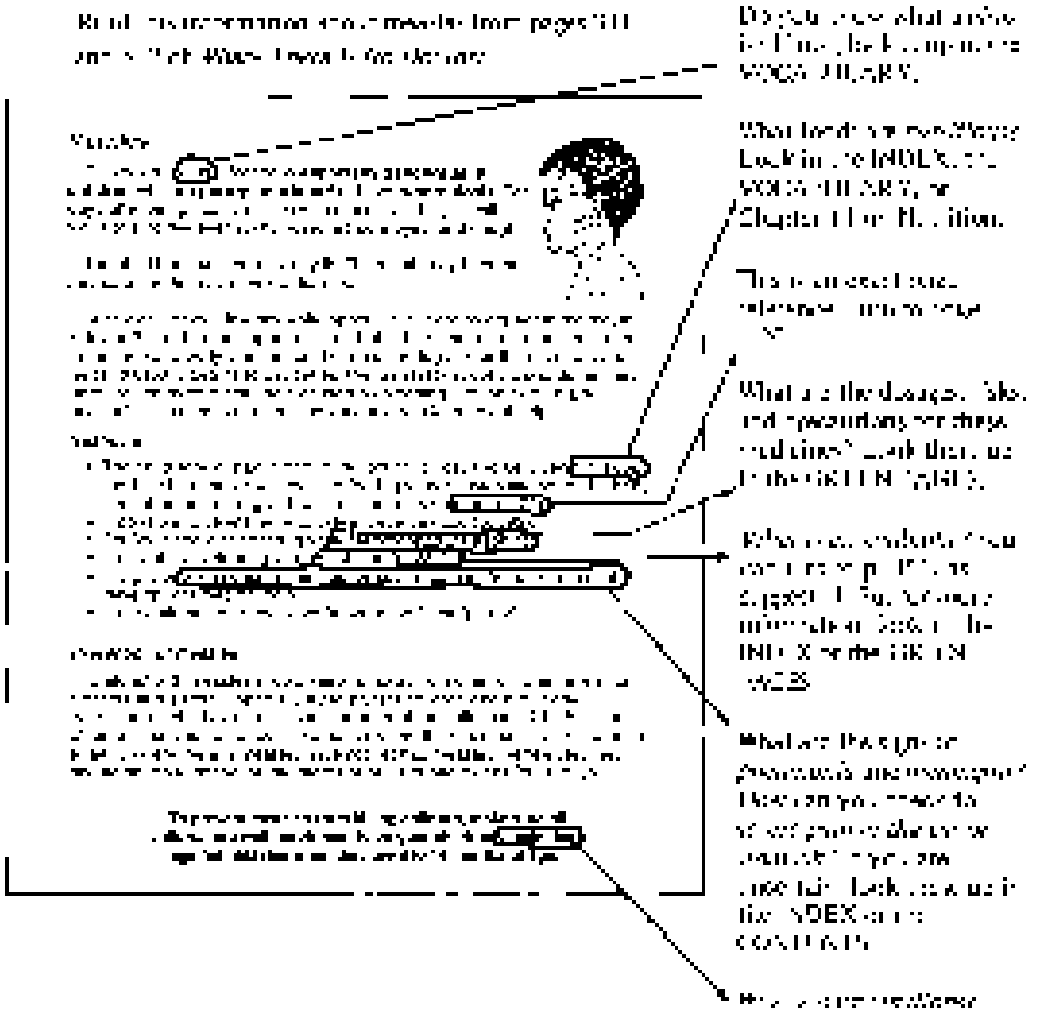
Also point out how a reader may need to look up a topic in the table of contents (see page 124 above) and then look up a topic in the table of contents (see page 48 above). Check students' ability to follow the arrows.

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Looking up related information—even when page references are not given



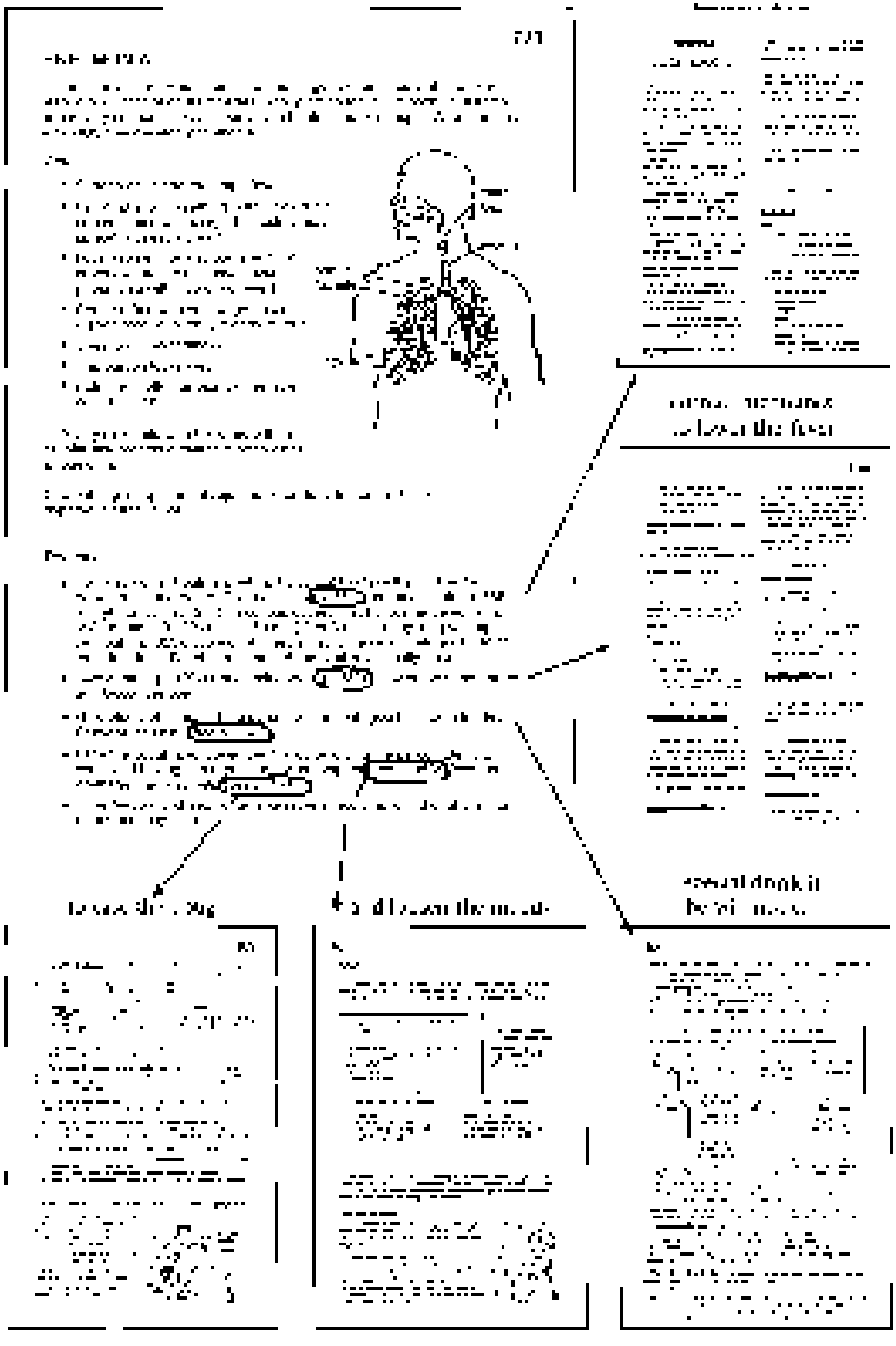


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PRACTICE IN READING AND USING THE BOOK

[illegible] gives students a good chance to develop [illegible] Where There Is No Doctor—especially the CONTENTS and INDEX on the [illegible].

[illegible] person can [illegible] the [illegible] but could [illegible] can help students find [illegible] the [illegible] and [illegible] the [illegible] says [illegible] [illegible] [illegible]



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Using the GREEN PAGES to find information about medicines

Read the role play and then act it out in your group using WORD.

For example, one person pretends to be the mother of a [illegible] and the other pretends to be the health worker. The mother tells the health worker that her child has worms.



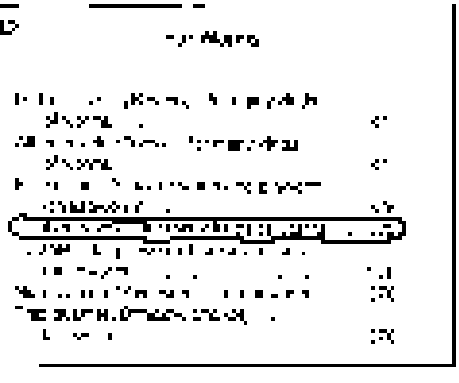
The health worker says that she will give the mother some medicine called Mintezol, saying that it is good for all kinds of worms.



But before giving it to her son, the mother wants to know more about the medicine. She asks the health worker what it is for, how it works, and if there are any side effects. The health worker tells her that Mintezol is good for worms in the stomach.

Then the health worker tells the mother to look up Mintezol in the GREEN PAGES. She says she will help her to find it.

LIST OF MEDICINES



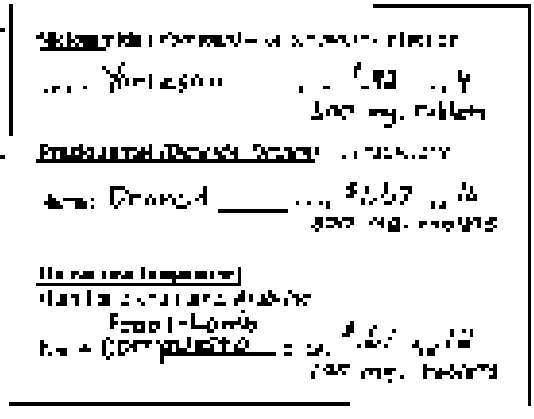
INDEX OF MEDICINES



Read the role play to your group. Then, together, the health worker and the mother should look up Mintezol to find out what the medicine can be used for. They notice that the description says nothing about tapeworm.

So the health worker tells the mother that Mintezol would probably not be useful for her son's tapeworm.

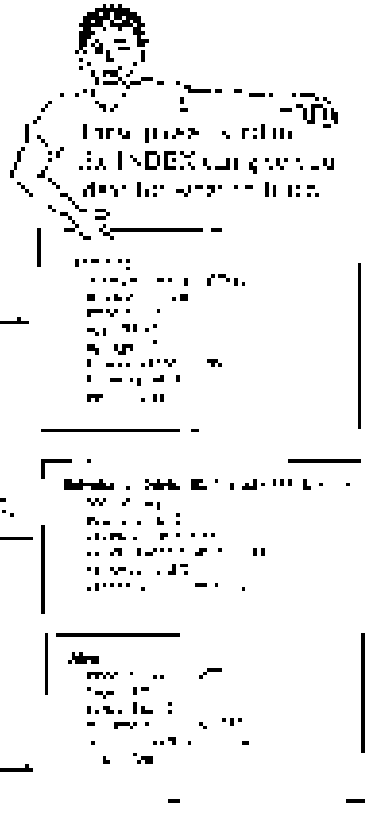
Look back over page 20 of WORD. There you will find 3 medicines that do work for tapeworm (Niclosamide (Yomesan), [illegible] praziquantel (Biltricide, Droncit), and purging croton, [illegible] Albendazole. Read about the risks and precautions, and copy out the correct and complete dosage for one adult and one child. The words will help you. Then role-play with your partner, using one of these medicines. Or you can give each other information during the role play. Be sure all students write down the correct dosages.



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[illegible] [illegible] [illegible] [

Using the INDEX or CONTENTS to plan classes or for independent study



Using the INDEX or CONTENTS to plan classes or for independent study

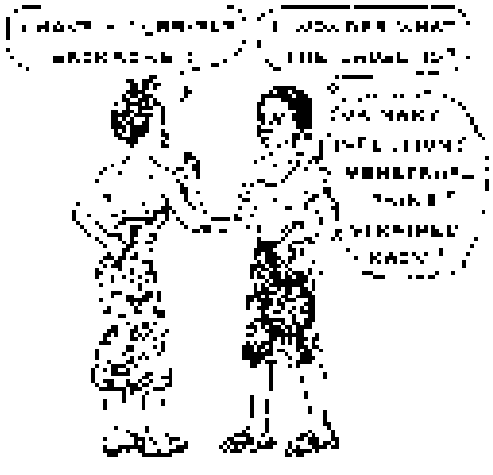
Using the INDEX or CONTENTS to plan classes or for independent study

Using the INDEX or CONTENTS to plan classes or for independent study

CHAPTER 21

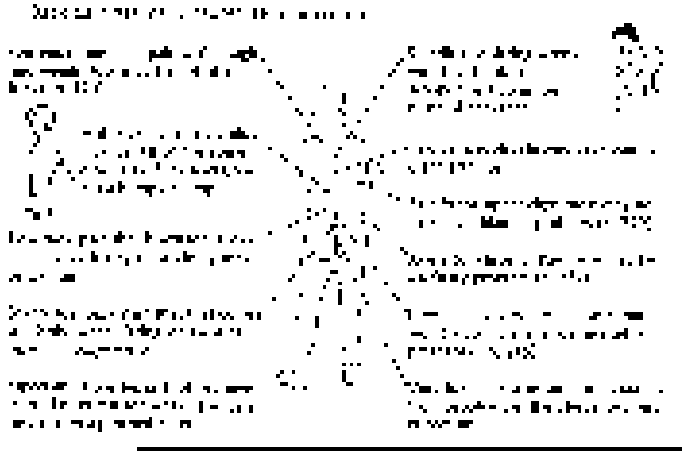
Practice in Using Guides, Charts, and Record Sheets

GUIDES AND CHARTS THAT HELP TELL DIFFERENT PROBLEMS APART



A page from a guide to diagnosis in *Where There Is No Doctor*

back pain



Learning to use diagnostic guides and charts.

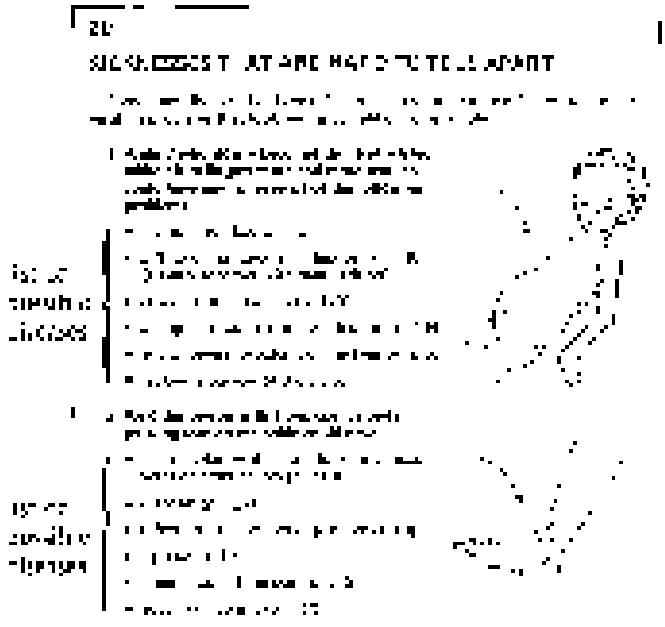
Where There Is No Doctor contains several guides and charts that can help you to tell what kind of problem a person has. These charts could be used in a health post or health center, in a village, or in the home. They are designed to help you figure out what is causing a problem. Compare the signs and symptoms of each problem to determine what kind of problem it is.

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[illegible] the various diagnostic charts and guides, and explain how to use them. [illegible] the problem [illegible] [illegible] [illegible]

LEARNING TO TELL SIMILAR PROBLEMS APART

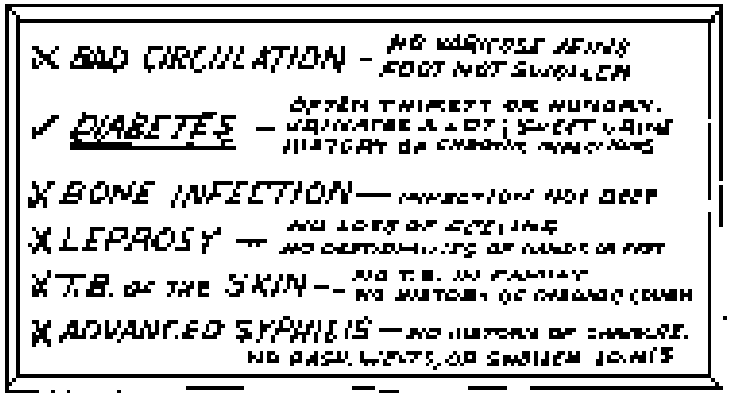
A good way to introduce the idea of consecutive diagnosis is to work through it with a group of health workers. Here they will find 2 examples showing similar looking problems that can be confused by many health workers.



The students can take turns role playing each of the actors or causes. Each person who acts out a particular problem should be given a piece of paper with a sign and a brief description of him. In the role play, the whole class then questions and examines each person in turn to find out what is making him ill. The class can then discuss the role playing and the information it has revealed.

During each role play, students can list the possible causes of the problem on the blackboard. Then write the reasons that make each one more or less likely.

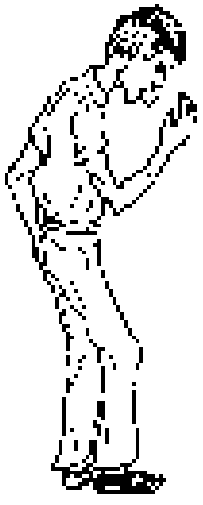
Facts and symptoms that help you to decide whether a wound is caused by diabetes, the blackboard might look like this after role playing.



Many people [illegible] the kinds of questions they should ask to find out what is causing the problem. Then they will [illegible] the problem. Each person should keep track of his or her questions, tests, findings, and decisions in a notebook or other record sheet. After each of the problems is discussed afterward in class, each student will have a written record of what he thought and why.

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LEARNING TO READ CHARTS

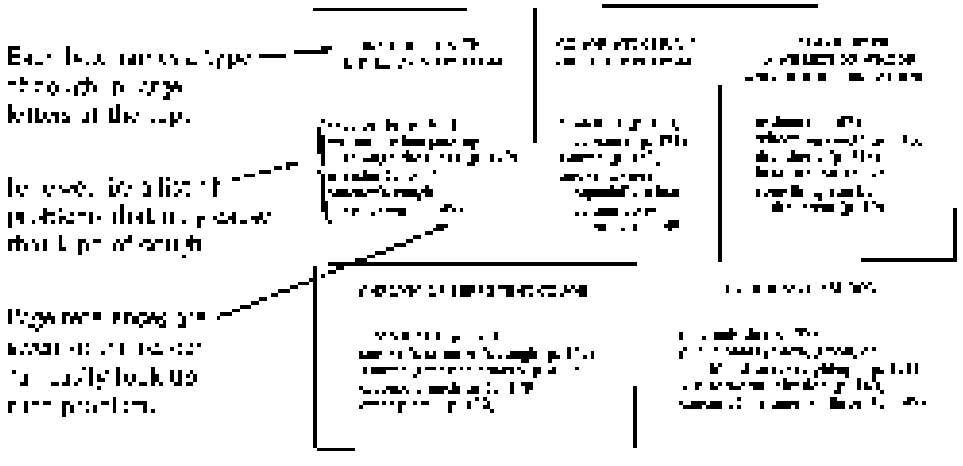


Many health workers visit new health posts, join training to understand and use charts. Show students how to find their — and their clients' — place on the chart. Help them [illegible] Explain and demonstrate how to use charts. Have them practice using charts in role-play exercises and study questions.

For example, if a sick person's main complaint is a cough, students can look at page 1 of *Where There Is No Doctor*. There they will find pages that lead to the sections that discuss different kinds of coughs. Ask questions such as:

- What does this chart mean?
- How can it help us find the cause of the person's cough?

The chart has 5 rows.



To use the chart, explain and demonstrate that:

- Find the first question: Does the person have a cough? If so, the 5 types of cough in the chart can help find the cause.
- Then look at each problem listed in that section of the chart. Read more about the typical signs and symptoms of each.
- Note: Some of the problems listed may require the person to take some kinds of drugs (medicines). Be sure to explain any drugs mentioned. (Chapter 17).
- Remind students to consider all of the possibilities. Do not make the diagnosis until you have made sure that other causes are less likely.

> Make sure students understand that their check-ups must include as many possible causes of a problem as they can think of. They must not make a diagnosis too early. If the diagnosis is not clear, it is safer to refer the patient. They should never be ashamed to ask for help.

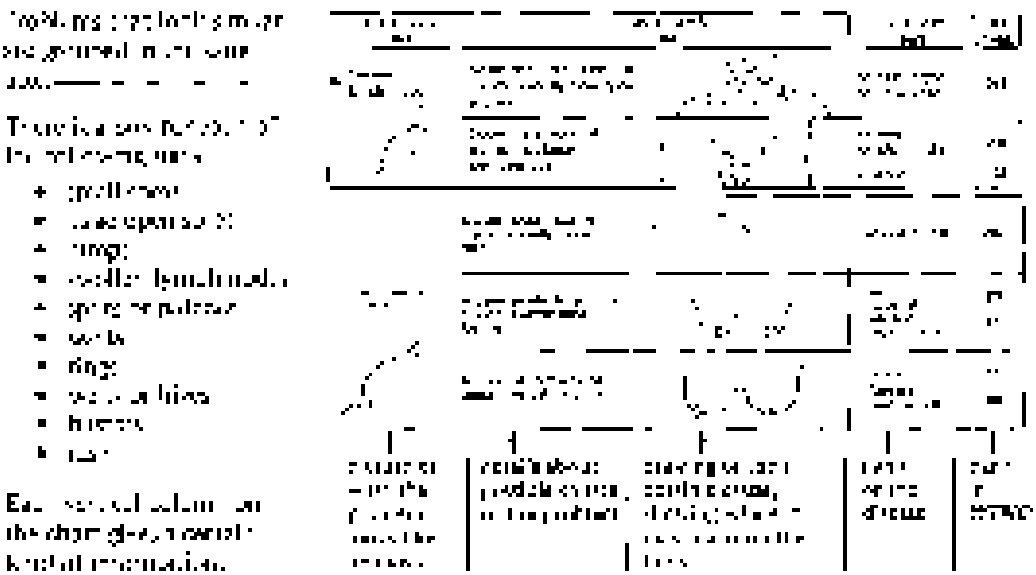
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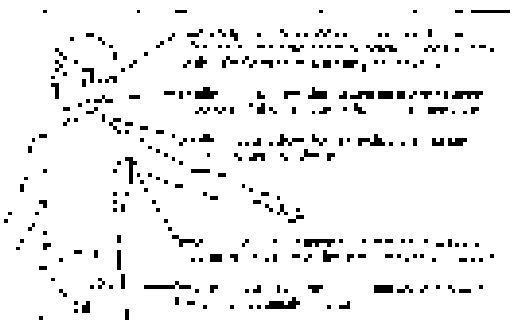
AN EXAMPLE OF HOW TO LOOK SOMETHING UP USING CHAPTERS OF THE INDEX

Suppose you are trying to find out what to do for a child who has a rash, and you want to know the possible causes. There are 3 chapters that have something to do with rashes:

1. **The Guide to Identification of Skin Problems**, which tells you HOW to find out Where There is No Doctor. It has drawings and descriptions of many skin problems. You can read it to learn about skin problems in general, or you can look up a specific problem in the table of contents. The rash is not named, so you have to read through it.

2. To make the most use of this guide, read the sections that describe the problems you are interested in. Some information is organized





2. Discussion of swollen lymph nodes [illegible] WHO. [illegible] [illegible] [illegible]

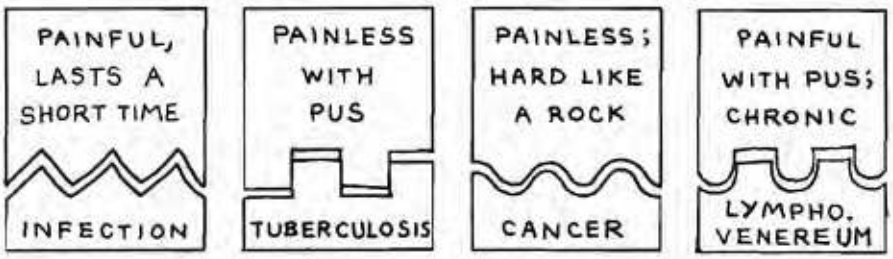
BASING TEACHING MATERIALS ON CHARTS OR GUIDES

Many of the charts and guides in *Where There Is No Doctor* can provide ideas for teaching aids that help health workers to practice comparative diagnosis. Here are two examples from Project Piaxtla in Mexico.

Example 1: Swollen lymph nodes

During one training course, health workers made a flannel-board puzzle to help themselves review the different kinds of swollen lymph nodes. The puzzle is based on information from pages 88, 196, and 197 of *Where There Is No Doctor.*

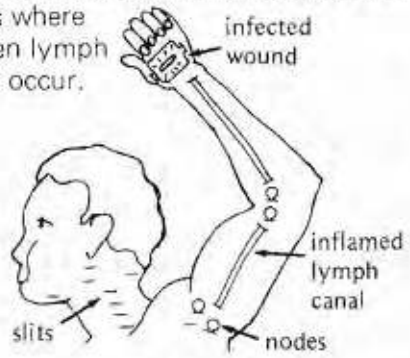
First they made puzzle cards showing on one half the signs of a problem causing swollen lymph nodes, and on the other half the name of the problem that most often causes those signs.



They chose 3 colors to represent signs of different kinds of swollen lymph nodes:

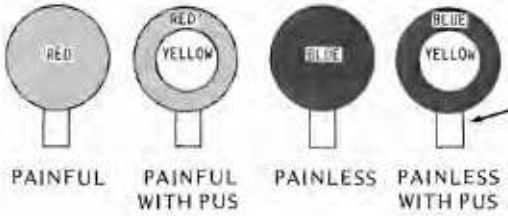
RED = PAINFUL BLUE = PAINLESS YELLOW = WITH PUS

Then the students made a figure of a man, with slits cut in the neck and other places where swollen lymph nodes occur.





Next they cut out and colored 4 kinds of cardboard lymph nodes:



The 'nodes' have tabs that fit into the slits in the cardboard man.

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The student health workers first practice with the puzzle cards to learn the signs of each problem. Then they use the big drawing of the man to review the different problems and where on the body they appear.

The students take turns placing the colored nodes, wound, and lymph canal pieces on the cardboard man to show the signs of problems described in ***Where There Is No Doctor.*** They challenge each other to correctly identify and find the treatment and prevention for each problem they create.

Test yourself. Can you name the probable causes of the swollen lymph nodes shown in these photos?



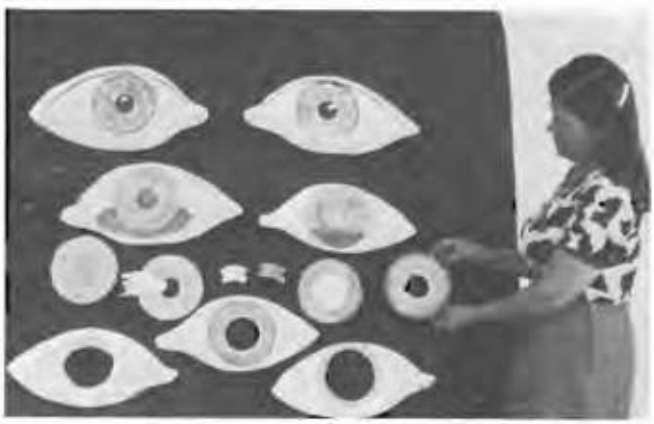
By making these teaching materials themselves and testing each other with the puzzle cards, health workers soon learn to recognize the different problems.

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Example 2: Eye problems

During another Project Piaxtla training course, the student health workers made a flannel-board puzzle for eye problems. It includes most of the problems described in Chapter 16 of ***Where There Is No Doctor.*** The students cut out and colored cardboard pieces to represent the whites of the eyes, irises, and lenses. They also made cut-outs of blood clots, Bitot's spots, corneal scars, fleshy growths ***(pterygia),*** pus, and so on. One 'white of an eye' they colored yellow to represent jaundice.

Then the students took turns putting the pieces together on the flannel-board to form specific problems. The group used their books to try to identify the problems and find recommendations for treatment.



HERE ARE SOME EXAMPLES:

This eye is normal.



This eye is very painful. What is the problem? (See *WTND*, p. 221.)

This eye has bleeding behind the cornea. What should you do? (See *WTND*, p. 225.)



This eye has pus behind the cornea. What should you do? (See *WTND*, p. 225.)

People sometimes call the two problems below 'cloudiness' in the eye.

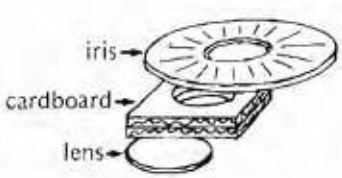
But a scar on the cornea is on the surface.



And a cataract is a cloudy lens behind the pupil.

shadow

To determine whether clouding in the pupil is a cataract, health workers can shine a flashlight sideways into the person's eye. If there is a cataract, a moon-shaped shadow is seen on the clouded lens. To get the same effect in the teaching aid, put a ring of thick cardboard between the iris and the lens.



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GUIDES AND CHARTS THAT TEACH SAFE LIMITS



An essential part of training a community health worker is giving him information. What should he say to a mother who asks him about her baby's weight? When should he send a child with a high fever to the medical aide?



The answers to these questions will be different for each health worker. They will depend on the local conditions in each village and from village to village. When considering these questions, health workers should also be encouraged to do research. Some questions to be asked include the following:

- How common are various health problems in your area?
- How much can a health worker be trusted to do?
- How much medicine should be kept in the health worker's home?
- How much medicine should be kept in a village, and by whom should it be kept?
- What criteria should be used to decide when to refer a patient to a medical unit for treatment?
- How much cost should be charged for each medicine given to a patient?
- Can the family afford the emergency transport cost of available medical services?
- What do you do when a child is not getting better, but you have run out of medicine?

Finally, it is important that health workers understand the principles behind emergency measures. Then they will be able to adapt their actions to changing circumstances. Health workers should not be memorizing lists of rules. They should understand the principles behind the rules.

Where There Is No Doctor has several guidelines which help the health worker to recognize when medical complications may be developing. Each guideline tells the health worker when immediate emergency measures should be taken.

GUIDES AND CHARTS INDICATING NEED FOR SPECIAL CARE

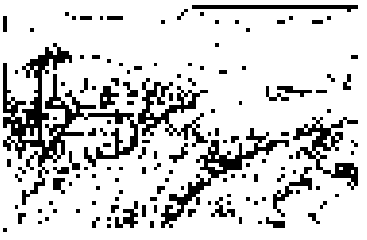
	page
[illegible]	[illegible]
Weight loss in a baby or young child	56
Signs of dehydration	56
Common problems in pregnancy	76
Signs of trouble during labor and delivery	104
Signs of trouble after delivery	210
Signs of medical emergency in newborn baby	230

Charts and guidelines like these can help health workers to recognize when a patient's condition is getting worse. They can also help health workers to recognize when a patient is getting better. Then the health worker can stop giving medicine and can tell the patient when to stop taking medicine. Charts and guidelines can help health workers to avoid giving too much medicine or too little medicine. They can help health workers to avoid giving medicine for too long or too short a time.

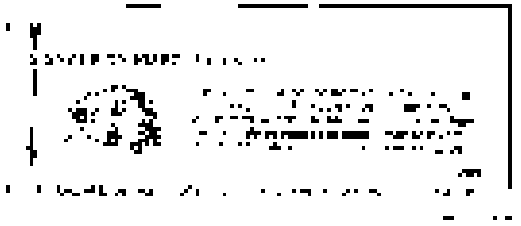
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Stories that help students to explore limits and (re)charts

STORY 1: A child with severe pneumonia

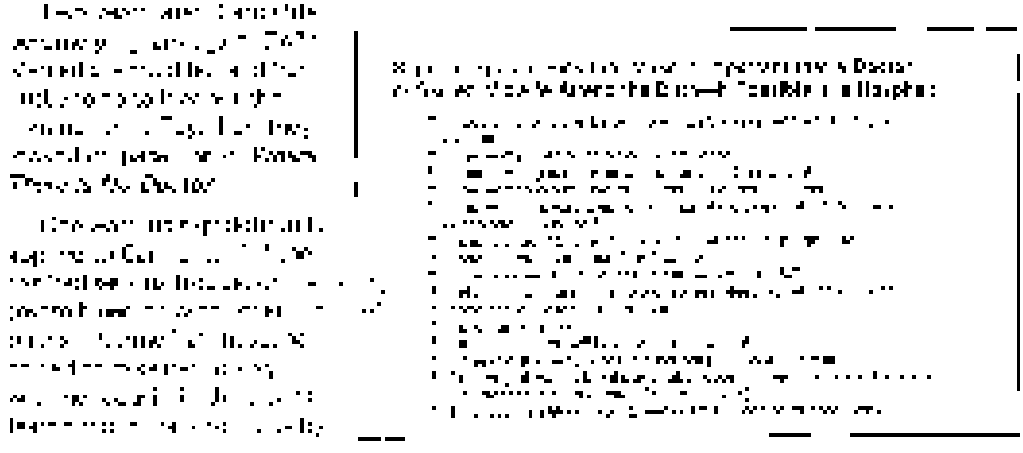


STORY 2: A child with emergency



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Discussion questions



- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]

Note to instructors: Before your reading group meets, ask a group of health workers you know to read the story "[illegible]" in the book *Where There Is No Doctor*. Ask them to think about the questions above. Then lead a discussion with them about the story.

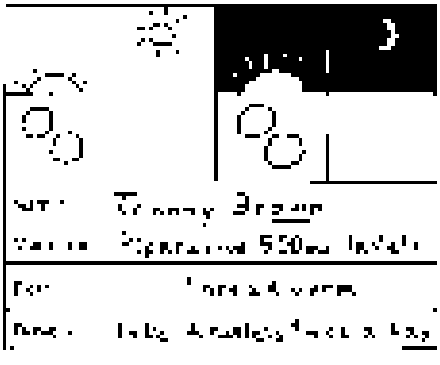
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PRACTICE IN USING RECORD SHEETS

In the study of teaching a role-play for practice in using record sheets is discussed on page 106. Here are other exercises for practicing methods and forms that help health workers learn about recording personal health information.

Which Does It Do Better? Look at the 4 different forms for recording health information.

PATIENT REPORT CARD (WHO, p. 44). This is designed for adolescent girls and boys who are being treated for tuberculosis. It helps the health worker and the patient keep a record of the patient's progress in taking medicine. If the person is referred to a hospital or clinic



DISEASE REMINDER; WHO, p. 45). This is designed for giving to the patient to remind him or her to take medicine at certain times and days. It is also useful for recording when medicine was taken. A similar idea is found in the pill-a-day egg-basket on page 21 of this book.

RECORD OF PERINATAL CARE (WHO, p. 25). This is for recording information about pregnant women and their babies. It helps the health worker keep track of the progress of pregnancy and the baby's growth. It helps the worker decide when to refer the pregnant woman to a hospital. It helps the worker plan for the baby's birth. It helps the worker keep track of the baby's health after birth. It helps the worker plan for the baby's future

LEARNING RECORD KEEPING THROUGH ROLE PLAYS

To sit down with a group of students and tell them how to fill out record sheets can be boring for everyone. This is because such a lesson does not immediately relate to real problems or real life. Students are likely to pay little attention and to end up using the record forms incorrectly, carelessly, or not at all.

It is far more interesting for health workers to learn to fill in records while actually attending a sick person, weighing a baby, or checking the health of a pregnant woman. But in fairness to everyone, some classroom preparation should be done in advance.

To make the classroom learning more realistic, whenever possible try to base it on situations that students have just experienced in the clinic or community. These may be emergencies, consultations, or health problems seen in prenatal check-ups or under-fives clinics. Students can report what they have seen to the rest of the group, perhaps in a role play. At the same time, the rest of the class practices recording the information on the suitable form. This way, everyone learns from the experience of a few students. Even those who were actually involved benefit from the suggestions and criticism of the group.



A role play about an injured person who was carried in on this stretcher the day before. (Mexico)

Example: Using the record form for prenatal care

Some student health workers in Mexico saw a pregnant woman at one of her regular prenatal check-ups. Her main complaint was swollen feet. Otherwise she felt fine. This is what was written on her RECORD OF PRENATAL CARE:

RECORD OF PRENATAL CARE

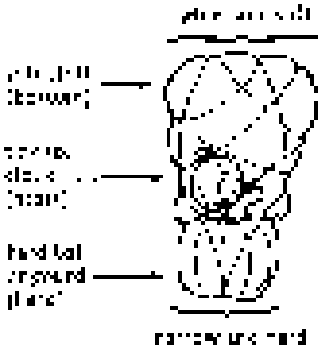
NAME JUANA GARCIA AGE 28 NUMBER OF CHILDREN 6 AGES _____ DATE OF LAST CHILDBIRTH MARCH 1, '79

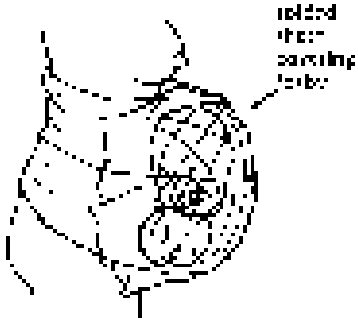
DATE OF LAST MENSTRUAL PERIOD JULY 17, '79 PROBABLE DATE FOR BIRTH APRIL 24, '80 PROBLEMS WITH OTHER BIRTHS ONE BREECH

MONTH	DATE OF VISIT	WHAT often HAPPENS	GENERAL HEALTH AND MINOR PROBLEMS	ANEMIA (how severe) ?	DANGER SIGNS (see p. 269)	SWELLING (where? how much?)	PULSE	TEMP C.	WEIGHT (estimate or measure)	BLOOD PRESSURE *	PROTEIN IN URINE *	SUGAR IN URINE *	POSITION OF BABY IN WOMB	SIZE OF WOMB (how many fingers above (+) or below (-) the navel?)	
1 Aug.														-	
2 Sept.	15	tiredness, nausea, and morning sickness	tired vomiting	NO	NONE	NO	68	37	51 kg	110/70	NO	NO		-	
3 Oct.														-	
4 Nov.	12	womb at level of the navel	O.K.	"	"	"	68	36.9	52.5 kg	112/70	"	"		0	
5 Dec.	8	baby heartbeat & 1st movements	O.K.	"	"	"	70	37	53 kg	108/68	"	"		+ 1	TETANUS VACCINE
6 Jan.	10		O.K.	"	"	"	72	36.9	54 kg	110/70	"	"		+ 3	1st ✓
7 Feb.	15	some swelling of feet constipation heartburn varicose veins shortness of breath frequent urination baby moves lower in belly	Swelling of feet	"	"	Feet ++	70	36.9	55.5 kg	112/74	"	"	8	+ 5	2nd or booster ✓
8 March														+	3rd
9 April 1st week														+	
2nd week														+	
3rd week														+	
4th week														+	
														+	
BIRTH															

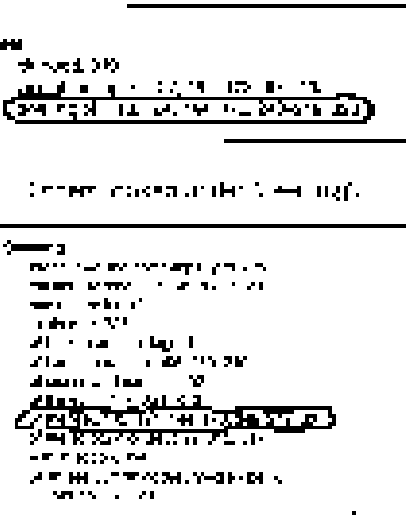
The students made a copy of the record form, leaving the line for the 7th month blank. The next day they organized the following role play for their fellow students. (See next page.)

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Many health workers learn about pregnancy and childbirth only from books. This is a mistake. Pregnancy is a time of great change for a woman's body. Only by seeing and touching a pregnant woman can you learn to recognize the normal changes of pregnancy.

Pregnancy is a time when a woman needs special care. Health workers can help her and her baby through pregnancy and childbirth. But they must know what to look for.

Some health workers have never seen a pregnant woman. They have only read about pregnancy in books. They have only seen pictures of pregnant women. They have only heard lectures about pregnancy.

Then they go to a village. There they find many pregnant women. They do not know what to look for. They do not know what to do.

This is a mistake. It is a mistake that can cost lives.

Learning about pregnancy from books is not enough. You must also learn by doing. You must learn by seeing and touching pregnant women. You must learn to recognize the signs of pregnancy. You must learn to recognize the signs of problems.

This is why we have written this chapter. It is a guide to help you learn about pregnancy. It is a guide to help you learn how to care for pregnant women. It is a guide to help you learn how to recognize problems.

Read this chapter carefully. Then find a pregnant woman. Examine her. Talk to her. Learn from her. Learn from your mistakes. Learn from your successes.

Only by doing will you learn. Only by doing will you become a good health worker.

The students ... learned ... They examined ... They ... and ... They ... signs ... They ... what they were looking for and why. ... They ... pregnant ...

Following the suggestions for prenatal care in *Where There Is No Doctor*, the health workers measured the woman's pulse, temperature, weight, and blood pressure. Since they had all learned how to use and read a urine test strip, they checked the urine for protein and sugar. In the urine, they could also detect early pregnancy because the hormone HCG appears in the urine of the baby's mother soon after conception. To the surprise of the students, two of the women were pregnant. They were able to confirm their tests.

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[illegible]

PROBLEM	WHAT WE FOUND
✗ MALNUTRITION	[illegible]
✗ ANEMIA	[illegible] NO SIGNS OF ANEMIA.
✗ TRICHINOSIS	HAS NOT EATEN PORK RECENTLY
✓ POOR CIRCULATION	[illegible]
✗ TOXEMIA OF PREGNANCY	[illegible] BLOOD PRESSURE & URINE O.K.
✗ HEART TROUBLE	NO SIGNS
✗ KIDNEY DISEASE	FREQUENT URINATION [illegible] DUE TO PRESSURE OF CHILD, OTHERWISE NO SIGNS



[illegible]

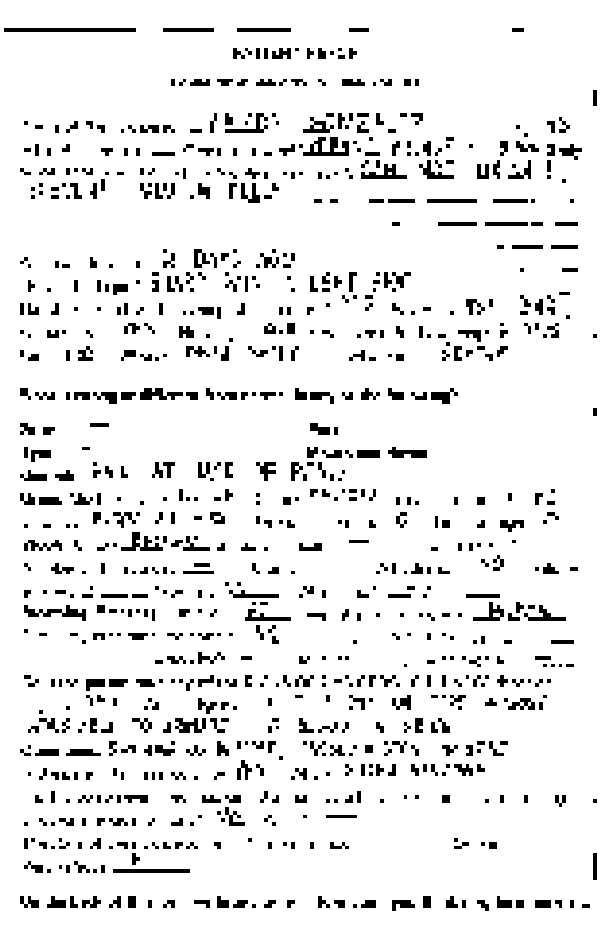
The group's suggestions will be written on the chalkboard. Then the trainer will lead a discussion of the group's ideas. Here is a sample discussion:

[illegible]

Note: Some students do not have a clinical background, so they may find them on the CHECKLIST FOR EVALUATING A CONSULTATION on page [illegible] of the student manual. Have them look at it.

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USING RECORD SHEETS AND TEACHING AIDS TO HELP STUDENTS UNDERSTAND SPECIFIC TREATMENTS

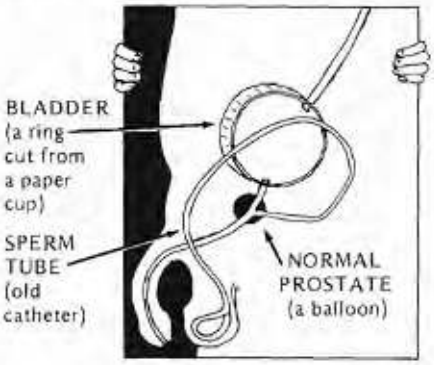




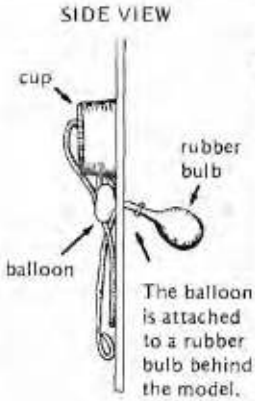
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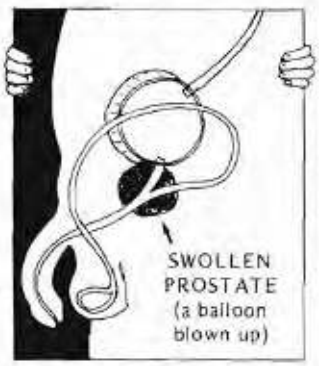
To learn about the urinary system, how it works, and what could have caused the man to stop urinating, the health workers and students made a large cardboard model, based on the drawing on page 233 of *Where There Is No Doctor*. They used a large paper cup, a balloon, and some old tubing to form thedifferent parts. The model shows how two different problems can block the urine in the bladder. To read about the signs and treatments of these problems, see *WTND*, pages 234-235.

An **enlarged prostate gland** can cause difficulty in urinating and even block urination completely if it swells and presses against the urinary tube.



A balloon is used to represent the prostate gland.





By squeezing the bulb, students can blow up the balloon to show a 'swollen prostate'.

A **bladder stone** can also block the urinary tube so that the person has difficulty passing urine—or cannot pass any at all. The students were asked, "What can be done in a case like this?"



After thinking for a while, one student suggested that if the person would lie down, maybe the stone would roll back and free the opening to the urinary tube, like this: →



A bladder stone was, in fact, the cause of the man's problem. The health worker diagnosed and treated it correctly when he visited the village. (Later the man did need surgery to have other stones removed.)

Using their books, the student group tried to figure out answers to the questions at the bottom of page **21**-16. The use of a real PATIENT REPORT together with the teaching aid made the class more effective.

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CAREFUL USE OF A REFERENCE BOOK CAN EQUAL YEARS OF TRAINING

[illegible] **problem-solving situations can prepare health workers to handle a wide range of problems in a short time.** [illegible]

[illegible]

[illegible]

[

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PART FOUR

ACTIVITIES WITH MOTHERS AND CHILDREN

Most trainers of health workers agree that activities with mothers and children are the most important part of health work in communities. This is because

- Women and children make up more than half the people (usually 75%).
- The health needs of mothers and children are especially great.
- Women are in charge of the everyday provisions of care for babies and young children, so their needs are a concern of all.



Part Four of this book has three chapters.

In Chapter 22, we look at activities that help safeguard the health of pregnant women, mothers, and their children. We discuss ways health workers in communities can promote and improve these programs. But we also stress the importance of new values. Women and men in communities must accept and support these activities. Family weight, which is discussed in Chapter 6, is a critical meeting point for the mother, mother-and-baby, and family-planning programs. Each of these programs is discussed in this chapter.

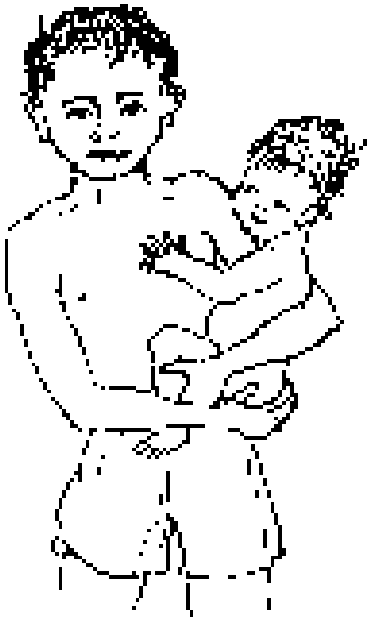
In Chapter 23, we examine family planning. We look at how health workers can help people in communities accept and benefit from family planning. We discuss the benefits of family planning for mothers and child health care. We also look at the barriers to the use of family planning and discuss common myths about family planning. Each of these myths and rumors can be overcome, and the decision of the person or couple to practice family planning can be respected. In this chapter, we also look at ways health workers can help people use their families' natural resources to help themselves.

Chapter 24 is about "Child-to-Child Activities." The main activities in this chapter are based on the Child-to-Child Program. Many of the activities in the Child-to-Child book can be used by health workers in their own programs. We also look at simple teaching aids and ways to help people learn from their own experiences. The program emphasizes learning about children's lives and needs and not just the "facts" of education or health and nutrition. The health worker can play an important role in this process.

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THE ROLE OF FATHERS IN CHILD CARE





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CHAPTER 22

Pregnant Women, Mothers, and Young Children

To help improve mothers' and children's health, health workers need to lead or organize activities in the following areas:



1. **Prenatal care** (for pregnant women)
   - history and check-ups for problems
   - health education with emphasis on nutrition and safety (and medicines that could harm the baby)
   - tetanus vaccinations and other precautions (iron supplements when needed)



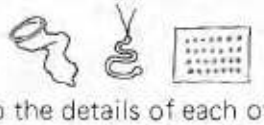
2. **Birth**—special care for 'high-risk' mothers and babies
   - cooperation and learning with local midwives
   - special precautions to prevent infection and hemorrhage
   - referral to hospital for high-risk deliveries and complications
   - care of the newborn

3. **Mothers and young children**
   - observation of children's growth and health
   - health education with a focus on nutrition, cleanliness, safety measures, and activities that help children's bodies and minds to grow strong and active
   - oral rehydration
   - vaccinations
   - diagnosis and treatment of common health problems
   - care and attention for children who have special problems



Health workers in Ajoya, Mexico leading mothers in a discussion about nutrition.

4. **Child spacing or family planning**



In this chapter, we do not go into the details of each of these areas. They are discussed in *Where There Is No Doctor* and in many other books on mother and child health.* Instead, we look at common difficulties that health workers encounter in promoting mother and child health activities. We explore approaches to training that help avoid or overcome some of these difficulties. And we give examples of methods and aids that health workers can use to help mothers learn about the health needs of their children.

*See, for example, *Practical Mother and Child Health in Developing Countries*, by G. J. Ebrahim, available through TALC (see p. Back-3).

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Getting started: Have mothers and midwives take the lead

Health workers, especially if young, single, and from the village where they work, often have difficulty in promoting prenatal and mother and child activities. For them to be advising older women about pregnancy, birth, and child care may seem ridiculous or even insulting.

In such cases, it is a good idea for the young health worker to explain her problem to some of the respected older women, including local midwives. Rather than trying to tell these older women what to do (which might offend them), the health worker can ask them for their advice and help in organizing and running the prenatal or mother and child program. That way the young health worker does not lead the activities, but stays in the background, sharing the information and ideas that she learned during training.



Asking people's help is the best way to win their cooperation.

If health workers are to seek advice and leadership from more experienced persons in their communities, it is best if they get used to doing this during their training. Encourage students to invite local mothers, midwives, and other experienced persons to take part in classes and in actual mother and child health activities conducted during the training course.

PRENATAL CARE



Education and health activities with pregnant women are among the most important areas of mother and child care.

You will find information concerning prenatal care on pages 250 to 253 of *Where There Is No Doctor*. Ideas for adapting prenatal advice about nutrition to local customs and beliefs are found in the story beginning on page **13**-1 of this book.

Holding special prenatal clinics at a separate time or place from the children's clinic usually does not make sense. Most pregnant women already have small children, so it is more convenient (for them) if you **include prenatal care as part of an under-fives program. This can combine education, preventive care, and treatment for both women and children.**

Young women who are pregnant for the first time often will not come to any kind of clinic. But since first pregnancies involve more risk, special care is called for. Health workers can visit the homes of these women and win their trust and cooperation.

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During their training, students may be able to visit pregnant women in the community, and help them take care of their needs. The women will feel better about this if the instructor or local midwife first asks them to help 'teach' the students. They can discuss their experiences of pregnancy and help the students learn to ask questions and give advice in ways that most women will appreciate.

Before beginning visits to pregnant women, it also helps if students practice with role plays in class. On page **21**-13 there is an example of a role play of a prenatal check-up. In it, students act out how to examine a woman, and practice filling out the RECORD OF PRENATAL CARE.

Note: In a mixed group of students, the girls or women may be shy about role plays involving pregnancy or birth, especially if these involve physical examination. In such cases, encourage the male students to dress up and play the role. This not only makes the class more fun, it is also a valuable lesson for the male health workers to experience—if only in make believe—what a woman goes through during pregnancy, prenatal exams, and childbirth.



Here a male health worker in Ajoya, Mexico plays the role of a pregnant woman, complete with mask of pregnancy and swollen ankles. Other students ask questions and examine 'her'.

LEARNING ABOUT BIRTH

In a 2-month training course, health workers may not gain enough experience to be able to attend births alone (except in emergencies). Therefore . . .

Prepare health workers to assist, learn from, and share ideas with local midwives or birth attendants.

A good way to do this is to **invite local birth attendants to take part in the classes on childbirth.** (See the next page.)

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One of the most exciting classes we have seen took place when an old midwife from a neighboring village came to the Ajoya clinic. She had come with some questions of her own about 'modern methods' of midwifery. So one of the instructors invited her to a childbirth class for new health workers. Together, the students and the midwife explored what they knew, what she knew, and what each still wanted to learn. Together they drew up lists of information and ideas that they could share with each other (see below).



Not surprisingly, their ideas were not always in agreement. But each showed respect for the other. The midwife invited the students to attend births with her. And the students invited her to future classes.

EXAMPLES OF IDEAS AND INFORMATION THAT HEALTH WORKERS CAN SHARE WITH TRADITIONAL MIDWIVES:



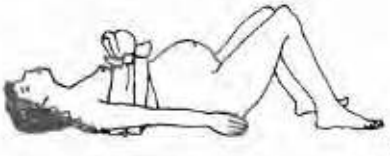
- Foods that will help make women stronger during childbirth.
- How to check for anemia and other danger signs during pregnancy.
- When to refer a woman to a hospital to give birth (before trouble starts, if possible).
- The importance of **not** sitting on the mother or pushing on her belly to get the baby out.
- The proper use of oxytocics (to control bleeding after birth, not to speed up labor!).
- How to prevent tetanus of the newborn (with special emphasis on helpful and harmful local traditions—see p. 184 of *WTND*, and p. 22-6 of this book).
- The need to hold the baby below the level of the mother until the cord is tied (this provides the baby with extra blood and makes him stronger).
- The importance of putting the baby to the breast right after birth (to help control bleeding and push out the placenta).
- The value of *colostrum* (the mother's first milk) for the baby.
- The importance of urging mothers to **breast feed,** not bottle feed their children.
- Signs of danger and aspects of care for the newborn.
- The importance of the mother eating a variety of nutritious foods following birth (and the danger of avoiding eggs, beans, meat, and fruit, as is the tradition in some places).
- Ways for midwives who cannot read to keep records and to send information with mothers or babies they refer to hospitals (see examples on page 22-7).

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EXAMPLES OF INFORMATION AND EXPERIENCES THAT TRADITIONAL MIDWIVES CAN SHARE WITH HEALTH WORKERS:

- Personal experiences and insights from many years of attending births.
- How to respond to the common questions and concerns of pregnant women in terms of the local culture and language (see the story of Janaki and Saraswati, p. **13**-1).
- How to feel the position and size of the unborn baby; doing this in a friendly, confidence-building way.
- Safe ways to help make labor easier and shorter:
  - Allow the woman in labor to eat a little, if she feels hungry.
  - Give her herbal teas and other drinks.
  - Permit the woman to get up and walk around, or to change to any position that is comfortable.
  - Show her real babies or pictures of babies happily nursing. The warm feeling this produces in the mother helps her womb contract strongly. If labor slows down, let a baby or caring person suck the woman's breasts.
- Ways to give comfort and to calm the fears that can slow or stop labor:
  - Avoid letting the room get too crowded with friends and relatives.
  - Avoid having those present discuss cases of death or misfortune in childbirth.
  - Reassure the woman, hold her, massage her, and comfort her. Let her feel your confidence that all is progressing well.
- The need of the woman in labor to have a kind and sympathetic person stay close to her and offer support. This person could be the midwife, or the woman's sister, mother, or close friend—or, if acceptable, her husband.*
- Knowledge of local beliefs and traditions relating to childbirth.

  In Mexico, for example, some village women believe it is essential to take the following preventive measures:



Using a 'belly band' to prevent the baby from trying to come out through the mother's mouth.



Tying the umbilical cord to the mother's leg until the placenta comes out, to keep it from crawling back inside.



Burying the placenta in a corner of the room to protect the mother's spirit.

Traditional midwives can tell health workers about common local beliefs and discuss ways to respect them when attending births. If a belief is helpful, health workers can encourage it. If harmless, they can go along with the custom to help the family feel more confident and comfortable. If it is harmful, they should help people understand why. Or they may be able to build on local beliefs to help explain new and healthier ways. (See the story from Nigeria on the next page.)

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*A recent study in the ***New England Journal of Medicine*** shows the importance of having a familiar, loving person present at childbirth. The average length of labor for first births in a Guatemalan hospital was 8.8 hours for mothers accompanied by a sympathetic woman, and 19.3 hours for women who were attended only by nurses and doctors. Also, those with companions had fewer birth complications and felt more warmly toward their new babies. Does this speak in favor of home births?

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Adapting new ideas to old beliefs

In Lardin Gabas, Nigeria, health workers learn to teach new ideas through the local tradition of story telling (see p. **13**-5). They also learn to adapt their health advice to local beliefs.

An example is a story they tell to help mothers and midwives learn about the prevention of tetanus in newborn babies. Midwives in Lardin Gabas traditionally rub dry dirt or cow dung into the end of a baby's cut cord to prevent bleeding. The result is that babies often die of tetanus from the infection that enters through the cord. But people think the illness is caused by a certain kind of bird that lands above the baby. They believe that when the bird sings, the spirit of the baby flows out through the cord, causing the baby's body to stiffen with spasms.

The story the health workers tell describes how a village midwife learned to prevent this form of infant death. After carefully washing her hands, she would tightly tie the baby's cord with clean strips of cloth, then cut it with a boiled bamboo knife. Later, when the bird landed over the baby and sang, the baby's spirit could not escape because the cord was tightly tied.



Questions for discussion:

If you tell this story to a group of health workers-in-training, have them discuss its strengths and weaknesses. Ask questions like these.

- In what ways does this story help mothers and midwives gain greater understanding and learn healthier practices?
- In what ways does the story mislead people or block their understanding of important causes of disease?
- Which is more likely to help people gain control of the events that affect their health and lives, a magical or a scientific understanding of causes and results?
- What are some problems that might result from the fact that the story makes it seem like tying the cord, rather than cleanliness, is the key to preventing tetanus? Can you retell the story in a way you think is better?

Reporting information about births

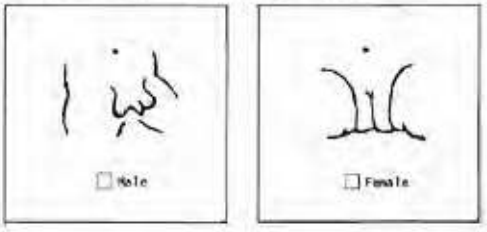
Keeping records of prenatal care and providing accurate information when referring emergency births or complications to a hospital is an important part of any birth attendant's job. On page **10**-8, we discuss the need to keep such forms simple and useful. Health workers and midwives who can read may want to use the RECORD OF PRENATAL CARE (***WTND,*** p. 253). But for those who cannot read, other solutions are needed.

Health workers in Ecuador have developed a reporting system for midwives, using different colored cards. Local midwives learn to associate each color with a specific problem: red if the mother is hemorrhaging, white if she is very ***anemic*** (pale), blue if the baby has delayed or difficult breathing, and yellow if he is ***jaundiced*** (yellow).

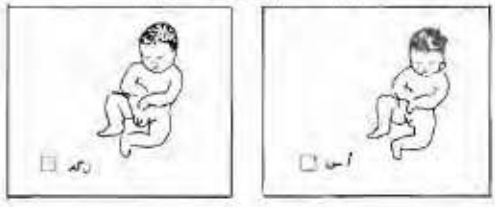
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In Indonesia, a birth report form using pictures was developed for midwives who cannot read. The form was later adapted for use in Egypt, with the help of a group of traditional midwives. Here are some of the changes they suggested.

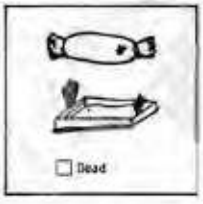
The Egyptian midwives found these drawings on the Indonesian form too abstract.



They said it would be better to draw the whole baby, with an earring for the girl (since all baby girls in Egypt are given earrings).



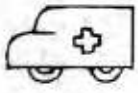
They thought this Indonesian drawing of a dead baby looked more like a sweet wrapped in paper.



They suggested that the dead baby be shown wrapped like a mummy, as is often done in Egypt.



And they suggested changing the red cross on the ambulance



to the red crescent used on Egyptian ambulances.



The revised Egyptian form is shown below. Read it from right to left. start here



Reporting form for traditional birth attendants in Egypt, adapted from an Indonesian form with the help of local midwives.
(Taken from *Salubritas*, American Public Health Association, July, 1980.)

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TEACHING AIDS FOR LEARNING ABOUT BIRTH

In a short training course in a village setting, health workers usually do not have a chance to attend many births. Good teaching aids are therefore essential. The more lifelike they are, the better. But it is important that the aids used be ones that the students can make themselves at low cost. That way they can use them for health education with mothers and midwives in their own villages.

On page **11**-3, we showed 3 models for teaching about childbirth: one made of plastic, one of cardboard, and one a real person. Of these, the plastic model is least appropriate because it cannot be duplicated by the health workers.

The cardboard box model is appropriate because of its simplicity. Also, the back flap can be cut to form breasts, so students can practice putting the baby to the breast right after birth. This is important because it helps to prevent hemorrhage and to push out the placenta.





A male health worker in the Philippines 'delivers a baby'.

An even more appropriate teaching model (where culturally acceptable) is a real person with a doll baby hidden inside her clothing. The person wears a pair of pants with the crotch cut to form a 'birth opening'. This way, the 'mother' and the birth attendant can act out all the emotions and events of childbirth.

Women may be embarrassed to act out childbirth before a mixed group. But even when they are not, it is a good idea to have a man act the part! This way, men become more sensitive to the woman's situation during labor.

Babies for these demonstrations can be made of cloth stuffed with rags or straw, or children's dolls can be used.



The placenta can be made of red cloth sewn so that the lobes can be spread and inspected. Make the membrane of thin plastic (cellophane).



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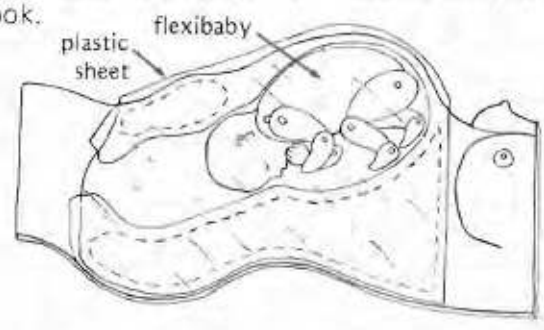
If having a real person act out childbirth is not culturally acceptable in your area, try using the cardboard 'birth box' instead. To make the demonstration more lifelike, you can put the box on a cot, and have a person lie underneath.



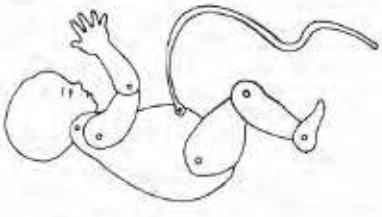
The person underneath can push on the box to show contractions of the womb, and make panting and groaning sounds and talk as the 'woman' gives birth.

A teaching aid to help health workers and mothers see the position of the baby inside the womb was invented by Pablo Chavez, the village health worker who has done some of the drawings for this book.

Pablo made a cardboard figure of a woman's body, with a window cut out to show the inside of the womb. This he covered with a clean piece of old X-ray film to form a transparent pocket.



He also made a flexible baby model from pieces of cardboard and some rivets.





The 'flexibaby' can be placed in the 'womb' in any position, and then used to demonstrate the different presentations of birth (head first, butt first, foot or hand, etc.).

Another way to show the different birth positions is to use a real baby together with a drawing of a woman giving birth. A mother holds her baby in front of the picture, and shows how it would be delivered in various positions. (See also p. **12**-7.)



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Learning about complications of childbirth

Sideways babies: Village midwives are sometimes able to turn a baby that is sideways in the womb by *gently* handling the woman's belly. But this takes skill and great care (see *Where There Is No Doctor*, p. 267). The birth attendant must **never use force,** as this could tear the womb and cause the mother to bleed to death. Usually it is best to try to get the mother to a hospital.



To help health workers recognize the danger in trying to turn the baby, and the need to be very gentle, the Ajoya health team invented this teaching aid:



They put a small plastic doll inside a balloon and filled the balloon with water. (It is hard to get the doll into the balloon. You could try using a plastic bag instead.)



They asked students to pretend it was a baby in a womb. Students then tried to turn the baby to line it up with the opening.



Although they were careful, the balloon popped! So they learned that the womb, like the balloon, can tear easily if not handled with extreme care.

Dangerous bleeding: Health workers and midwives need to be able to tell the difference between normal bleeding after childbirth and dangerous blood loss.

LESS APPROPRIATE



Instructors often teach that it is normal to lose up to half a liter of blood after giving birth, but that to lose more is dangerous.

It helps if students actually see the quantity of blood.

MORE APPROPRIATE



But on a rag or sheets, a little blood can look like a lot. Students can easily misjudge. So first show them the quantity, then spill it over cloths or rags. Use red-colored water. To make it thick like blood, use tomato juice or mix some red gelatin powder into the water. Or use blood from a freshly killed animal. (Add sodium oxalate or juice of wood sorrel to delay clotting.)

EVEN MORE APPROPRIATE



MOST APPROPRIATE



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USE OF THEATER TO CORRECT HARMFUL PRACTICES

Many traditional midwives are more skilled at some aspects of childbirth than are many modern doctors. Some, for example, can successfully turn babies that are sideways or butt first (see p. **22**-10).

Unfortunately, however, a few commonly accepted practices by midwives are harmful. For example, in Latin America many midwives now use injections of ***pituitrin*** or ***ergotrate*** to speed up labor and "give the mother strength." This can cause the womb to tear and the mother to quickly bleed to death. Or it can cause the blood vessels in the womb to contract so much that the baby suffers brain damage or dies from lack of oxygen.

This new custom is hard to change. Both midwives and mothers believe it is right and modern to use the injections. Midwives argue that if they do not use them, mothers will go to another midwife who does.

To make people aware of the dangers of misusing these strong injections during childbirth, village health workers in Ajoya staged a short skit before the whole community.

In the first scene, Maria begins to have labor pains. She is about to send for her favorite midwife. But a gossipy neighbor tells her that the midwife is old-fashioned. She convinces Maria to call for a modern midwife who uses injections. The modern midwife attends the birth and injects Maria with ***pituitrin*** to speed things up. The baby is born blue and never breathes.

In the second scene, one year later, Maria is in labor again. But this time she calls her favorite, trusted midwife, Doña Julia. When Maria feels exhausted during the long labor, she begs for an injection "to give me strength." But Julia explains why that would not be safe. She helps Maria to relax. Soon the baby is born healthy and 'pink'. Everyone is glad that Julia did not use the medicine.



The baby born dead.
(Made of blue cloth.)



The baby born healthy.
(They used a child's doll.)

At the end of the play, a health worker holds up both dolls and repeats the message:

THERE IS NO SAFE MEDICINE FOR GIVING STRENGTH TO THE MOTHER OR FOR MAKING THE BIRTH QUICKER AND EASIER.

IF YOU WANT TO HAVE STRENGTH DURING CHILDBIRTH, EAT GOOD FOODS DURING PREGNANCY: BEANS, GROUNDNUTS, DARK GREEN LEAFY VEGETABLES, EGGS, AND CHICKEN.



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MOTHERS AND YOUNG CHILDREN—'UNDER-FIVES' CLINIC

The first years of life are when a child's health is most delicate and when good nutrition, cleanliness, and other protective measures are critical. For this reason, many health programs conduct special 'under-fives' clinics. But as with any other health activities, unless the approach is adapted to the local situation, problems are likely to occur.

Two common mistakes:

1. Some under-fives programs focus only on baby weighing, health education, and preventive measures such as vaccination. For curative care, mothers must bring their babies back on a different day. This separation of prevention and cure is unfortunate. Most mothers are busy or have to come a long way to the health center. For many, it is difficult to bring their babies one day for weighing and another day for treatment.



Separation of curative care and prevention.



Use of unnecessary medicines to attract mothers to the program for preventive activities.

2. Other under-fives programs use curative medicine as a 'magnet'. They attract mothers to monthly baby weighings by giving away colorful cough syrups, diarrhea 'plugs', or other unnecessary medicines. To get the free medicines, mothers sometimes tell health workers that their babies have a cough or diarrhea—even when they do not. This use of 'medicine as a magnet' is wasteful, dishonest, and creates dependency. (Giving out free milk is even worse. It leads mothers to bottle feed rather than breast feed. See p. 27-31.)

To avoid these mistakes, help health workers learn to organize under-fives activities in an appropriate way:

- **Deal with preventive, curative, and educational needs at the same place and time.**
- If there are more children than you could attend on one day, divide them into 2 or more groups and have them come on different days.
- **Do not use either medicine or food giveaways to attract mothers.** Instead, make the educational activities so exciting that mothers will not want to miss them.



Prevention and cure together—but with limited use of medicines.

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WEIGHING BABIES– WHAT PURPOSE DOES IT SERVE?



The periodic weighing of babies has become a standard feature of many health programs. But the purpose it actually serves differs greatly from program to program. Instructors and health workers would do well to ask themselves questions like the following.



WHOSE PURPOSE DOES OUR BABY-WEIGHING PROGRAM SERVE?

- What is the real reason that most health workers weigh babies?
- What effect, if any, does this have on the children's health?
- How could the program be improved?
- By whom?



At best, baby weighing serves a valuable purpose. It helps health workers and mothers to discover problems in children's growth and correct them before they become too severe. So **baby weighing helps to protect and improve children's health.**

But in many health programs we have visited, there is little evidence that baby weighing has any real effect on children's health. The purposes it serves may be quite different.

- In some programs, baby weighing has become a mysterious ritual. Or it is done only to fulfill a requirement or impress the supervisors. Little use is made of the weights that are so religiously (and often inaccurately) recorded.
- In other programs, the main purpose of baby weighing seems to be to provide statistics for the health authorities. If babies are only weighed once every 3 or 4 months, statistics are generally the only purpose served. To be of much benefit to the mothers and children, weighing needs to be done more often. About once a month is best.
- In some programs, the chief purpose of the baby-weighing ceremony seems to be social. It gives mothers a chance to come together and talk. (This can be a valuable function of a baby-weighing program, but should not be its only purpose.)

Weighing babies can serve many purposes. But its main goal should be to help meet the health needs of the children. On the next page is an outline of appropriate reasons for weighing babies and how health workers can help achieve the goals they set.

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ASPECTS OF AN APPROPRIATE BABY-WEIGHING PROGRAM

Purposes	Who is Most Served	How It Is Done
To find which babies are underweight, and to help mothers correct the underlying problem in time.	Baby (and mother) 	Weigh each baby every month. Explain the weight and what it means to the mother. Seek out and invite 'high-risk' mothers and babies.
To teach mothers about child health and nutrition.	Mother (and baby)	Give appropriate advice, demonstrations, and skits when mothers come to weigh babies. Follow up with home visits as needed.
To encourage self-reliance and responsibility of mothers and other members of the community. 	Mothers (and community health workers)	• Have mothers keep children's health charts and learn to interpret them. • Use low-cost or homemade scales and teaching aids made by members of the community. • Build on local customs, values, and home care. • Let some mothers take increasing responsibility for running the baby-weighing program.
To bring mothers together to discuss common problems, explore their causes, and work together toward change.	Mothers (and children, and the whole community)	Lead discussions to analyze needs. Encourage mothers to take part in planning and conducting the weighing program and related activities.
Information or *data* collection, for determining nutritional needs in community and evaluating progress.	Health team (and community, and health authorities)	Carefully record and periodically analyze the weight records of all children in the community (every 6 months or each year).
To provide an occasion for related preventive and curative activities.	Children and mothers 	If possible, provide at the same time and place: • vaccinations • early identification and treatment of health problems • prenatal care • opportunity for family planning

As with almost any aspect of health care, **the way health workers learn about baby weighing during their training will affect how they approach it in their communities.** At worst, a baby-weighing program can be a meaningless and humiliating experience for mothers. At best, it can help bring people—especially mothers—together to better understand and solve their common problems. It can help strengthen their capacity for working together toward change.

The teaching methods used for helping health workers learn about weighing babies will serve a double purpose. Health workers can later use these same methods to explain growth charts to mothers in their villages.

The following ideas for learning about baby weighing and the use of growth charts have been developed by village workers in western Mexico. They have proven especially useful in that region, but may need to be adapted for use in other areas.

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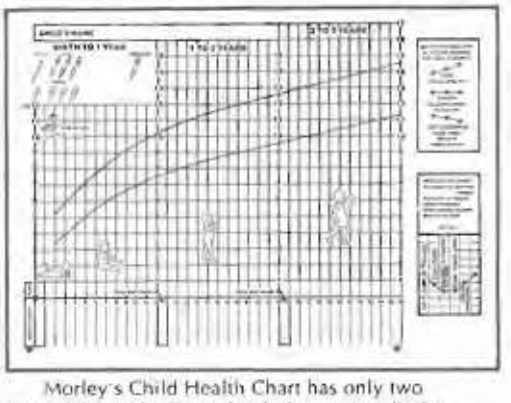
LEARNING TO USE AND UNDERSTAND GROWTH CHARTS

Health workers who are not used to reading charts and graphs may at first have difficulty recording babies' weights accurately or interpreting what they mean. But with appropriate teaching methods, health workers can quickly learn to understand and use weight charts. They also can learn to teach non-literate mothers to follow the growth of their children on the 'Road to Health'.

Choosing an appropriate chart

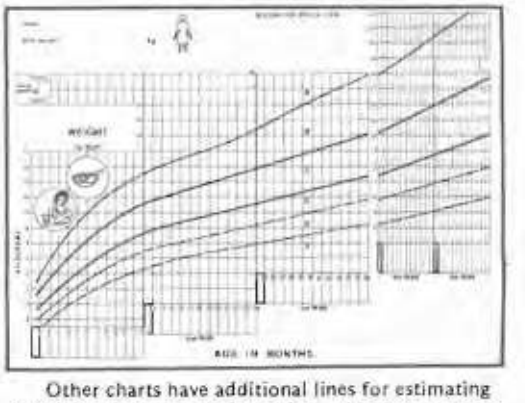
Different types of age-weight charts are used by different programs. We prefer David Morley's 'Child Health Chart' because of its simplicity (see page **25**-9 or ***Where There Is No Doctor,*** p. 299). But others prefer more complex charts.

Preferred by mothers and those who work with mothers



Morley's Child Health Chart has only two curved lines. The lines clearly form a 'road', the 'Road to Health'. Even mothers who cannot read can learn to see whether their children are growing well or falling below the 'Road to Health'.

Preferred by health authorities and data experts



Other charts have additional lines for estimating different degrees of malnutrition. Although perhaps more useful for conducting large surveys, these charts are often confusing to mothers.

Charts for teaching

The basic teaching aid for learning to use a growth chart is the chart itself. **Practice charts** can be mimeographed or silkscreened at relatively low cost. Prepared mimeograph stencils of the 'Road to Health' chart are available from TALC (see p. **Back**-3). TALC also sells low-cost practice charts on inexpensive paper.

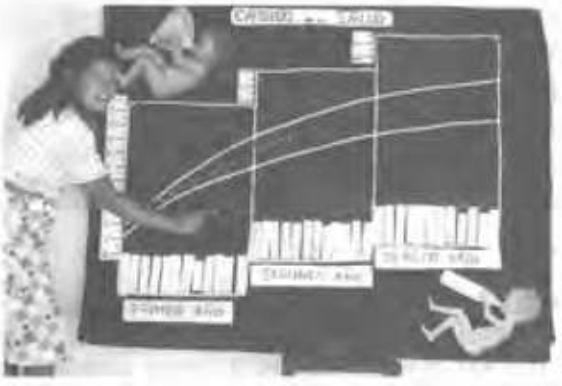
A large flannel-board chart is particularly useful for group practice. These can be purchased from TALC—or better still, they can be made by the student health workers or a mothers' group.

If students are not used to drawing, but have experience in sewing, they can make the chart by sewing strings and ribbons onto a flannel cloth. That way they build on skills they already have, rather than struggling with an activity that is foreign to them. (This idea was discussed on page **11**-4.)



Sewing a 'Road to Health' chart. (Ajoya, Mexico)

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On the large flannel-board Road to Health chart, students can take turns placing small flannel spots representing the ages and weights of children. Use different colored spots to show the growth patterns of different children.

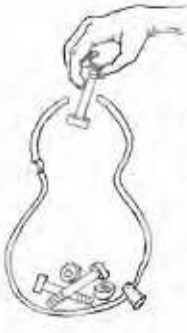
The flannel-board chart in this photo compares the growth patterns of a breast-fed baby and a bottle-fed baby. (See ***WTND,*** p. 304.)

Making the practice weighing and use of charts seem real—and making it fun!

If model 'babies' and role playing are used, then practice in weighing babies, using growth charts, and giving advice to parents can be fun. At the same time, everyone will learn about child nutrition, diarrhea, and the dangers of bottle feeding.

Make a 'baby' out of clay, a plastic bottle, or a gourd. You can use the same 'gourd baby' used for teaching mothers and children about dehydration (see page **24**-18).





To make the gourd's weight be similar to that of a young baby, put some heavy objects in it. The 'baby' can actually be made to gain weight each 'month'. Simply add increasing amounts of water between weighings.

To make practice more realistic and fun, make a life-size model of a breast-feeding 'mother'. You can use a cardboard carton and a plastic bottle filled with water.



Attach a baby-bottle nipple so that the 'mother' can actually breast feed the gourd baby.



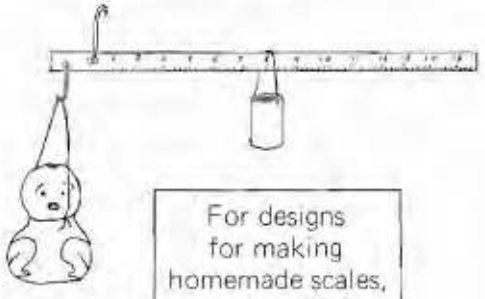


In order to let the 'milk' run quickly into the gourd baby, cut a large hole in the rubber nipple.

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Using these teaching aids, the students (or mothers) practice the monthly weighing of the 'baby'. Between weighings, the 'mother' breast feeds the gourd baby so that it gains weight each time.

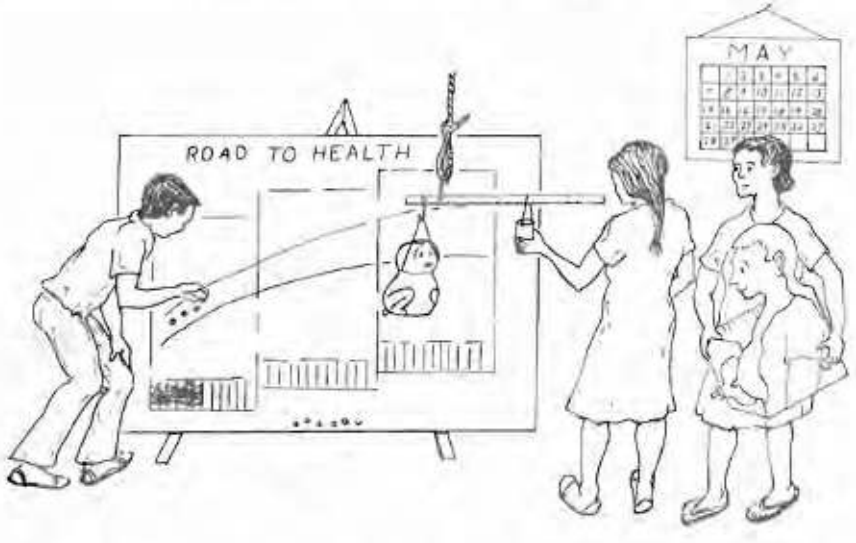
It helps to hang a calendar on the wall and change it to the next month before each weighing. This helps everyone understand that the skit represents a period of several months.



For designs for making homemade scales, see page **16**-2.



Each 'month', as the baby is weighed, the health workers or mothers take turns recording the baby's age and weight on the flannel-board Road to Health chart.



In this way, everyone sees how the baby's weight goes up each month, and how the baby advances along the Road to Health.

The group can also act out various nutritional or health problems that could affect the baby's weight, and show how these appear on the chart.

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For example, have the group act out what can happen when a baby is changed from breast to bottle feeding.

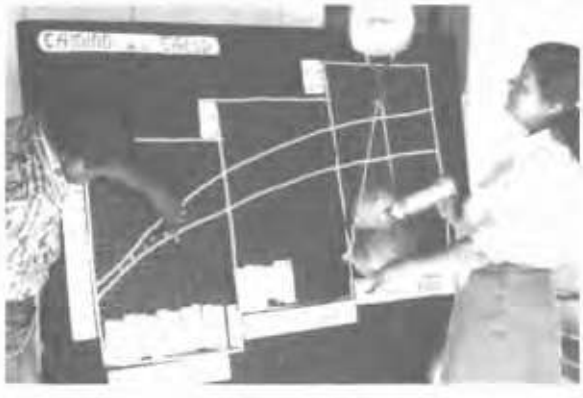
As long as the baby breast feeds, he gains weight well and moves up on the Road to Health.





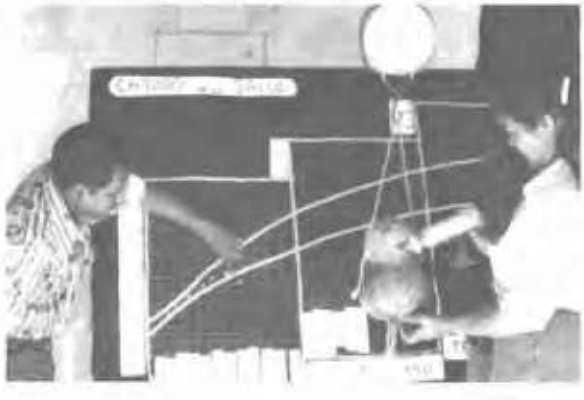
But when the baby is changed to bottle feeding at 6 months, he stops gaining weight. (Plug the nipple of the bottle so that liquid comes out very slowly.) The dots showing his weight on the Road to Health chart stay at the same level.





Then, because the baby bottle has germs on it, and the baby is not as well nourished, he gets diarrhea (pull the plug). The baby's weight goes down.





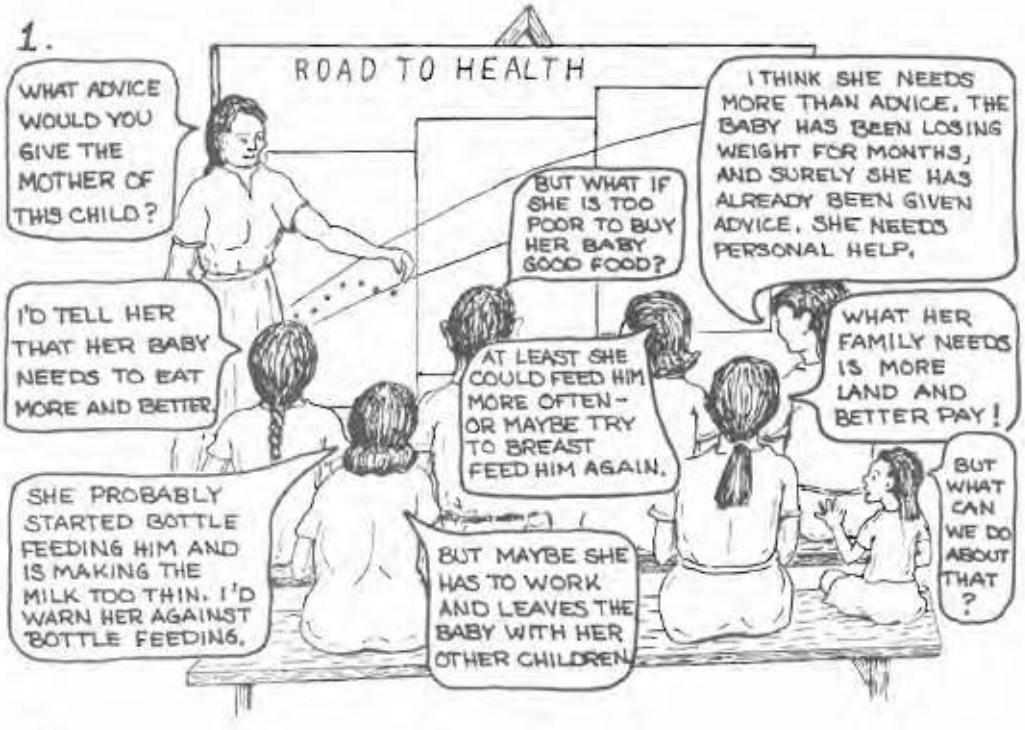
Note: The use of the gourd baby and cardboard mother is only one idea for teaching the use of weight charts. It was developed by village instructors and students during a training program, and that was part of what made it a success. We hope you and your students will think of new and even better teaching ideas.

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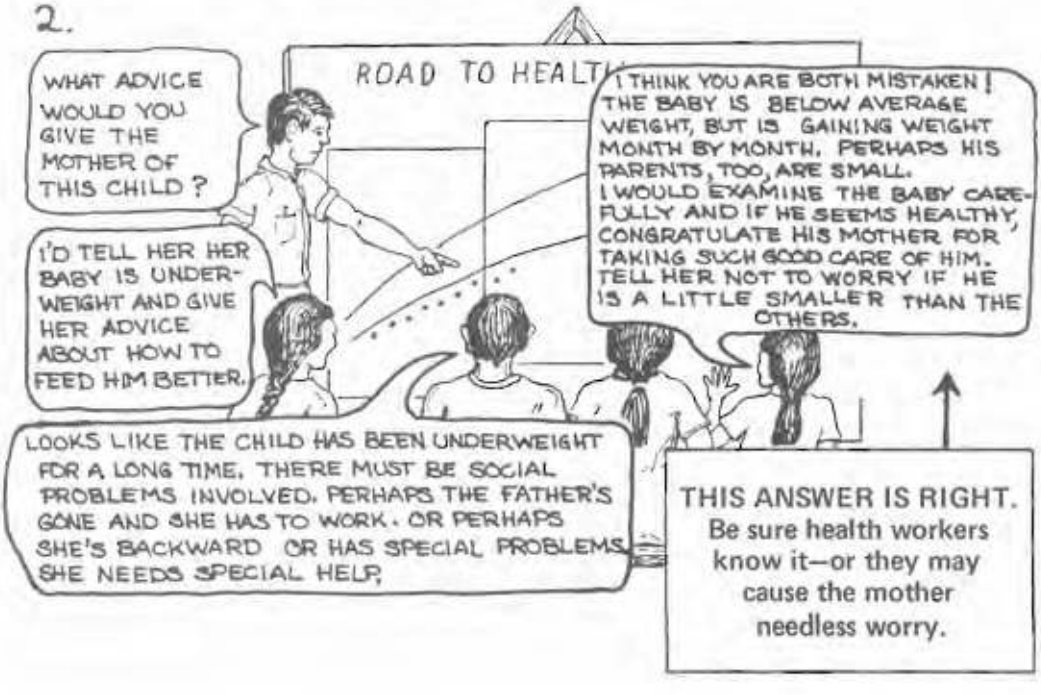
Follow-up discussions and further learning

Flannel-board Road to Health charts can be used to start many lively discussions, and to help health workers or mothers learn to interpret the charts correctly. Here are two examples:

1.



2.



THIS ANSWER IS RIGHT.
Be sure health workers know it—or they may cause the mother needless worry.

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WOMEN'S HEALTH—AND STRENGTHS



Traditionally, childbirth and women's health problems have been attended to mostly by women. But in many parts of the world, modern medical knowledge is now kept mainly in the hands of men. Even doctors who specialize in women's needs are mostly men!

This is unfortunate, because women have many health problems that men never experience. No man has been pregnant, had a vaginal discharge, or suffered from a painful abscess during breast feeding.

Of course there are exceptions, but in general, male health workers are not as sensitive to women's problems. "A man just doesn't seem to listen," many women say.

For this reason, more and more women have begun to feel that self-care is a wise idea. Health workers, whether men or women, can help groups of women get together, learn about each other's needs, and begin to care for and help one another. The book ***Our Bodies, Ourselves,*** * although written for middle class women in a developed country, has many good suggestions regarding women's self-care.

When health workers meet with groups of women to discuss health problems, it helps if they **ask the women what they want to learn about.** Women in different areas will have different concerns. Here is a list of topics that a village women's group in Latin America wanted to discuss and learn more about:

- 'bad blood' (venereal disease) and infertility
- 'burning urine' and other urinary and vaginal problems
- a girl's first bleeding and related problems
- failure to bleed every month, and other menstrual problems
- miscarriage and abortion
- pain when having sex
- rape, abuses by men, and self-protection
- how to avoid unwanted pregnancy
- diet during pregnancy and following childbirth
- causes of 'eclipsed' babies (birth defects)
- specific problems and 'modern practices' related to childbirth
- care of newborn babies and young children
- breast pain and abscess when breast feeding
- cancer, how to avoid it and how to recognize it
- 'change of life' *(menopause)*

Where mother's clubs or traditional women's groups already exist, encourage health workers to look for ways to work with them, and ask for their help.

Some women's groups are active in the struggle for social change. We know of villages in 3 Latin American countries where women have organized to prevent abuses by local authorities. Sometimes this happened in situations where the men were too frightened to speak out or take action. (In many countries, officials are less likely to use violence against women.) In Honduras, for example, a group of teen-age boys was jailed recently for helping to take over farmland that the government had promised to poor families and then refused to give them. The boys' fathers were afraid to act, so a local women's group organized over 4000 women, stormed the jail, and managed to release them—with no violence or injury!

When women awaken to their power of collective action, they can do a lot! (See the women's theater presentation on page **27**-19.)

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*Written by the Boston Women's Health Book Collective, Box 192, Somerville, MA 02144, USA.

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CHAPTER 23

The Politics of Family Planning

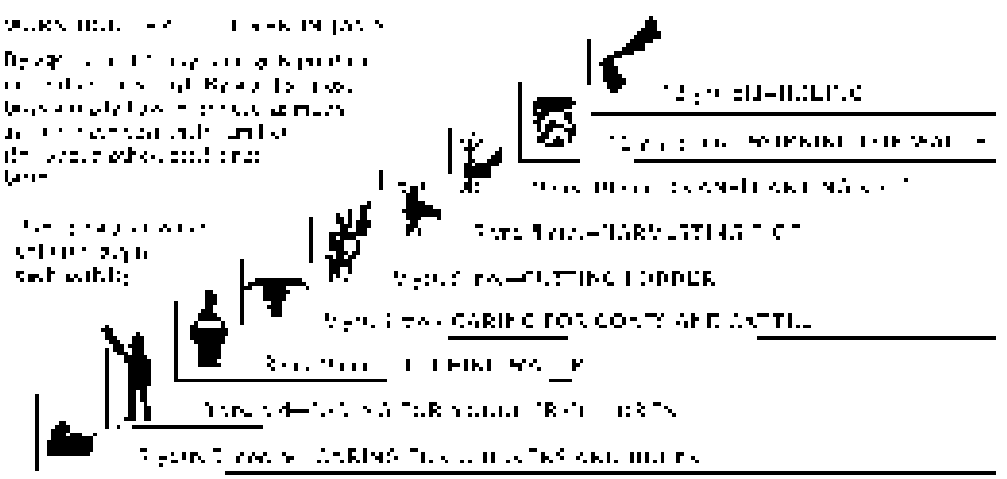


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CHILDREN OF THE POOR: A BURDEN OR A BENEFIT?

For many poor families, to have many children is an economic necessity.



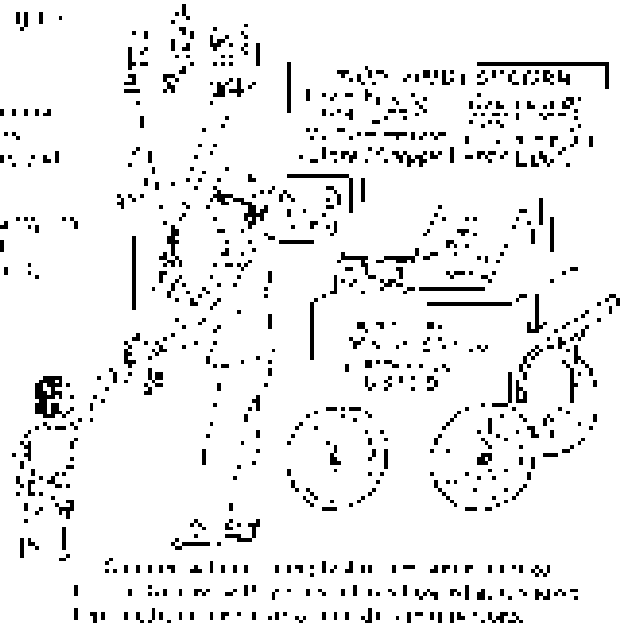
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In many cases, rapid population growth is a problem that can be solved only by certain changes in economic and social conditions. Increasing numbers of men and women in developing countries have little or no access to land, credit, and resources to which poor people have the greatest need. In many countries, a small minority of people own most of the land and control most of the wealth. In poor countries where resources have been more fairly distributed, and where employment, housing, and care for the sick and old are guaranteed, people usually choose to have smaller families.[4] As women's status rises, they see more opportunities for work outside the home and gain more control over their own lives. Increasingly, they see the benefits of smaller families. In China, for example, the government has been trying to limit population growth through strict government laws. In Kerala, a state in southern India, people have chosen small families voluntarily.[5]

Most people will choose to have small families only when they have a basic amount of economic security.

SELLING FAMILY PLANNING TO THE POOR

Governments and organizations have tried many different ways to encourage people to have fewer children. These methods range from providing free contraceptives to using incentives and penalties. But the use of incentives invites abuse. In some countries, women are sterilized after they have had a certain number of children. In India, men are paid to have vasectomies. Poor people are especially vulnerable to pressure to accept family planning services.



Family planning programs that are run by outsiders often fail. Programs that are run by local people are more successful. Local people understand the needs and customs of their own communities. They can also adapt programs to meet local needs.

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The quota system—and the problems it creates

To meet their [illegible] many [illegible] use a system of quotas. Workers are given a family planning campaign [illegible] to meet. Sometimes this is [illegible]. Every month, each community health worker is required to report the number of new family planning acceptors.

Such quotas [illegible] abuses. People are [illegible] to accept family planning methods that they do not want or that are not suitable for them. In some areas, [illegible] have been [illegible] and sterilized. In many countries, young women and teenage girls have been [illegible] and pressured so that authorities could meet their quotas.

[illegible] people in family planning programs [illegible] and [illegible] [illegible] [illegible]

FAMILY PLANNING ON THE PEOPLE'S TERMS



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Group discussion about population control and family planning

KEY QUESTIONS FOR DISCUSSION ABOUT FAMILY PLANNING



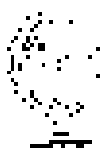
- How many children would the average couple in your community like to have?
- What will happen if a family has more children than it can feed?
- Do you think it is good for a woman to have a baby every year? Is it good for her health? Is it good for the baby's health?
- Do you think it is good for a woman to have a baby when she is very young? Is it good for her health? Is it good for the baby's health?



- Are there any foods that a pregnant woman should not eat?
- How much weight should a woman gain during pregnancy?



- Do you think a woman who is pregnant should continue to work? Should she work up to the day she gives birth? Should she rest for a while after giving birth?



- Do you think it is good for a woman to breastfeed her baby? How long should she breastfeed? Should she breastfeed her baby if she is pregnant again?



- What do you think are the best ways to space children? Why?



- Do you think it is good for a family to have a large number of children? Why? Why not?



- Do you think it is good for a family to have a small number of children? Why? Why not?



- What do you think are the best ways to keep children healthy?
- Do you think it is good for a family to have children close together in age? Why? Why not?
- Do you think it is good for a family to have children far apart in age? Why? Why not?





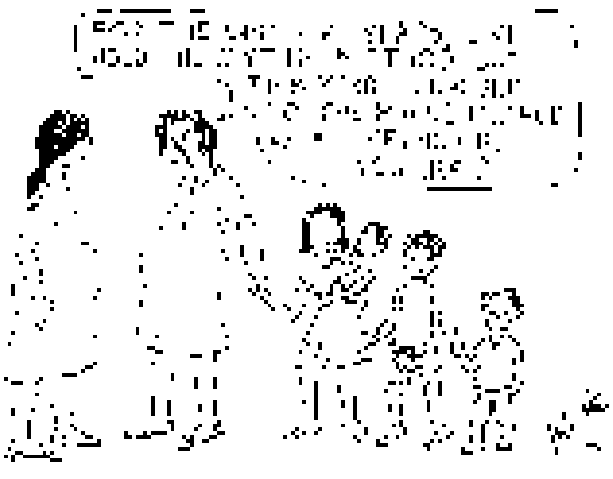
- What do you think are the best ways to prevent pregnancy?
- How well do these methods work?
- What do you think about the idea of [name of method]?

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ADAPTING FAMILY PLANNING TO LOCAL CIRCUMSTANCES

[illegible]

RELIGION: In some areas, religion is a very important influence on people's attitudes about family planning. In many countries, religious leaders have spoken out against family planning. Some religious leaders have encouraged their followers to have as many children as possible. Other religious leaders have encouraged family planning, but only by certain methods. For example, some religious leaders have approved the use of natural methods of family planning, but have disapproved of the use of modern contraceptives. Some religious leaders have encouraged family planning, but only for married couples. Some religious leaders have encouraged family planning, but only for unmarried couples.



[illegible]

[illegible]

[illegible]

LOCAL CUSTOMS: [illegible] adapt [illegible] Some of these work fairly well and are widely accepted. See George Mentor on page 237 of **WHWW**. Others do not, and are dangerous. In Mexico, some women have tried to prevent pregnancy by inserting bones or sticks of local cactus into their vagina. This can cause [illegible] infection and [illegible]

[illegible] have also received [illegible] about [illegible] adding powdered [illegible] to prevent pregnancy. [illegible] Vaginal douching [illegible] Breast-feeding [illegible] Some women [illegible] Others [illegible] Breast-feeding [illegible] [illegible] [illegible]

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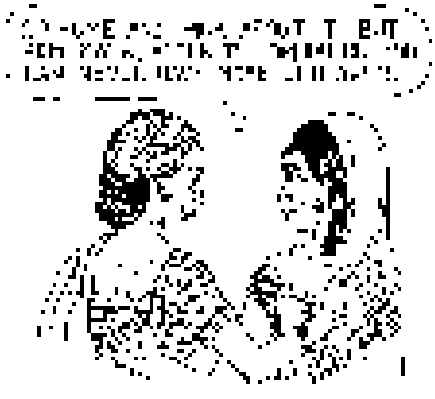
How much responsibility should health workers be given?

In a family planning program, health workers play a very important role in helping people to make decisions about family planning.

- In many large family planning programs, health workers are given targets for the number of people they must persuade to accept family planning. For example, they may be told that they must persuade 100 women to have an IUD fitted during the next year. Sometimes, payment or promotion depends on reaching these targets. This can cause problems. Health workers may put pressure on people to accept family planning when they do not really want it. They may also tell people only about the method that they have in stock, and not about other methods that may be more suitable.

- Some programs train health workers to do certain operations, such as fitting IUDs or carrying out sterilizations. Other programs do not allow health workers to do these things. Instead, they train doctors to do them. Which is the better way?

- In countries where family planning programs have been in operation for many years, there are usually enough health workers and doctors who have been trained to do sterilizations. In countries where family planning is a new idea, there are usually not enough trained people. In these countries, it is usually better to train health workers to do sterilizations than to train doctors. Doctors are usually busy with other work and are not easily persuaded to do sterilizations. Health workers are usually more willing to do them.



In many programs, we have seen that it is not possible for health workers to do all the things that they are supposed to do. For example, they may be supposed to visit every family in their area every month. But this is impossible if there are too many families in the area. Or they may be supposed to do many different things. But they cannot do all of them well if they do too many things. In such cases, it is usually better to concentrate on a few important activities.

In family planning, health workers are usually supposed to persuade people to accept family planning. In many countries, this is a very important activity. But in some countries, it is not necessary. In these countries, people usually want to have small families. They know how to use birth control methods. They can get these methods when they want them. In these countries, health workers should not waste their time persuading people to accept family planning. Instead, they should concentrate on providing birth control methods to those who want them.

It is women's right to control their own bodies.

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CHAPTER 24

Children as Health Workers

In villages and communities throughout the world, **young children are often cared for by their older brothers and sisters.** These young 'child-minders' not only play with their smaller brothers and sisters, but carry them about and even bathe, change, and feed them. It is not unusual for a small child to spend more time under the care of an older sister or brother than with his mother or father.

In some areas, children—especially girls—do not attend school regularly because they are needed at home to watch the smaller children while their mothers work.

If children can learn more about how to protect the health of their younger brothers and sisters, they can make a big difference in the well-being and development of young children in their communities.



After their mother died, this young girl did her best to care for her baby brother. If she had known more about his needs and how to care for him, perhaps he would be healthier.



This girl is doing a good job of caring for her baby brother. If health workers can help children to learn more about meeting the needs of their smaller brothers and sisters, this will do much to improve children's health.

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CHILD-to-child



Some of the best ideas for teaching and involving children in health care have been developed through the CHILD-to-child Program.

CHILD-to-child is an international program designed to teach and encourage school-aged children to concern themselves with the health of their younger brothers and sisters. The children learn simple preventive and curative measures appropriate for their communities. They pass on what they learn to other children and to their families.

The CHILD-to-child Program first began in preparation for the International Year of the Child, 1979. David Morley (author of ***Paediatric Priorities in the Developing World*** and ***See How They Grow***) brought together a group of health workers and educators from many countries. This international group designed an experimental series of 'activity sheets' for children, to be tried out by teachers and health workers. The activity sheets are not intended as step-by-step instructions. Rather, they are suggestions for helping teach children about important health-related subjects.

CHILD-to-child activity sheets have been written on the following themes:

- How do we know if our children get enough food?
- Healthier foods for babies and children*
- Care of children with diarrhea*
- Accidents*
- Our neighborhood—making it better*
- Let's find out how well children see and hear
- Looking after eyes
- Our teeth
- Health scouts*
- Playing with younger children*
- Toys and games for young children
- A place to play
- Children's theater—and stories about safety and health
- Understanding children with special problems
- Understanding children's feelings
- Early signs of illness
- Caring for children who are sick*
- Better health habits*



These activity sheets are available in several languages from TALC (see page **Back**-3). TALC also distributes a 104-page book entitled ***CHILD-to-child,*** by Aarons and Hawes, published by Macmillan Press in England. The book contains 8 of the activities, but does not include all of the ideas from the original sheets. The more complete versions of the 4 CHILD-to-child activities in this chapter are available in English or Spanish from The Hesperian Foundation.

It should be clearly understood that the activity sheets, written for use in many countries, must be adapted to local situations.

*Included in the book, ***CHILD-to-child.***

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THE SOCIAL AND EDUCATIONAL VISION BEHIND CHILD-to-child

Some of us involved in CHILD-to-child see far more possible value in it than simply teaching children about the health needs of their younger brothers and sisters. The educational process that it encourages is equally important.



These are some of the social and educational principles behind CHILD-to-child.

- Children are not only a first priority for health work, but also an enormous resource as enthusiastic health care providers. With a little assistance, **children could soon do more to improve the well-being of their younger brothers and sisters than all doctors and health workers put together**—and at far lower cost.
- Through learning in an active, practical way about health care when young, children will become better parents. They will be more likely to meet the needs of their own children.
- CHILD-to-child can help introduce a liberating learning process into schools. It can help bring schooling closer to the needs of the children, their families, and their communities.
- It can also make children more aware of their own ability to change and improve their situation, through sharing and helping each other.

There are several ways that CHILD-to-child activities can help change or transform the schools.

- CHILD-to-child introduces into the classroom information and skills that children can use right away, in their homes, to benefit their younger brothers and sisters. Both children and teachers can discover the excitement of learning that has immediate value to families and the community. So a seed of change is sown.



- In CHILD-to-child, children learn to work together and help each other. Older grades organize to help teach younger grades. Younger grades conduct activities (story telling, puppet shows, seeing and hearing tests, etc.) with pre-school children. Everybody teaches and everybody learns from each other.
- There is no competition for grades, because in CHILD-to-child no grades are given (we hope!). **The children learn the importance of trying to help each other** rather than trying to end up on top of others. So another seed of change is sown.



- CHILD-to-child emphasizes **learning through experience.** Rather than simply being told things, **the children conduct their own surveys, perform their own experiments, and discover answers for themselves.** They are encouraged to **think,** to **observe,** to **explore,** and to **invent.** This makes learning adventurous and fun. It helps the children develop ways of looking critically and openly at life. It encourages the independence of thought that helps form leaders in the process of change. And so another seed is sown.



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- Most important of all, CHILD-to-child is founded on the belief that **children are able to take on a responsible role in family health.** This means children are respected and trusted. They are valued not simply as future adults, but as useful, important persons in their own right. In this way, children gain a greater sense of personal worth and direction. They may grow up to be more loving human beings.



Through CHILD-to-child, at least part of the children's education will help them to help each other—so that everyone can move forward together. At least the seed will be sown.

THE ROLE OF HEALTH WORKERS IN CHILD-to-child

CHILD-to-child activities can be led by health workers, school teachers, parents, or anyone who likes working with children. But health workers can play an especially important role in promoting and developing CHILD-to-child and similar activities with children.



In Mexico, some 'health promoters' have done this in several ways:

- They organize CHILD-to-child activities with children in the primary school (with the teacher's permission).
- They interest school teachers in conducting CHILD-to-child activities with their classes.
- They meet at the health post with children who do not attend school, so they, too, can take part in CHILD-to-child activities.

Health workers may also be able to work with children through local clubs and organizations (for example, Girl Guides or Boy Scouts).

In some countries, CHILD-to-child activities have been included in the official curriculum (study plan) for primary schools. Where this is the case, health workers can offer to work with the teachers. They can help both in developing the activities with the children and in adapting them to the needs of the community.

The health worker's role can be of great value. For in the process of fitting CHILD-to-child into the school study plan, some of the social and educational principles can easily be lost. The big challenge is to **help the teacher understand and use educational methods based on equality, experience, discovery, and sharing.**

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INVOLVING THE NON-SCHOOL CHILD

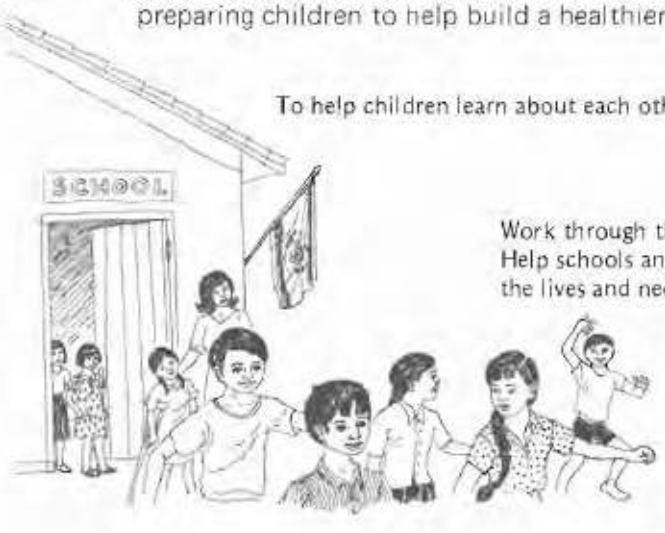
Some children often miss school because they are needed at home to care for younger brothers and sisters. Other children have to work to help their families earn a living. Health workers need to look for ways to reach these children who do not attend school. After all, they are the children who can benefit most from CHILD-to-child.

Encourage these children to come to the health post with their baby brothers and sisters, especially on days of baby weighing, 'under-fives' clinic, or child nutrition programs. Or try to set up special meetings to involve them in CHILD-to-child activities. Invite parents and school children to help.

Some health programs have helped start 'day care' centers for babies of working mothers. Such centers free more of the older children to attend school. Some of those who still cannot go to school may be able to help care for their younger brothers and sisters at the day care center. There they can be involved in CHILD-to-child activities.

Sometimes, **school children themselves can become the 'teachers' of those who do not attend school.** If a health worker can help this to happen, he will not only be acting to solve immediate health problems. He will also be preparing children to help build a healthier community as they grow up.

To help children learn about each other's health . . .



Work through the schools when possible. Help schools and teachers relate more to the lives and needs of the children.

But do not forget about children who cannot go to school because they have to take care of the younger ones at home.



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TIPS FOR TRYING OUT CHILD-to-child ACTIVITIES:

- Choose a place that is not too noisy or distracting.
- Start small, if possible with no more than 20 children.
- Allow enough time, so you do not have to rush.
- Have all materials ready ahead of time. Try to have enough so that all children can take part actively, instead of just watching.
- Use words familiar to the children. Avoid big scientific terms.
- Do not try to do too much at once. One activity sheet may have enough ideas to help you plan several meetings with the children.
- Before doing activities in a school, speak with the headmaster or teachers. Try to get their interest, understanding, and cooperation.
- Also discuss the activities with parents, so they will be more accepting of the children's new ideas. Perhaps some parents will want to help.

POSSIBILITIES FOR FOLLOWING UP CHILD-to-child ACTIVITIES:

- Older school children can lead activities with younger grades.
- School children can lead activities with pre-school and non-school children.
- Children can report back to the group about ways they have used their new knowledge at home and with younger children.
- Children's surveys can be repeated to check for improvements.
- Children can put on public skits, puppet shows, or demonstrations.
- Children from one school or village can introduce CHILD-to-child to children in another nearby school or village.
- Teachers can discuss how they might apply CHILD-to-child principles to the rest of their teaching, to make schooling relate more to children's lives.

EXAMPLES OF CHILD-to-child ACTIVITIES



In this chapter we give 4 examples of CHILD-to-child activities:

Accidents . . . . . p. **24**-7
Let's find out how well children see and hear . . . . . p. **24**-11
Understanding children with special problems . . . . . p. **24**-14
Care of children with diarrhea. . . . . p. **24**-17

These activities are expanded or revised versions of those available through the CHILD-to-child Program and TALC. We also have included photographs and observations on how the activities worked in Ajoya, Mexico, where the village health team and local school teachers conducted some of the original trials.

References to 4 other Child-to-child activities are made in this book:

An activity to see and remove plaque on teeth . . . . . p. **11**-6
Measuring the thickness of the upper arm . . . . . p. **25**-14
A game to help children look at the cause of thinness . . . . . p. **25**-17
Puppet show example: How to care for teeth . . . . . p. **27**-37

We hope that, as you review these CHILD-to-child activities, you will get a clearer idea of how they can be translated into exciting and rewarding action.

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CHILD-to-child

ACCIDENTS

THE IDEA

In some villages or neighborhoods, several children die each year because of accidents, and many more are injured. Many of these accidents could be prevented.

This activity is to help children prevent as many accidents as possible. Different sorts of accidents happen in towns and in rural areas. This activity sheet gives advice about only the most common accidents.

In order to do something about accidents, children need to know . . .

- what the most common dangers are
- how those dangers can be avoided
- what to do if an accident does happen

THE ACTIVITY

What accidents happen to children?

To get children interested, have them tell about accidents that have happened in their homes or their village. Have them list these on the blackboard.

BAD ACCIDENTS IN OUR FAMILIES

	BABIES	OLDER CHILDREN	GROWN-UPS
BURNS	IIII	I	
CUTS AND FALLS	I	III	I
ROAD ACCIDENTS		II	III
SWALLOWING BAD THINGS	III	I	

Ask why the accidents happened. If children can find out why, they will be better able to prevent them.

Preventing accidents

Together, children can decide what they might do to help prevent accidents. For example:

To prevent accidents in the road, they can . . .

- teach young children to stop, listen, and look both ways before crossing
- build bumps across the road at the edge of town and in front of the school so that fast drivers slow down
- write letters to newspapers and authorities about the worst accident spots

To prevent burns, they can . . .

- take care to see that their younger brothers and sisters do not go too close to the cooking fire







- keep matches out of the reach of small children (they can even make a small basket or shelf for matches to be stored high on the wall)
- be sure that handles of pans are turned so that they do not get knocked over



To make play safer, they can . . .

- warn others about the dangers of climbing dead trees, throwing stones, swimming in swift-flowing rivers, running when chewing sticks, etc.
- pick up broken glass, sharp stones, and garbage from streets and play areas



Children in Mexico cleaning up broken glass and garbage from the street.

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To prevent bites and stings, they can . . .

- warn younger children about where snakes, scorpions, and bees live



- clear grass and weeds away from paths

To prevent choking and other problems, they can . . .

- be sure babies do not play with small round objects such as beans or marbles (babies could easily choke on these, or put them in their noses or ears)
- mash foods like groundnuts and beans before feeding them to babies
- give teething babies large, clean objects to chew
- make sure poisons such as medicines and insecticides are kept out of reach, and that kerosene is not stored in drink bottles
- warn younger children not to eat strange fruits and plants, or drink out of strange bottles



If an accident happens . . .

There are many basic treatments children can learn. Here are a few suggestions.

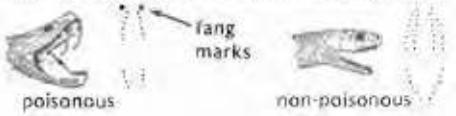
Accidents

If someone has a bad fall from a tree or gets badly hurt in a car accident, do not move him. If possible, cover him with a blanket to keep him warm. **Get help quickly.** If he must be moved, make a stretcher and put him on it gently, without bending his back, neck, or bones that may be broken.



Snakebite

Learn to tell the bite of a poisonous snake from that of a non-poisonous one. If someone gets a poisonous bite, move him as little as possible. Moving will spread the poison around the body. **Get help fast.**



Burns

Put in cold water ***at once.*** If the burn is bad, cover loosely with a clean cloth. Give Special Drink. **Get help quickly.** ***Never*** use grease or butter on burns. Keep burns clean. Small burns are best left uncovered.

Cuts and wounds

When possible, wash cuts with soap and water that has been boiled and cooled. Wounds left dirty get infected. Do not put mud, iodine, or merthiolate on open cuts. Only use bandages if they are very clean.



FINDING OUT HOW WELL THE ACTIVITY WORKED

- Children can compare the number of accidents before and after they take specific actions.
- They can talk about accidents they have prevented and others that still happen.

OTHER ACTIVITIES FOR CHILDREN

- Children at school can organize their own first aid clinic for treating simple cuts and wounds
- Each older child can 'adopt' a younger child to see that he crosses the road safely on the way to and from school.



- Children can make plays and puppets to teach about accident prevention. They can show these to others at school, waiting at clinics, and at village meetings.

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How teachers and health workers presented the Accidents Activity

Many of the CHILD-to-child activity sheets were first tried out in the small Mexican village of Ajoya. In order to learn if they were useful, both the village health team and the primary school teachers were given the sheets, with very little additional information or assistance.

It is interesting to compare the teaching methods used by the school teachers with those used by the health workers.

The health workers in Ajoya have found it important to bring learning as close to real life as possible. For teaching aids, they try to **use real objects rather than just drawings.** People learn best from what they can touch and handle.

Whereas the teachers made excellent posters to help the children learn about accidents, the health workers figured out ways to use real objects and lifelike situations to teach the same ideas.

For example: **Injuries from falls**

APPROPRIATE



The teacher made this poster to get the children thinking and talking about accidents from falls.

MORE APPROPRIATE



The health workers, however, had the children pretend one of them had fallen. The children then figured out how to build a stretcher using brooms and their shirts.

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Another example: **Burns from hot food**

APPROPRIATE



To help children understand that it is important to turn handles of pots so small children cannot reach them, the teacher copied this drawing from the activity sheet.

MORE APPROPRIATE



To teach the same idea, the health worker brought a big pan to school. He filled it with water and had a child (who did not know it had water in it) demonstrate how a baby might reach up and spill hot food on her head.

Result: the surprised child got soaked, everyone got a laugh, and no one forgot the lesson!

In a similar way, instead of drawing the tooth marks of poisonous and non-poisonous snakes on a poster, the health worker drew them right on the children's arms. (For photos and discussion of this example, see p. 11-6.)



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CHILD-to-child

LET'S FIND OUT HOW WELL CHILDREN SEE AND HEAR

BACKGROUND DISCUSSION

Some children cannot see or hear as well as other children. Often we do not know about this and the child says nothing. But because the child does not hear the teacher or see the blackboard, he may not learn as quickly as others. So he may try to hide in a corner. **We can help him by letting him sit close to the teacher.**

Also, babies who cannot hear well do not learn to talk or understand as early as others.

In this activity, the school children try to find out which small children and babies need help.

HELPING CHILDREN UNDERSTAND THE PROBLEM

One way to get children thinking about problems of seeing and hearing is to ask questions like these:

- Do you know anybody who does not see or hear well?
- Do you act differently with these people? Why?
- How would you feel if you did not see well? Or hear well?

You can help children understand these things better through games. For example:

Game 1. One child plugs his ears while another tells a funny story to the group. Then one of the children plays 'teacher' and asks everyone, including the child who has his ears plugged, to answer questions about the story. Finally they ask him what it felt like, not being able to hear the story well.



Game 2. The children form a circle. One child stands in the middle with her eyes covered. Around her feet are small stones, nuts, or other small objects.

The other children, one by one, try to creep up and steal these things.



If the child in the middle hears the 'thief', she points to him and that one is out of the game.

The goal is to steal the most objects without being heard.



Children in Mexico playing the 'hearing game'.

These games help children realize how important hearing is. They can invent other games to learn the difficulties of children who cannot see well.



For example, they could play a game in which one child is blindfolded. He then tries to recognize his friends by feeling them.

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FINDING OUT WHICH CHILDREN HAVE THESE PROBLEMS

Testing children's hearing

This can be done as a game.

1. An older child stands several meters from a line of younger children.



2. Behind each young child stands an older child with pencil and paper.



3. The first child calls the name of an animal, VERY LOUDLY.

4. The young children whisper the word to their older partners.

5. And the older children write it down.

Then the first child names other animals, each in a softer and softer voice, until at last he is whispering.

After about 10 animals have been named, and the words that the younger children heard have been written down, compare the different lists.

Repeat this 2 or 3 times.

Any child who has not heard nearly as many words as the others probably has a hearing problem. Let this child sit at the front of the class. If possible, he should be examined by a health worker—especially if he has pus in an ear or frequent earache.



Children testing hearing in Mexico.

Testing the hearing of babies

What can children do to find out how well the babies in their families can hear?

- They can make a rattle from seeds or small stones, creep up and shake it behind the baby's head, and see if the baby is surprised.



- Or they can call out the baby's name from different places in the room, and see if the baby responds.

If the baby is not surprised at the sudden noise, or does not turn his head when his name is called, he probably does not hear well. The baby may need to be taken to a health worker to have his hearing checked.

How can children help look after the ears of their brothers and sisters?

They can regularly look in their ears to see that there is no pus or small object inside. If they see anything wrong they should tell an older person, who should take the child to a health worker for help.



Hearing games children can play with babies

The children may think of games to help babies listen and learn.



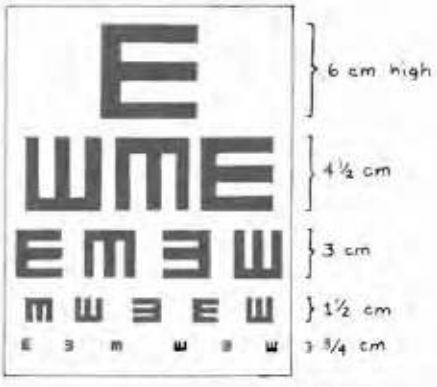
For example:

- Singing to babies, and teaching songs to young children.
- Telling stories and changing voices to sound like different people in the story—loud, soft, angry.

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Testing children's eyesight

Older children can make their own eye chart. They can cut out black 'E's of different sizes and paste them on white cardboard.



Also make a large 'E' shape out of cardboard or other material. →



First let the children test each other. Hang the chart in a place where the light is good. Then make a line about 6 meters from the chart. The child to be tested stands behind the line, holding the cut-out 'E'. Another child points at different letters, starting from the top.

The child being tested is asked to hold the cut-out 'E' in the same direction as the letter pointed to on the chart. Test each eye by covering the other.



If the child can easily see the 'E's on the bottom line, he sees well. **If he has trouble seeing the second or third line, he sees poorly and needs to sit up front.** If possible, the child should go to a health worker for further tests. He may need glasses.



Children making an eye chart.

After the children practice testing each other, they can test the eyesight of those in the younger grades and the children who will be starting school soon.

Looking at each other's eyes

Start with questions to get the children interested. For example:



- Are your eyes the same as your classmates'? Shiny? Clear?
- How about the eyes of your younger brothers and sisters? Can they see well in the dark? Or do they often stumble at night?
- Do their eyes look dull? Are there any unusual spots or wrinkles? If so, something may be wrong.

Many children in different parts of the world become blind because they do not eat foods that make their eyes healthy. **Eating yellow and green fruits and vegetables helps protect the eyes.** Some extra cooking oil added to food also helps.

If children's eyes are red or sore, you can suggest that they wash them often with clean water with a little salt in it (no saltier than tears). This may help eyes get better and keep the flies away. If they do not get better soon, see a local health worker.





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CHILD-to-child UNDERSTANDING CHILDREN WITH SPECIAL PROBLEMS

GROUP DISCUSSION

Encourage a class or group of children to talk about children who have some special problem or 'handicap'. Ask questions like:



- Do you know any child who cannot walk or run or talk or play like other children?
- Why can't this child do everything the same as you can?
- Is the child to blame?
- How do other children treat this child? Are they kind to him? Are they mean? Do they make fun of him? Do they include him in their games?
- How would you feel if you had a problem similar to this child's? How would you want other children to treat you? Would you like them to laugh at you? To pay no attention to you? To feel sorry for you? To do things with you and become your friend?

GAMES AND ROLE PLAYING

Children will better understand the child with a special problem if they can 'put themselves in his shoes'. They can play a **game in which one child pretends to have a handicap.**



The other children act out different ways of behaving toward the 'handicapped' child. Some are friendly. Some ignore him. Some make fun of him. Some help him. Some include him in their games. Let the children come up with their own ideas and act them out.

After several minutes, another child can pretend to have the handicap. Let several children have a turn with a handicap. Try to make the pretend handicap seem real.

For example, to pretend one child is lame, the others can tie a pole or board to one leg so the child cannot bend it.

Then have the children run a race or play tag. How well does the child with the 'bad leg' do?



After several children have played different handicapped roles, have each of them discuss his experience with the others: what it was like, what he felt, and why.

REMEMBER: Children are usually kind to a child with a very severe handicap. They are often more cruel to a child with a less severe problem, such as a limp.

THINGS THAT HANDICAPPED CHILDREN DO WELL

A handicapped child cannot do *everything* as well as other children. But often there are *some things* she can do as well, or even better. Try to have the children think of examples.

A child with crippled legs, who has to walk with crutches, often develops very strong arms and hands. Or a blind child may develop unusually keen hearing.

Rather than feel sorry for the handicapped child and look only at her weakness, it is better to recognize and encourage her strengths. For example:



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Play with a handicapped child

Children, try to include the handicapped child in your games and adventures. Let him do as much for himself as he can, and help him only when he needs it. But remember, he cannot do everything you can. Protect him from danger . . . but do not protect him too much! Too much protection is dangerous to any child's health. Children need adventure for their minds to grow, just as they need food for their bodies to grow.

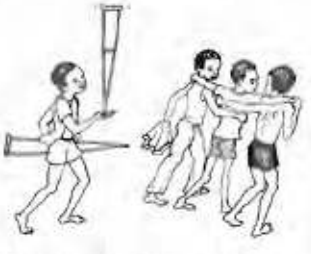
Swimming



Many children with crippled legs can learn to swim well. Their arms become unusually strong from using crutches, and in the water they easily keep up with other children. But sometimes they have trouble getting to the water, or the other children forget to invite them . . .



A friendly word of welcome to include the child with a special problem, or a little extra time or attention given to him, can make a big difference—and can make everyone feel good.



To help children see how much it matters to the handicapped child to be included in their fun, perhaps they can act out the pictures above.





Photos from Ajoya, Mexico

CHILDREN WITH VERY BAD HANDICAPS

Some children have very bad handicaps. They cannot swim or play many games. But sometimes these children can learn to play marbles, cards, or guessing games.

It is especially difficult for a child who cannot speak or think as easily as other children. This child may be very lonely. Sometimes a child who cannot speak, understands a lot more than people think he does. If there is such a child in your neighborhood, perhaps children could take turns visiting him, to talk or play with him. Let him know you care.

BABIES WITH PROBLEMS

Sometimes a baby has problems that make it very hard for him to learn to sit or crawl or walk. The muscles in his back or legs may be too weak, or may make jerky movements the child cannot control.

A child like this needs special help. Often there are things that older brothers and sisters can do to help the child learn to use both his mind and his body better.

For example: If a child has trouble learning to crawl, perhaps his older brothers and sisters, or other children, can play 'crawling games' with him.

Two children can hold up part of the baby's weight as he tries to crawl. Another child encourages the baby to crawl by holding out a fruit or toy.



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Play the game every day. As the baby grows stronger, less of his weight will need to be held up. In time he may be able to crawl without help.



Children in Mexico playing a 'crawling game'.

HOW CHILDREN CAN HELP A HANDICAPPED CHILD

There are many ways that children can help a baby or young child with a special problem to learn to do new things. Here are some ideas:

- **Make it fun!** If exercises can be turned into games, the child will learn faster and everyone will enjoy it more.
- **Self-help.** Help the handicapped child only as much as he needs. Encourage him to do as much as he can for himself and by himself.



A simple bar held by forked sticks can increase the self-reliance of a child who has difficulty squatting to shit.

- **Little by little.** But remember, some things are especially difficult for the handicapped child. Encourage her to do a little more than she already does—and then a little more. If you have her try to do too much, she may get discouraged and stop trying.
- **Show you care.** Show the child how glad you are when she learns to do new things.
- **Mind over body.** Play often with the child, in ways that help her develop not only her body but also her mind. Talk with her and tell her stories. Carry her about. Become her friend.



A rope swing like this can help a child who is lame to help herself learn to walk—in a way that is fun!

Are there any babies or young children in your village who are handicapped or have special problems? Perhaps the other children can take turns playing with these children and helping their families.

Sometimes handicapped children are not given a chance to go to school because their parents are afraid they will find things too difficult. Perhaps a group of school children can visit the child's family. They can offer to take her to school, help in whatever way they can, and be her friend. This could make a big difference in that child's life. CHILD-to-child!



REMEMBER—
ALWAYS BE FRIENDLY!

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CHILD-to-child

CARE OF CHILDREN WITH DIARRHEA

BACKGROUND INFORMATION



Diarrhea means frequent, watery stools (shit). Often children with diarrhea also have vomiting and a swollen belly with cramps. The stools may smell worse than usual.

In many areas, diarrhea is the most common cause of death in small children. It is most frequent in babies between 6 months and 2 years. It is more common and more dangerous in children who are malnourished. **Bottle-fed babies have diarrhea 5 to 6 times more often than breast-fed babies.** Diarrhea is less common where there is piped water in the houses.

A lot of diarrhea can be prevented if we . . .

- breast feed babies for as long as possible
- see that children get enough good food
- take care with cleanliness and use piped water wherever possible

Children who die from diarrhea usually die because their bodies lose too much water. This loss of water is called ***dehydration***. Therefore, the most important part of treatment is to replace the water lost through diarrhea and vomiting. For most diarrheas, medicines are not very effective. What do help are drinks that put liquid back into the child: water, breast milk, soups, herbal teas, etc. Also, children with diarrhea should be given food as soon as they can take it. Food gives their bodies strength to fight the sickness.

Even better than plain water or herbal teas is 'Special Drink' (often called 'Rehydration Drink'). This is water with some sugar and salt dissolved in it. Children can easily learn how to make the drink and give it to their baby brothers and sisters when they have diarrhea.

To sum up, children with diarrhea . . .

- must be given lots to drink, and
- must be encouraged to eat as soon as they are able.

In treating diarrhea, liquids and food are more important than medicines.

Who can introduce this activity?

Teachers, health workers, or anyone who is interested.

HELPING CHILDREN UNDERSTAND THE PROBLEM

How common and how dangerous is diarrhea?

To discover this, the children can make a simple survey. They can ask their mothers how many times during the last year their younger brothers and sisters had diarrhea. For each pre-school child they can find out:

- his age
- how he is fed (**breast** or **bottle**)
- **how many times he had diarrhea in the last year** (or during the last rainy season, or since some big fiesta, if people do not think in terms of years)
- **how many children died because of diarrhea** in the last year

When the children return to school, they write their findings on the blackboard.



In this way, the children can see at what ages diarrhea is most common. Probably they will also discover that the breast-fed babies do not get diarrhea as often as the babies who are bottle fed.

The children may want to make posters like these to help everyone know the importance of breast feeding:



The information the children gather not only helps them to learn about the situation in their village. They can also use it later to find out if their health activities have made a difference.

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What is dehydration?



It is the loss of too much water!

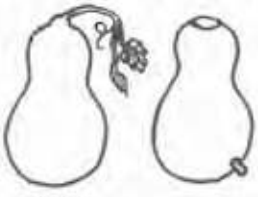


To look at the problem of dehydration, **start by talking about something familiar to the children.**

For example, in Latin America and parts of Africa, people associate diarrhea with sinking in of the soft spot (fontanel) on the top of a baby's head. People believe the brains have slipped down and this has caused the baby's diarrhea. Help the children see for themselves that the sinking of the soft spot results from the loss of water in the baby's body (dehydration).

To learn about dehydration, the children can conduct their own experiment by making a 'gourd baby' like this one:

1. Cut off the top, like this.



gourd

2. Fill the gourd to the brim with water.

Make a small hole with a plug.



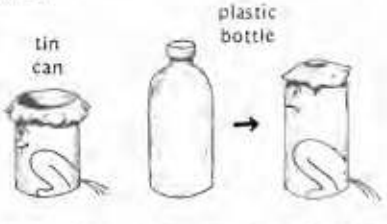
3. And cover it with a thin wet cloth.



4. Then have the children pull the plug and watch the cloth (soft spot) sink in!



If you do not have gourds, a plastic bottle or tin can will do.



Ask the children: "Why did the cloth sink in? What does the baby need to make the soft spot rise again?" In this way **the children find out for themselves that a sunken soft spot in a baby is a sign of dehydration.**

The children may want to make drawings or posters like this one so that other persons can learn, too.



Learning the different signs of dehydration

The children have already discovered that a sunken soft spot is a sign of dehydration. By putting additional holes in the 'gourd baby', they can experiment to learn other signs of dehydration.

When a baby has enough water, he pees well.



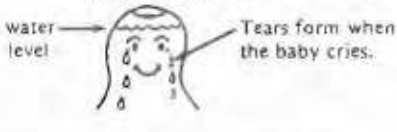
When he has lost a lot of liquid, he no longer passes urine (although the diarrhea continues).



In this way, the children discover that **a child who passes little or no urine is probably dehydrated.**

By putting a small hole at the corner of each eye, the children can notice that tears no longer form when a baby is dehydrated.

When the gourd is full of water, it forms tears.



When water is lost, tears no longer form.



So the children learn that **if a baby does not form tears when he cries, he is probably dehydrated.**

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To find out what happens when a child has vomiting as well as diarrhea, the children can do the following:



Pull out the plugs to show that diarrhea with vomiting causes a more rapid loss of water.



In this way, the children find that **dehydration comes more quickly and is more dangerous when a child with diarrhea also has vomiting.**

What happens when a child loses too much water?

The children can experiment to see how dangerous dehydration is to a baby.

For example: They can pick 2 flowers, put one in water, and keep the other without water. They will see that one lives while the other wilts and dies. Ask them why this happens.



Let the children compare this to a child with diarrhea.



Ask the children, "What does a baby with diarrhea need so it will not wilt and die?"

Or the children can put a fruit like a plum or guava in the hot sun to see what happens to it.

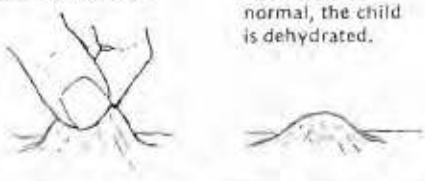


Ask the children what they think happens to a baby when he dries out. Right! He loses weight and can even become wrinkled.

Often you will not see the wrinkles of a dehydrated child at once. But children can learn to do the following 'belly wrinkle test':

Lift the skin of the belly between two fingers, like this.

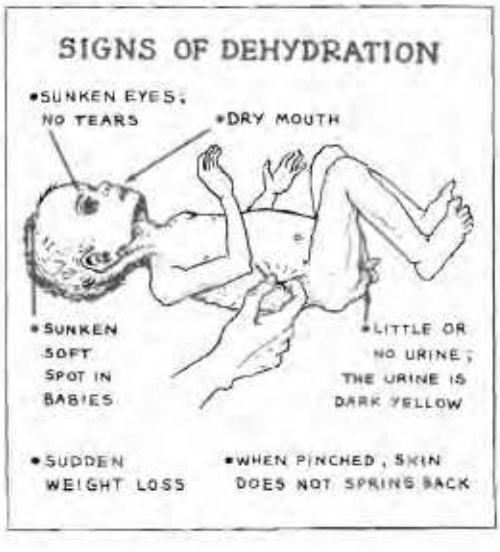
Then let go. If the skin does not spring right back to normal, the child is dehydrated.



Children can practice this test by pinching the skin on the back of an adult's hand. To make it seem more real, the children can make a simple doll baby like this from an old sock.



After the children find out the different signs of dehydration from their experiments, they can write the list of signs on the blackboard or on a poster.



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How can dehydration from diarrhea be prevented?

The children can find the answer by playing a game with the gourd baby. They pull the plug, then try to put back as much water as the baby is losing, like this:



They learn that, as long as all the lost water is replaced, the water level will never go down and the baby will not become dehydrated.

A child with diarrhea needs to drink **at least 1 glass of liquid each time he has a watery stool.**

Giving lots of liquid to a baby with diarrhea may at first increase the amount of diarrhea. But this is all right. Usually the diarrhea will soon get better. The important thing is to **be sure that the child drinks as much liquid as he loses.**

The children have now found out that:

A child with diarrhea needs a lot of liquid.

A 'Special Drink' to help prevent dehydration

Many of the **herbal teas and soups** that mothers give to children with diarrhea do a lot of good, because they help to get water back into the child.

Breast feeding provides both water and food, and should always be continued when a baby has diarrhea.

A **'Special Drink'** can be made from **SUGAR, SALT,** and **WATER,** and is especially good for persons with diarrhea.

The children can learn to prepare Special Drink in any of several ways.

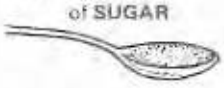


CAUTION: Making Special Drink with too much salt can be harmful. So before adding the sugar, TASTE IT TO BE SURE IT IS NO SALTIER THAN TEARS.

Ways to prepare Special Drink

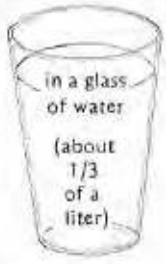
First method: ordinary spoons

Mix 1 teaspoon of **SUGAR**



\+ the tip of a teaspoon of **SALT**





Second method: by hand

Mix about this much **SUGAR**





\+ a pinch of **SALT**



Third method: plastic measuring spoons

In some places, special plastic spoons are available to measure the exact amounts of sugar and salt for one glass of water.



Fourth method: homemade spoons

Rather than depend on plastic spoons that can get lost or broken, the children can learn to make their own measuring spoons.

Here is one example.



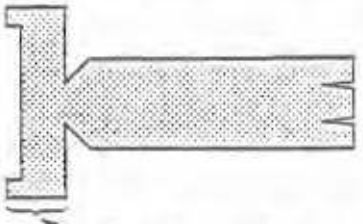
For another example, see the next page.

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A WAY TO MAKE MEASURING SPOONS FOR PREPARING SPECIAL DRINK

Children can make measuring spoons from many things. But it is important that they measure roughly the right amounts of sugar and salt.

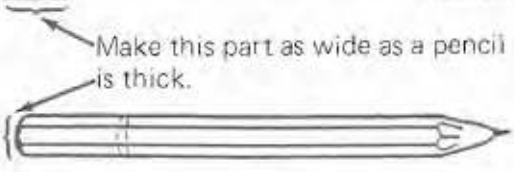
Here is one way to make spoons, using things that have been thrown away.

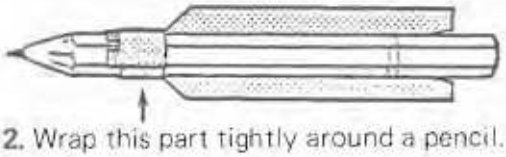


1. Cut a juice or beer can to this shape. (It is easy with scissors.)



Make this part as wide as a pencil is thick.



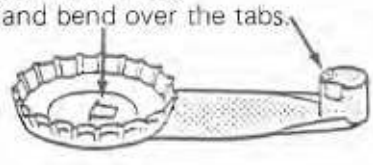


2. Wrap this part tightly around a pencil.

3. In the middle of a bottle cap make a small cut.



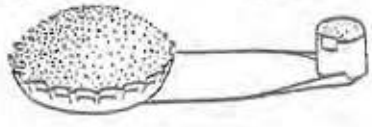
4. Join the pieces and bend over the tabs.



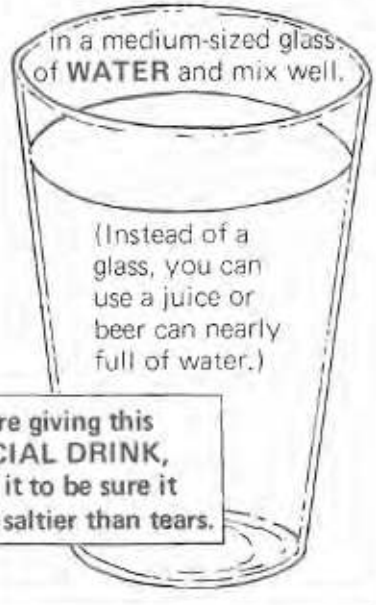
Give the child 1 glass of SPECIAL DRINK for each time he makes diarrhea.

HOW TO MAKE SPECIAL DRINK

Put 1 heaping bottle cap of **SUGAR** and 1 little spoon of **SALT**



in a medium-sized glass of **WATER** and mix well.



(Instead of a glass, you can use a juice or beer can nearly full of water.)

Before giving this SPECIAL DRINK, taste it to be sure it is no saltier than tears.

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How to give the Special Drink

Start giving the drink as soon as diarrhea begins.



ADULT
2 glasses each stool

An adult should drink at least 2 glasses of Special Drink after each watery stool.

A child should drink at least 1 glass of Special Drink after each watery stool.



CHILD
1 glass each stool

If the child vomits the drink, give him more. A little will stay in him. Give sips every 2 or 3 minutes. If the child does not want to drink, gently insist that he do so.

Keep giving the drink every 2 or 3 minutes, day and night, until the child pees normally (every 2 or 3 hours). Older children and their parents can take turns giving the drink all through the night.

A child with diarrhea should eat as soon as he can.

Many people still believe that persons with diarrhea should not eat. This is a big mistake. A sick person must eat well in order to overcome the sickness. A child with diarrhea should eat as soon as he is able.

To help children understand why this is important, ask if any of the children has ever missed a meal or spent a day without food. How did they feel? Weak? This way, the children can realize that a child with diarrhea needs food in order to be strong enough to fight off the illness.



When a breast-feeding baby gets diarrhea, KEEP GIVING BREAST MILK, BUT GIVE SPECIAL DRINK, TOO.

Helping to make learning more real

A game: Give the children the plastic spoon, salt, sugar, and water. Do not tell them how much to use. See if they can mix the drink correctly by following the instructions on the spoon. **It is important that they learn to make the drink correctly.**

Another game: Ask children to invent ways to make their own measuring spoons out of old bottle caps, juice cans, or whatever. Make sure the finished spoons hold about the correct amounts. You can give prizes for the most accurate spoon, the simplest spoon, etc.

Skits, puppets, role playing: Children can use puppets or role playing to act out what to do when a younger child has diarrhea. They can cut a large mouth in a "gourd baby", and actually give it Special Drink and food.



TEACHING OTHERS

After the children have learned about diarrhea and dehydration, they can help teach others. Here are a few possibilities:

- Children can put on demonstrations, plays, or puppet shows to convince people that giving liquids and Special Drink can save children's lives.
- They can discuss what they learn with their parents, and help prepare Special Drink when the baby has diarrhea.
- School children who took part in this activity can teach children who do not go to school because they have to care for younger brothers and sisters.
- Children from older grades can help teach these ideas to children in the younger grades.

FINDING OUT HOW WELL THE ACTIVITY WORKED

The group can make counts each month (or after 6 months or a year) to find out:

- How many children (or their mothers) have made the Special Drink for persons with diarrhea?
- How many children have had diarrhea?
- How many (if any) died?

Ask any child who has prepared the Special Drink for a brother or sister with diarrhea to tell his story at school. He can explain how he (or his mother) made the Drink and used it, any problems he had, and if it seemed to help.

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MORE IDEAS FOR HELPING CHILDREN LEARN AND TEACH

Avoiding parent-child conflict over new ideas

One big doubt often raised about the CHILD-to-child Program is this:

People, including parents, often have very fixed ideas about managing common illnesses. **Is it fair to ask children to take home new ideas that may conflict with the beliefs and customs of their parents?** Could this weaken children's respect for their parents or for local traditions? Or will it make parents angry with the children and, perhaps, with the school?

These are valid questions. In many areas, for example, parents believe it is harmful to give a child with diarrhea anything to eat or drink. They argue from experience that giving food or drink to the child may make him have another watery stool more quickly. How, then, can a boy or girl convince parents that, even though the sick child continues to have diarrhea or to vomit, it is very important to give lots of liquid and also food?



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

There are no easy answers to these questions, but one thing is clear. In a program such as CHILD-to-child, **it is not enough to work only with the children.** Health workers and teachers need to work with the parents and the community as well. There are ways they can help families become more open to the new ideas children bring home from school. These include discussion groups, mimeographed sheets (where enough people know how to read), and evenings of entertainment with role plays and skits.

It is best when both children and adults take part. A good way to win community acceptance is to involve parents and opinion leaders from the first. Ask the help of parents or the local health committee in planning CHILD-to-child activities and explaining them to other parents.

It is important that teachers and health workers show respect for the ideas and traditions of the children's parents. At the same time, **try to prepare the children for some of the difficulties that may arise** when they introduce their new ideas at home. Role playing and story telling are good ways to do this.

To follow is an example of a story that can be used to help children learn and teach about diarrhea, dehydration, and Special Drink.

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ABDUL AND SERI

A CHILDREN'S STORY FROM INDONESIA*



Abdul ran home from school almost as fast as on the day his sister Seri had been born. As soon as he saw her in the courtyard, his eyes lit up, for although Abdul was already 8 years old, he loved to play with his little sister.

Seri was only one and a half years old. She would clap her hands in delight when he made funny faces at her, or giggle when he counted her toes. He had helped her with her first steps, picking her up gently when she tumbled.



But what was wrong today? Usually Seri toddled straight for her favorite Abdul with her arms outstretched. But now she just sat on the porch and gazed at him with dull eyes. Quickly he lifted her up to his hip. He noticed that she must not have had her usual bath before he came home, because she had an unpleasant smell about her.

Their grandma greeted him with a tired voice. Worried, Abdul asked her, "Is Seri sick? Why does she act like this?" "She's had several watery bowel movements today," answered Grandma, "and she's been very fussy, Abdul. You must not let her have any food or drink so that the diarrhea will stop and she will get better."

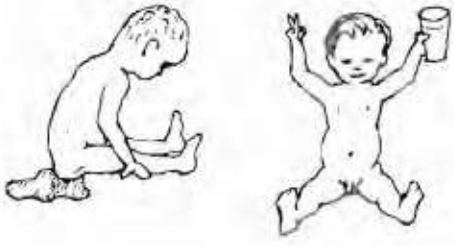
***Note:** This story and its pictures are reproduced with permission from John Rohde, M.D. This or similar stories should be adapted to fit the situation and language of children in your area.

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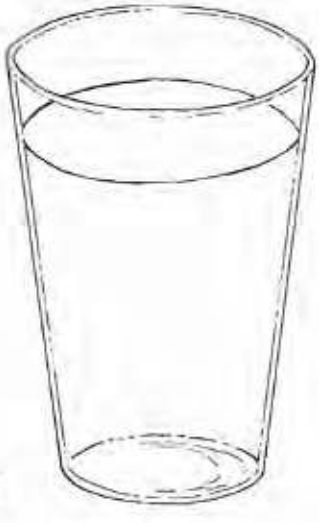
without water

with water



Abdul thought for a moment, and then he took a deep breath. "But Grandma," he cried out, "my teacher told me that a watery stool can be very dangerous. If the body loses water, it's like a plant that isn't watered. First it gets weak, and then it dies! We have to give Seri enough to drink so she won't be weak like this."

Grandma could feel how much Abdul believed in what he was saying, and she was very proud that her grandchild had a chance to go to school and learn new things. But still, no one had ever given any food or drink to a child with watery stools as long as she could remember. Then, while Abdul looked at her with pleading eyes and waited for her response, she thought of one of her own dear children she had lost after only 2 days of watery stools. And what about little Tini next door, who had died the same way? Grandma sighed and said gently to Abdul, "Perhaps your teacher is right. Maybe we should try a new way. What does she say we ought to do?"



In one glass of WATER

mix one level teaspoon of SUGAR



and one pinch of SALT



Abdul looked at his grandmother with new respect, put Seri into her arms, and urged her to follow him. Quickly, he put some water on to boil* and afterwards (while they waited for it to cool) he told Grandma the simple recipe that would help Seri. Grandma could hardly believe that one level teaspoon of sugar and a pinch of salt in a glass of boiled water would be the right thing to give Seri, but she was determined to let Abdul try.

*The delay caused by boiling may not be wise. See the discussion on p. **15**-3. (Editor's note.)

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As soon as the water was cool enough for Seri to drink, Abdul added a level teaspoon of sugar and a pinch of salt. He stirred the drink and offered it to Seri. She was so thirsty that she gulped the whole glass! Abdul made her another glass, adding the right amount of sugar and salt again. Grandma watched with surprise as Seri drank the whole second glass as well.

Suddenly, Seri vomited and Grandma looked as if she were about to scold Abdul. "My teacher says not to worry if the child vomits in the beginning. Just try again," he said. He mixed a third glass for Seri, but this time he urged her to drink it more slowly.



When the glass was finished, Seri clapped her hands and began to squirm, trying to get off Grandma's lap. Burbling at Abdul, her eyes darted after him as he got out a biscuit. Finally wriggling off Grandma's lap, Seri walked toward Abdul with arms out to take the biscuit. Suddenly, much to Grandma's dismay, Seri made another watery bowel movement.

"Don't worry, Grandma, she's already so much better," said Abdul. "Look how eager she is to have the biscuit. And she's still thirsty! She's trying to reach the glass."

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Abdul had just helped Seri finish another glass of the Special Drink, when his mother arrived home from her trip to the market. "How is Seri?" she asked Grandma anxiously. Seri moved toward her mother's voice, her eyes bright with recognition. "Why, she's much better, I see. I'm so relieved. Not giving her anything to eat or drink must have helped her."

"Oh, no," said Grandma, smiling at Abdul. "We've tried a new way, and look how Seri has changed since this morning. Abdul, tell your mother what you've given Seri."
"I'll wait till you nurse her, Mother. She'll be even happier then," answered Abdul.



The next day, Abdul got to school early. He shyly told his teacher that he had tried the recipe she had taught the class to use in case anybody in their families had watery stools. His teacher was very happy that Abdul had remembered to use 1 level teaspoon of sugar and a pinch of salt in the glass of boiled water. She was even happier to know that, although Seri had had a watery stool two more times that day, today the diarrhea had stopped completely.

"Make sure she keeps drinking and eats some extra meals so she'll be just as strong as she was before," the teacher cautioned Abdul. "You've really learned well."

Abdul glowed inside. When school was over that day, he ran home with a happy heart to find Seri wanting to play, her arms outstretched and her eyes shining, waiting for a new game.

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A puppet show about 'Special Drink' (oral rehydration)

Although the story of Abdul and Seri 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 story of Abdul and Seri 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 Abdul and Seri 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.

Perhaps the health workers you train can help children in their villages to do the same.

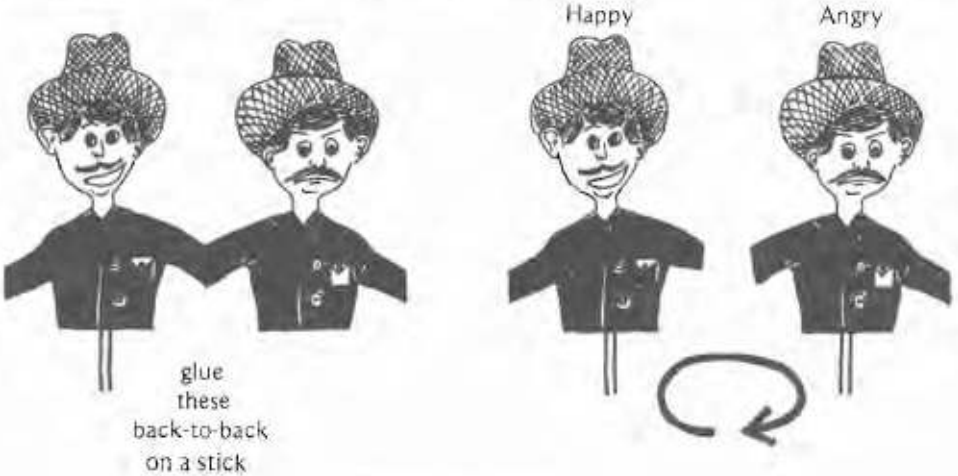


Draw a picture on cardboard or posterboard. Cut it out and glue or nail it to a stick.



PEPITO

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. (To make a puppet with 4 different expressions, see p. **27**-36.)



glue these back-to-back on a stick

PEPITO'S FATHER

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The children's puppet show in Ajoya was a huge success. Here are some photos from their performance.

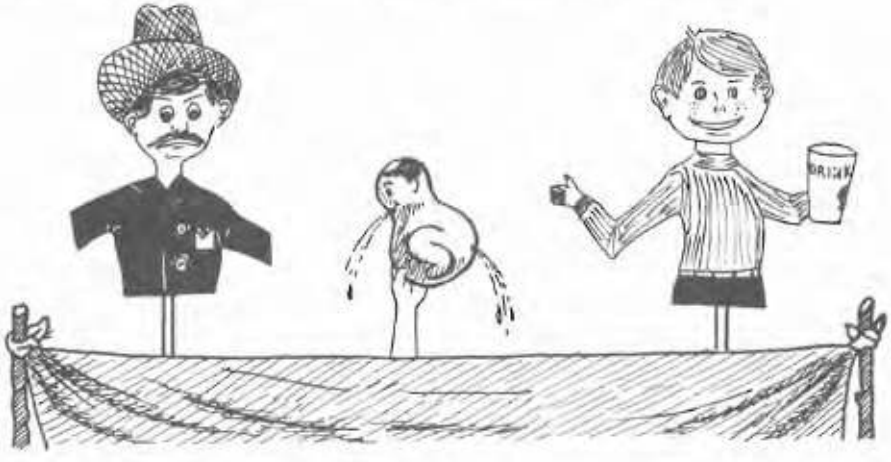


Here the children greet the audience before the puppet show begins. The sign in Spanish says, THE SCHOOL CHILDREN PRESENT: "PEPITO TEACHES HIS FAMILY."

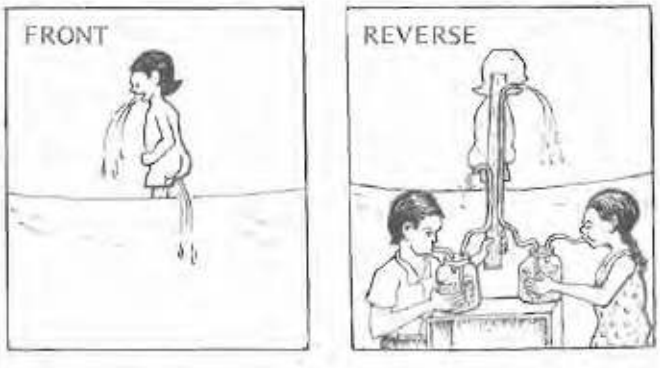


Here is Pepito, explaining to his parents how to make 'Special Drink' for his baby sister who has diarrhea.

Children can make the puppet show even more exciting by using a 'gourd baby' with water in it—so the baby can actually have diarrhea and vomit.



Or they can make a puppet with some rubber or plastic tubes attached to jars of muddy water. When a child blows into the jar, the puppet 'vomits' or has 'diarrhea'.



Color slides or filmstrip with a script of the play, "Pepito Teaches His Family," are available from the Hesperian Foundation.

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PARENTS' RESPONSE TO CHILD-to-child

In the village of Ajoya, most of the parents were enthusiastic about the CHILD-to-child Program, even though some of the new ways of doing things seemed strange to them. Among the reasons for the community's acceptance were the evening theater and puppet shows (including "Pepito"*).

The children also gave demonstrations of dehydration and rehydration using the 'gourd babies', which everyone loved! It was the first time that most people understood that the sunken soft spot is caused by water loss from diarrhea.



In Ajoya, the boys and girls found that most of their parents accepted the idea of giving Special Drink to children with diarrhea. The local health workers had been explaining this to families for years. So many families were already giving Special Drink to their children when they had diarrhea.

What really shocked people, however, was the result of the children's survey conducted as a part of the Diarrhea Activity. This study showed that **70% of mothers were bottle feeding their babies,** and that **the bottle-fed babies in Ajoya suffered from diarrhea 5 times as often as the breast-fed babies!**

Some of the mothers were so concerned by the children's findings that they staged a short play, or 'skit', entitled "The Importance of Breast Feeding." (See p. **27**-31.) In this skit, the mothers used 'cardboard babies' to show various stages of good and poor nutrition. It was a great success—at least in terms of entertainment.

It is hard to say how much influence the children's study and the skit have had on the way village mothers feed their babies. Throughout Latin America, many mothers have been changing from breast feeding to bottle feeding, in part because of advertising by the producers of artificial milk. However, we have talked to several mothers who decided to breast feed their babies as a result of the children's study and the women's skit.

Apart from measurable results, however, the cooperation, concern, and fun that have come out of this CHILD-to-child activity have made it enormously worthwhile. What final effect it may have on the children themselves, when they grow up to become parents and perhaps leaders in their communities, we may never know.

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*Besides the puppet show on using Special Drink, the children later presented a puppet show about "Care of the Teeth" (see p. **27**-37). These children's shows were performed on the same nights that villagers and health workers-in-training presented Village Theater productions.

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PART FIVE

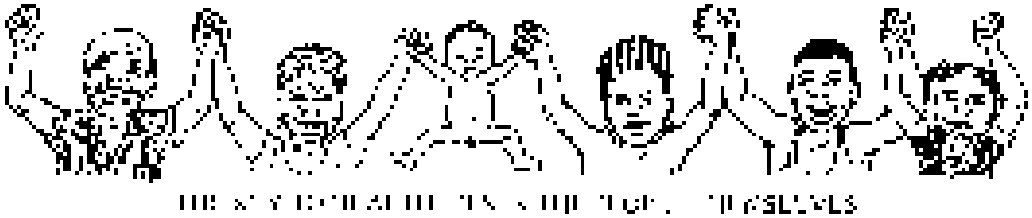
HEALTH IN RELATION TO FOOD, LAND, AND SOCIAL PROBLEMS

Part Five of this book includes chapters on topics that are important for health but are not usually included in books about health. Some of these topics are rarely discussed at all. Others are discussed only in books that are not easily available to health workers. Part Five gives information about these topics in a way that health workers can understand and use.

In Chapter 25 we look at the causes of poor nutrition. We point out that poor nutrition is usually not caused by lack of food. Rather, it is caused by poverty, by unfair distribution of land, and by other social problems. We show how poor nutrition can be prevented by changing these conditions. We also show how health workers can help people to grow more food and to improve their diet, even when they are not able to change the basic causes of poor nutrition.

In Chapter 26 we discuss ways in which people's lack of land and other resources, and their poverty, can affect their health. We show how health workers can help people to improve their situation. We also discuss the problem of migration from the countryside to the towns, and the health problems that migrants often face. We suggest ways in which health workers can help migrants to overcome these problems.

Chapter 27 deals with the problems that many people have because they are treated unfairly by others. We discuss the health problems that can be caused by violence in the home and in the community. We suggest ways in which health workers can help people to prevent violence and to deal with its consequences. We also discuss the health problems that can be caused by alcohol, drugs, and tobacco. We suggest ways in which health workers can help people to reduce the harm that these substances cause. We discuss the health problems that can be caused by accidents, and we suggest ways in which health workers can help people to prevent accidents. We discuss the health problems that can be caused by disasters, and we suggest ways in which health workers can help people to prepare for disasters and to deal with their consequences. We discuss the health problems that can be caused by war, and we suggest ways in which health workers can help people to prevent war and to deal with its consequences.

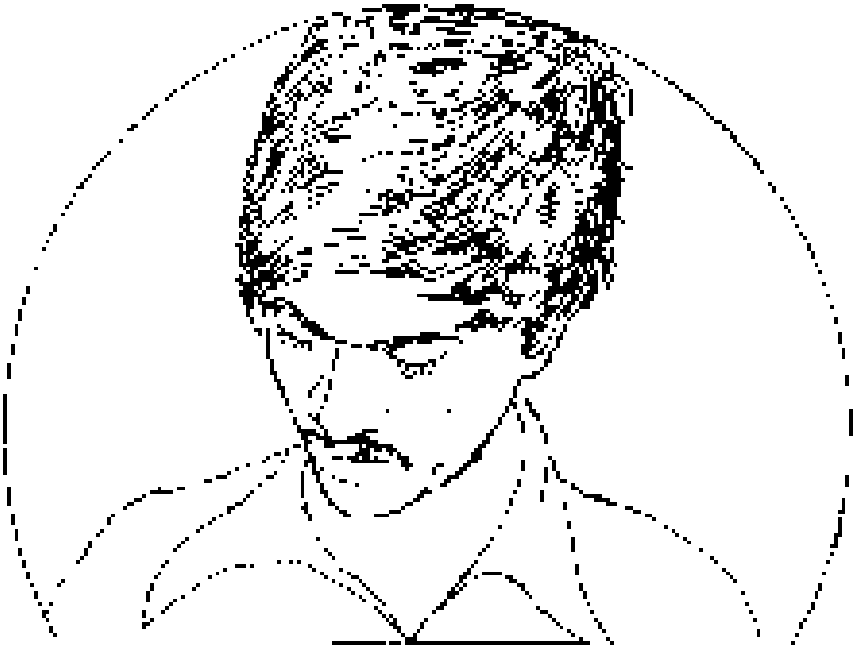


THE WORLD WOULD BE A BETTER PLACE IF PEOPLE LOVED EACH OTHER AS MUCH AS THEMSELVES

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"Primary health care is usually only learned when other rights are also being denied. Usually it is only learned when the need or desire goes unrecognized and unsupported. In many countries today, the move from primary health care to primary [illegible] right, even the primary health service [illegible] treatment, a political issue, [illegible] the life of the community [illegible]. Each community or the village and the community as a whole, to call the health [illegible] to organize and prevent disease through the self-help element. The basic thrust of the community by facing the most comprehensive personal problems of oppression and injustice, ignorance, apathy, and misguided [illegible]."

Rafiq-ul Chowdhury, of Comprehensive Rehabilitation, a community-based health program in Bangladesh



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CHAPTER 25

Food First

Good health depends on many things, but above all on getting enough to eat. A person who does not eat enough of the foods his body needs becomes thin and weak. He has trouble resisting infections and other illnesses. Also, disability and death from many diseases—especially diarrhea, measles, and tuberculosis—are more frequent in persons who are malnourished. Poor nutrition, with its related illnesses, is responsible for more deaths than any other problem, and is an especially great danger to young children.



Food must be a first concern for health work in a community where people are hungry or many children are malnourished.

LOOKING AT THE PROBLEM OF POOR NUTRITION

Before health workers begin specific nutrition activities, it is important for them to look at their people's food problems as a whole. Planners and experts have tried many approaches to combatting hunger and malnutrition. But in spite of billions spent on agricultural extension, the Green Revolution, irrigation systems, development projects, food supplements, and nutrition centers, **there are more malnourished children today than ever before in human history.**

One reason why so many approaches fail is that they are usually designed by persons who have never suffered from hunger or malnutrition themselves. Planners and scientists often are blind to important social factors that are painfully clear to the poor. As a result, new methods and technologies intended to reduce malnutrition repeatedly end up benefiting the well fed at the expense of the hungry. Health workers who unquestioningly follow the plans of outside experts can easily make similar mistakes.



It is important, therefore, that health workers and their instructors not simply accept the standard approaches to working with nutritional problems. They need to critically examine the suggestions of outsiders and to use only what fits the needs of the people in their own area.

Any nutrition plan a health worker uses should be designed or adapted with the help of the people it is intended to serve.

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[illegible]

Poor nutrition and poverty

[illegible]

The rich man's explanation of hunger:
too many people,
not enough land and resources.





[illegible]

All these activities combined have not yet solved the problem of hunger in the world. But they do show that it is possible to do something about it. Some of the most important lessons we have learned are listed below.

1. People must be willing to work together to solve their problems. They must be encouraged by others to do so, but they must do the work themselves (see p. 20-21).



2. The basic causes of poverty must be identified and dealt with. Poverty is not caused by lack of knowledge or by laziness. It is caused by the way people are treated by others. Poor people are often forced to live on land that is unsuitable for farming. They are forced to pay high prices for goods they buy, and receive low prices for the things they sell. They have little power to change their situation. Poor people must be encouraged to work together to gain more power over their lives. Only then will they be able to improve their situation. [illegible]



3. In a similar way, new dams that were designed to open more farmland through irrigation have actually flooded many poor farmers off their land. Meanwhile, the newly irrigated lands typically end up in the hands of wealthier farmers.



4. Unfortunately, foreign aid and food supplements in times of famine have tended to increase the poverty and dependency of poor countries and poor families. Foreign food aid has often pushed down local grain prices, causing the ruin of struggling small farmers. In any case, much of the food sent as aid ends up in the hands of the rich, not the hungry.

The poor people's explanation of hunger: unfair distribution of land and resources, too much in the hands of too few.

Studies by various groups, including the U.N. Food and Agriculture Organization, the ***New Internationalist,*** the Institute for Food and Development Policy, and the Human Needs/Global Development Program have shown that:



George Silk

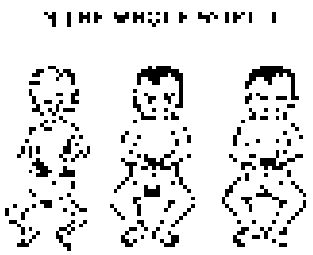
The problem of hunger is not caused by shortages, but by unfair distribution. Or as Mahatma Gandhi put it, "There is enough for every man's need, but not for every man's greed."

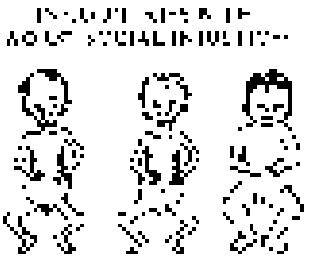
- There is plenty of food in the world today to feed all people adequately.
- There is enough farmland to feed 2 to 3 times the present world population. However, much of the land held by big property owners is unused or poorly used.
- For the world's 3 major grain crops (rice, wheat, and maize), the most productive systems are those organized on the basis of small-owner operations. The most productive landlord system yields less than half as much per hectare as most small-owner systems.
- In all the major famines of the 1970's, there was enough food stored within the affected countries to feed all the people adequately. But the price of food rose too high for people to afford. Many of those with extra food hoarded it instead of sharing it with the starving.
- There is no scarcity of total resources, but rather a tremendous misuse of them. In the course of 2 weeks, the world's governments spend $4,000,000,000 on weapons of war—enough to feed everyone on earth for an entire year!
- Increased agricultural assistance has never brought lasting increases in food production in any country with a big-landowner/tenant-farmer system.

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World hunger is not a technical, but rather a social problem. It exists not so much because of shortage of land, food, or wealth, but because these are very unequally distributed.

Some of the children in front of him are the children of the working people of [illegible]





[illegible] Some of the children in front of him are the children of the working people of [illegible] But in some of the cities, the children of the rich and the poor live in the same neighborhood. Some are in the same school. Some are in the same classroom. But you are not likely to find them playing together. These are the places where small, powerful groups try to control [illegible]

The number of hungry children in a country or community may be one of the most accurate measures of social justice and human rights.

Today, the most serious problem for rich and poor countries is [illegible]



5% of the people try to survive on 13% of the world's resources.

while the other 87% of the world's people must survive on 87% of the world's resources.

The gap between rich and poor countries [illegible] between the rich and poor in our own country, and [illegible] Poor people in our country are more likely than rich people to suffer from malnutrition, hunger, and [illegible]

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WHAT ARE REALISTIC ANSWERS TO HUNGER?

Meaningful answers must come from those who do the work to produce the food. Leaders of the poor point out that **in places where unfair distribution is a cause of malnutrition, lasting solutions can only come through fairer distribution**—of land, resources, and decision making. In many countries this will require major social change, with the formation of new governments that fairly represent the working people.

Clearly, however, small community-based programs and village health workers are not in a position to combat national problems singlehandedly. In countries where the rights of the poor are severely restricted, they even may have to be careful of how and with whom they discuss these questions. (See 'A call for courage and caution', page **Back**-1.)

But whether or not the problem of unfair distribution is openly discussed and combatted, community-based programs need to keep it in mind. People can be helped to look at their food problems and carry out nutrition activities in ways that develop their self-confidence, determination, and cooperative spirit. This will help prepare them to work for far-reaching changes when the time is right.

We cannot wait for the big changes that may put an end to hunger. In whatever ways they can, large and small, health workers need to make sure the children in their communities get enough to eat. **The children who are hungry need food now.**

We are guilty of many errors and many faults,
but our worst crime is abandoning the children,
neglecting the fountain of life.
Many of the things we need can wait.
The child cannot.
Right now is the time his bones are being formed,
his blood is being made,
and his senses are being developed.
To him we cannot answer 'Tomorrow'.
His name is 'Today'.

—Gabriela Mistral, of Chile

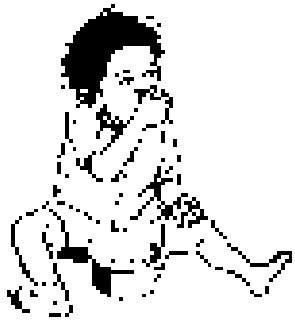


His name is 'Today'.

Far-reaching change—which is the only final answer to hunger—will take time and well-organized preparation. But sometimes, within their local areas, health programs or health workers can help people achieve greater fairness or more control of land, food, marketing, or specific resources. This can mean more food for the poor—through greater self-reliance. These possibilities will be discussed later in this chapter, and in the rest of Part Five.

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SOLVING NUTRITION PROBLEMS IN THE COMMUNITY



To help health workers learn about food needs in their communities and what to do about them, it takes active, participatory learning approaches. But it works well. It helps health workers learn by actually working with people and their needs. This series is moving the focus of learning out of the classroom and into the community.

In this section, we suggest steps health workers may take to help solve food and nutrition problems in the community. Although it may help to discuss the steps first, we recommend that you also practice them. Ideally, you should try to work on these steps with a group of health workers in your community.

Suggested steps for approaching food problems in a community:

1. **Know (or get to know) the people well.** Try to understand their attitudes, beliefs, traditions, and habits, especially those that relate to food and child care. (See page 123.)

2. **Try to find out how much malnutrition there is in your community and who is most affected.** Use the growth chart to find out how much malnutrition there is in your community. Ask mothers and others questions. Try to find out what problems people think are most important. Try to find out what people already do or should not do, and why. Learn as much as you can about what people think about health and nutrition. (See *Where There Is No Doctor*, page 123.)

3. **Consider which food and nutrition problems are most important.** Use what you have learned from the people themselves and from the signs in your community to help you decide which problems you will try to help solve first. Choose problems that are important to the people, and that you will be able to help solve.

4. **Look for the causes of these problems.** Malnutrition is usually the result of poverty and other food-related problems. These causes may include poor soil fertility, poor ownership, farming practices, poor food distribution and sale, poor food preparation, poor hygiene, and poor child care practices. Try to find out the causes of the problems you have chosen to work on, preferably within the community. (See page 124.)

5. **Carefully consider the obstacles** to your solving the problems you have chosen. Be specific about the obstacles. Some projects fail because of obstacles that are not considered at the beginning.

6. **Together with your community, decide which problems to attack first.** Try to choose problems that:
   - are important to the people themselves, and that they are ready and motivated to work on;
   - are not difficult or costly to solve, and that can be solved by using skills and resources that are locally available.

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TAKING A SURVEY TO FIND OUT ABOUT NUTRITION NEEDS IN YOUR COMMUNITY

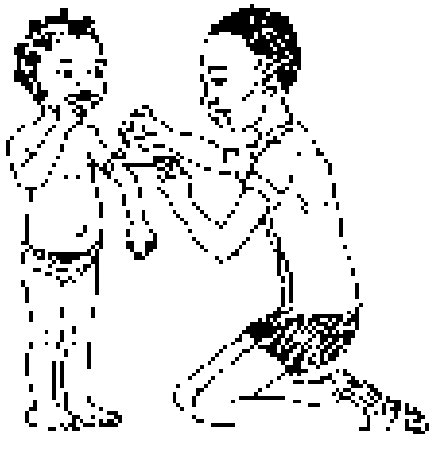
Some health workers in [illegible] have started a special project. Every day, those who live in the village or the neighbourhood where they work visit a few families to find out about [illegible] and take a simple record of [illegible]. Each day, they [illegible] many people in the village they can help with their knowledge. However, [illegible] understanding and support of the women and children they work with. The health worker [illegible] as the key contact person or facilitator for someone who makes [illegible].

A similar survey in your area may be [illegible] nutrition problems can be found in at least [illegible] ways:

1. It can help people [illegible] how many people [illegible] in your area. If more than [illegible] children [illegible] underweight, or too thin for their age, then this same survey probably has a serious food problem.
2. It can help to show **which children and which families** have the greatest need, and [illegible].
3. The results can be used to [illegible] **inform, and involve** [illegible] in [illegible].
4. The survey can provide a **basis for comparison** at a later date. People will be able to see if the action they have taken to improve nutrition in their village has been successful.

Surveys [illegible] can be [illegible] of the [illegible] of a survey. Here are [illegible]:

- [illegible] whether [illegible] your village [illegible] and [illegible] each month or not.
- [illegible] in [illegible] the [illegible].
- [illegible] how many [illegible] and how many [illegible].
- [illegible] might [illegible] the [illegible] affect the nutrition of different members.



By helping [illegible] in this [illegible], [illegible] and [illegible] to [illegible].

However, if surveys are to be conducted by untrained people, they should be **simple, quick and interesting**. On the following pages we explore a variety of survey methods.

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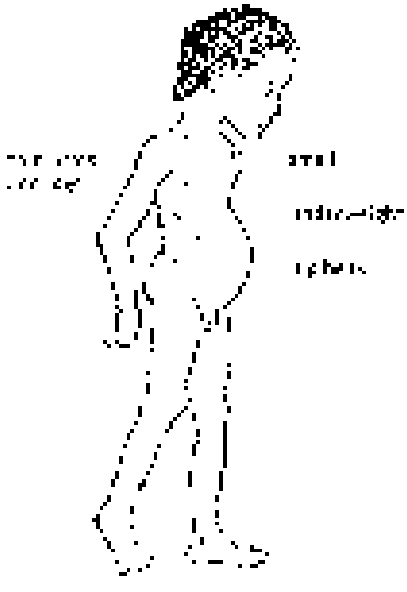
Finding out about the nutrition of children in a community

You can use the weight for age chart and the arm circumference tape to find out how many children in a community are malnourished. Instructions for using these are on page 17 and 18.





But for every child who is seriously malnourished like the two shown, there are usually many others who are less severely malnourished, for example:



The signs of malnutrition are not always obvious. The child may look normal, even fat, although the face and arms are thin. The child's hair may look healthy. However, because he is poorly nourished, his body uses the energy in food very quickly. He gets tired and sick more easily than a well-nourished child.

Children with this form of malnutrition suffer from more diarrhea and more colds and other illnesses than well-nourished children. Measles, malaria, and pneumonia are not in fact more dangerous for these malnourished children, but more of them die.

It is important to find children like this and make sure they get the special care and food they need before they become very sick, because it is not always obvious which children are growing well and which are not. Some form of measurement is often helpful.

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Measuring to find which children are too thin or not growing well

Parents often do not take their underweight children to the health post until they are seriously ill. By then it may be too late. Even if health workers ask mothers to bring all children under five each month, the sickest or weakest are sometimes left at home. It is therefore important that health workers visit all homes and try to identify those children who are too thin or need special care.



In Zimbabwe, 'health scouts' cycle from village to village weighing children, recording weights, and encouraging mothers to attend under-fives clinics.

What are appropriate ways to measure thinness of children under five?

We will discuss three useful methods: 1) weight-for-age, 2) weight-for-height, and 3) arm thickness. The method you choose will depend on local resources, needs, and who does the measuring.

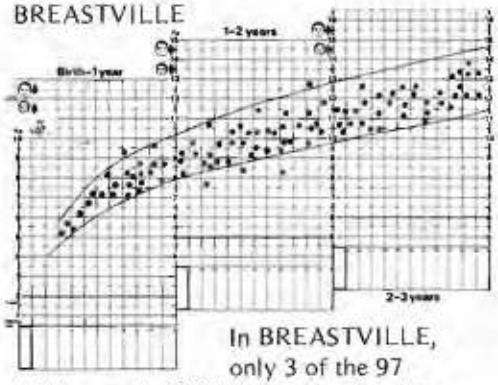
1. Weight-for-age: THE CHILD HEALTH CHART

The use of the Child Health Chart for individual children is explained in ***Where There Is No Doctor,*** (pages 297-304); and in much greater detail in David Morley's book, **See How They Grow**. Methods for teaching health workers and mothers to use the charts this way are on pages **22**-15 to **22**-19 of this book.

For the purpose of a nutrition survey, however, a single weighing of all children under five can be recorded on one chart.

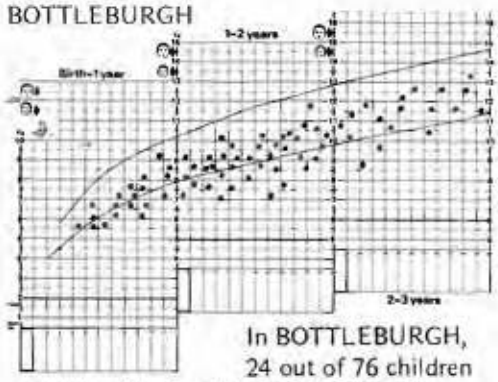
Below are examples of survey charts for two different villages. Each dot on the charts represents the age and weight of a different child.

BREASTVILLE



In BREASTVILLE, only 3 of the 97 children under 3 fall below the Road to Health (below the two curved lines). Malnutrition in young children is not a big problem in this village.

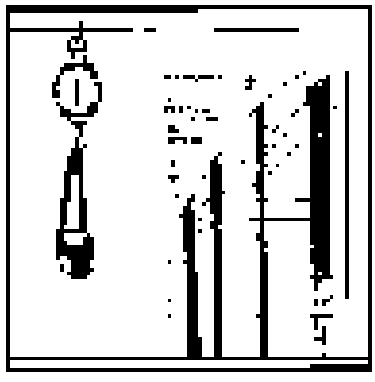
BOTTLEBURGH

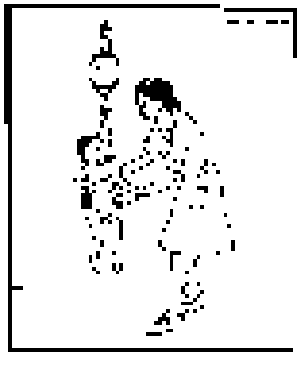


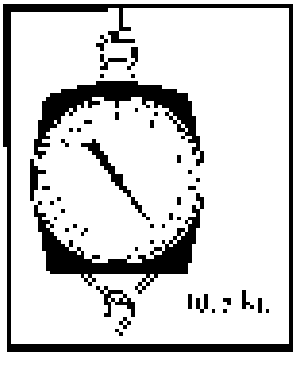
In BOTTLEBURGH, 24 out of 76 children are below the Road to Health. This village has a serious problem with the nutrition of young children. (What do you think might explain the big difference between the two villages?)

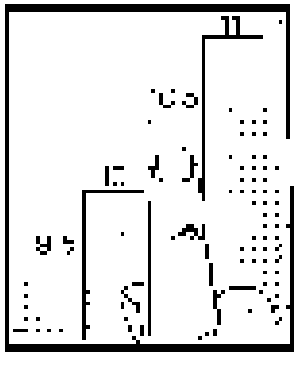
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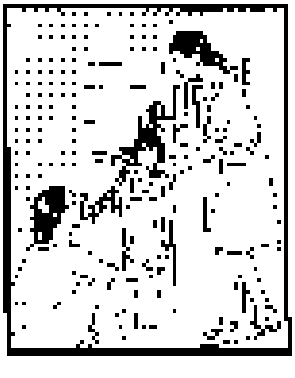
2. Weight for height: THE THINNESS CHART

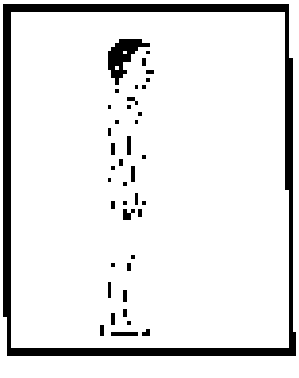


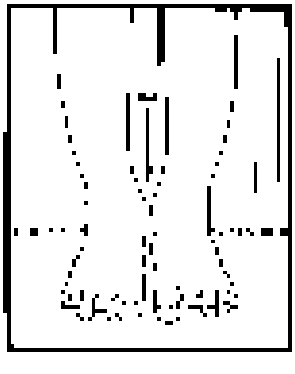










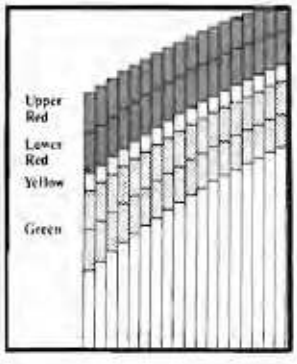


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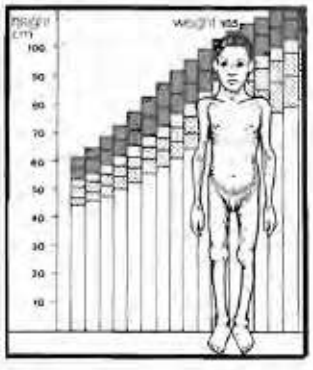
7. Now put your hand flat on the child's head. **Which color does your finger touch?**



8. Is the child in the upper red, lower red, yellow, or green?



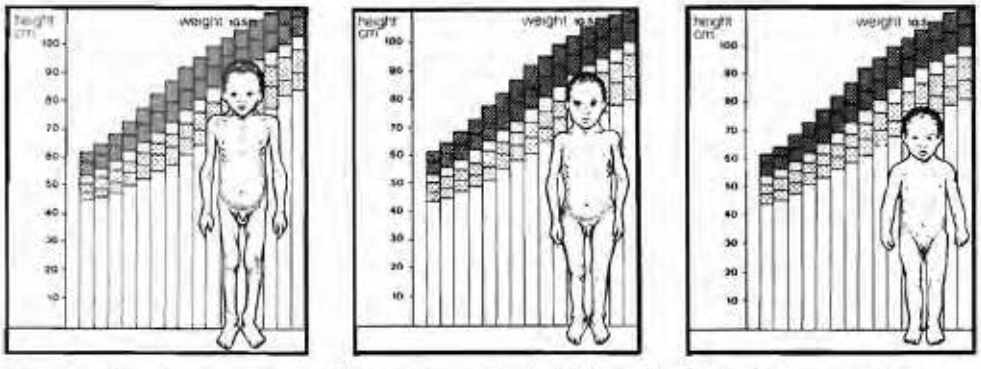
9. If the child is in the **upper red,** he is dangerously thin and needs **more food urgently.**



10. If the child is in the **lower red,** he is very thin and needs **more food at once.**

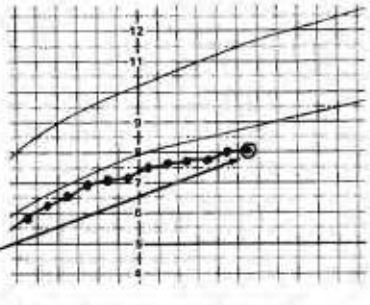
11. If the child is in the **yellow,** he is thin and **may need more food.** Check him regularly.

12. If the child is in the **green,** he is well nourished. **Three cheers!**



(Notice that the younger, smaller, well-nourished child on the right weighs as much as the older, very thin child on the left.)

The Thinness Chart is especially useful when children are measured only once—as in a survey. But it can also be used together with the Road to Health chart. It lets you know whether a child who measures below the Road to Health is too thin, or is simply smaller than average. If a child is too thin according to the Thinness Chart, this can be noted on the Road to Health chart. Simply put a RED CIRCLE around the dot on the chart, like this:



PRECAUTION: At first the Thinness Chart may confuse persons who have used the Road to Health chart. This is because on the Road to Health chart, the thin child appears ***below*** the level of the well-fed child. But on the Thinness Chart, the thin child appears ***higher*** on the chart than a well-fed child of the same weight. This difference needs to be carefully explained.

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Also keep in mind that children in some parts of the world have relatively thin bones and bodies, even when well nourished. You may have to adapt the Thinness Chart (raise or lower it slightly) according to the size of well-nourished children in your area. These charts are new and still being tried out. If you try them, please let us know how well they work and how useful you find them.

Where to get Thinness Charts: These can be ordered from TALC, or from Save the Children Federation (see p. **Back**-3). An easy-to-use weight-for-height record card (also in color) comes with the Chart. TALC also offers a color slide of the Thinness Chart. To make a wall chart from it, project the slide against a blank wall and trace over it (see p. **12**-16).

3. Measuring UPPER ARM THICKNESS

The thickness of a child's upper arms or legs is usually a good indicator of how well nourished he is.



A well-nourished child usually has fairly thick arms and legs. ←

A poorly nourished child has much thinner arms and legs. →



Measuring arm or leg thickness has recently been recognized as one of the easiest and best methods for checking to see whether children are well nourished. In parts of Africa and Asia, such measurements have been village traditions for many years.



In Ghana, Africa, families put a chain of beads just below the baby's knee. If it gets too tight, they are pleased. ←

If it slips down, they become worried. →





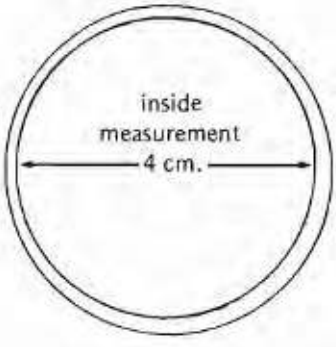
In Kerala, India, mothers put a metal ring below the baby's knee. If the ring slips down, they say that "the devil is sucking out the baby's juices." (This could refer to either malnutrition or dehydration.)

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THE BRACELET:

From age 1 to 5, the thickness of a child's upper arm does not normally change much. But a well-nourished child has a thicker arm than a poorly nourished child. By measuring the distance around children's arms, we can tell if they are well fed or too thin.

One way to measure the thickness of a child's arm is with a bracelet like this:



If the bracelet will not slide past the elbow, the child is well nourished.



If the bracelet slides easily onto the upper arm, the child is poorly nourished.



Brown



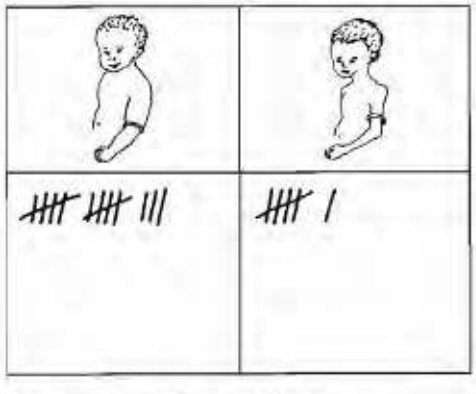
The photo at left shows how the upper arm is measured with a bracelet. This child's arm is too thin. She is malnourished.

Bracelets like this are commonly used in some countries as wrist ornaments for women. Be sure to check that the inside measurement is right.

The bracelet can also be made of twisted grass, rattan, or wire.

This method is simple to use and easy to understand. It may be especially useful for village thinness surveys because health workers can involve persons with little or no formal education. Any child, mother, father, or midwife who wants to can take part in and understand the survey.

Persons who cannot read can record their findings on a simple card with drawings, like this. →



CAUTION: Unfortunately, some health workers have reported difficulties in getting the bracelets over the elbows of even very thin children. We suspect that this method may work better where most people are thin boned (India, the Philippines, etc.) and less well where they have thicker bones (parts of Africa and Latin America, etc.). If you try this method, please let us know how it works in your area.

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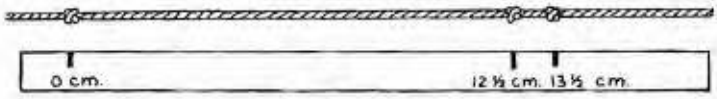
THE STRIP:



This easy method is ideal for community thinness surveys conducted by parents or school children.* Even the measuring instrument, or strip, can be made by young children. While this method is a little more complex than the bracelet, it is more accurate and is useful anywhere.

Making the strips:

- Cut thin strips of heavy paper, firm cloth, old X-ray film, or other material that will not stretch—about 25 cm. or 10 inches long.
- Measure and mark lines as shown in the drawings on this page. The strip on the left is full size and can be used as a model.
- Color the strip as indicated—or in a way that will make sense to people in your area. (See the **Note** on page **25**-16.)



Strips can be made of string or grass.
Put knots at the correct distances.

Measuring the children:

- Measure the arms of children between 1 and 5 years old.
- If a child measures in the **green** (over 13½ cm.), he is **well nourished.**
- If in the **yellow** (12½ to 13½ cm.), the child is **thin.**
- If in the **red** (below 12½ cm.), the child is **too thin.**



Measuring a child who is too thin.



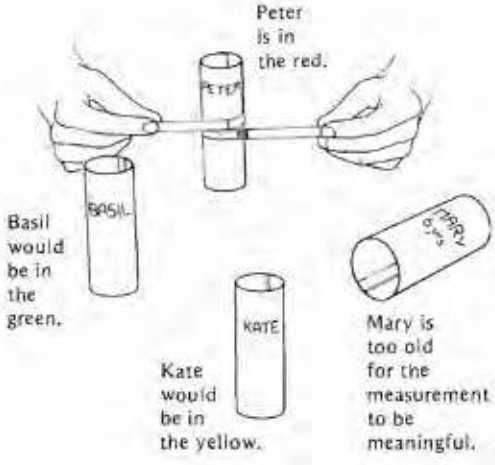
Measuring a child who is growing well.

*A CHILD-to-child activity that uses the 'strip' is available from TALC or the Hesperian Foundation. It is titled "How do we know if our children get enough food?"

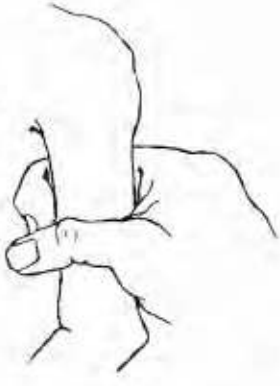
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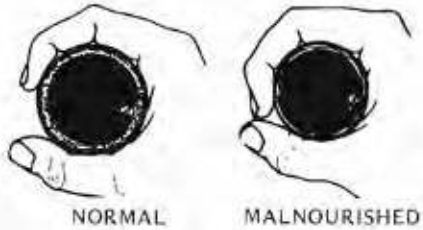
Practice measuring:

Before measuring children's arms, the health workers, parents, or children can practice on pieces of wood cut from the branch of a tree, or on rolled cardboard or newsprint. Use pieces that vary in thickness from 11 to 15 cm. Write a child's name on each one. Then play games, pretending that the pieces of wood or cardboard are different children's arms. See who can discover which children are healthy and which are too thin. Practice giving advice on nutrition. Make sure everyone measures correctly.



With practice, health workers can learn to measure for thinness using only their fingers. This can become a standard part of their physical examination of young children.





Note: These drawings are just an example and not true for everyone, since the sizes of our hands vary.



Here school children learn to judge the thinness of a child's arm by practicing on a stick of variable thickness. (Ajoya, Mexico)

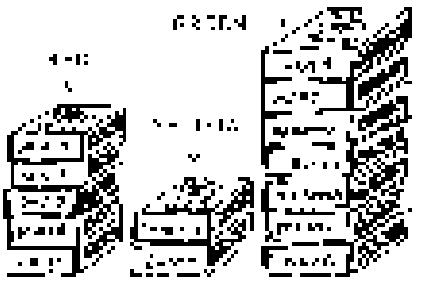


A learning game:

Put different-sized rolls of wood or newsprint in a bag. Have the students tell by feel which are too thin.

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Recording the results of the thinness survey:

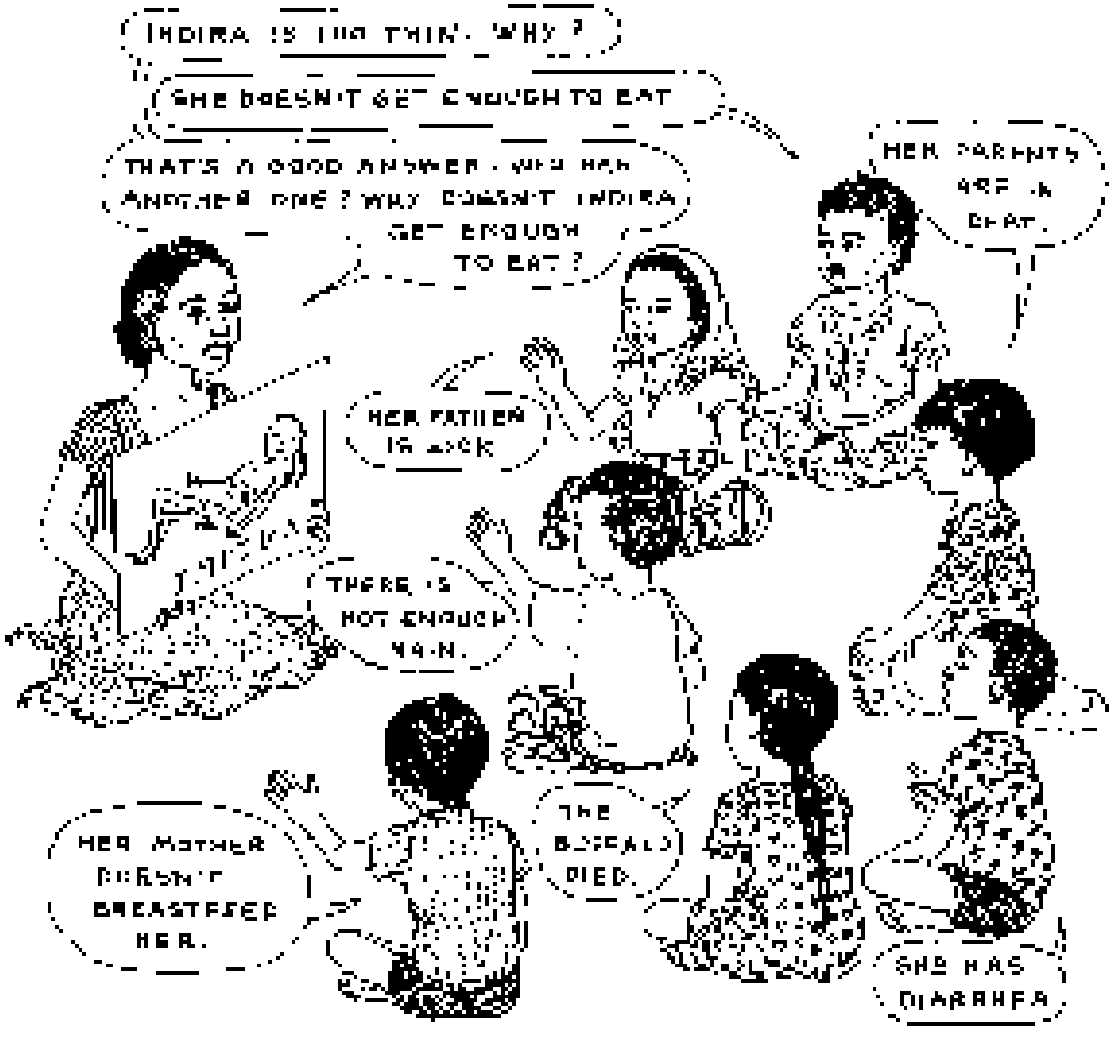


When recording [illegible] you [illegible] graphs, you [illegible] [illegible] [illegible] by [illegible] [illegible] [illegible]

A GAME TO HELP CHILDREN LOOK AT THE CAUSES OF THINGS

[illegible] game to help children explore the question, "Why do some children not get enough to eat?" [illegible] called "Another Game" [illegible] page 28-10.

[illegible] the game, you will need to make a set of cards like those shown below. You will also need a picture of a child. The "Why doesn't Indira get enough to eat?" problem tree shown above can be used as a guide. [illegible] of the cards, [illegible] of the possible answers.



[illegible] the cards [illegible] and put them in the right order [illegible] relationships between causes and problems.

Similar games can be made with [illegible] people in the community. [illegible] can help them to understand [illegible] and [illegible] causes of problems.

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Finding out about the nutrition of persons other than children

In conducting a nutrition survey, the main focus should usually be on the children. But other persons may also have nutrition problems—especially women, old people, and sick people.

Checking for anemia:

Anemia is one of the most common problems for pregnant women and breast-feeding mothers. It may also be a problem for both children and adults in areas where there is hookworm or malaria. So health workers may want to consider checking for anemia as part of their nutrition survey.

Few health workers have the equipment needed for testing the level of ***hemoglobin*** (red coloring) in the blood. But they can often tell whether a person has anemia by checking for paleness of the lips, gums, tongue, inner surface of the eyelids, fingernails, or palms.

Health workers who are inexperienced in judging paleness can use a set of life-size color photographs showing the lips and tongues of two people—one normal, the other anemic. These photographs can be held up next to a person being checked for anemia.

The cards we show here have been produced (in color) by the Voluntary Health Association of India (VHAI). To order the photo cards, write to VHAI or TALC (see page **Back**-3).

APPROPRIATE

NORMAL



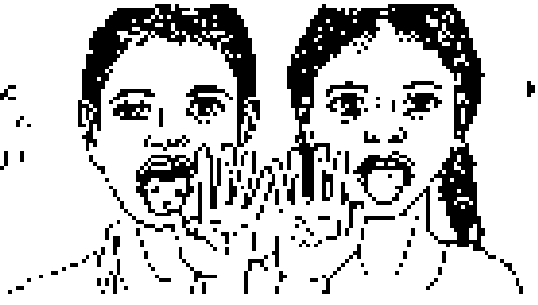
This woman does not have anaemia. She has red and healthy lips and tongue. After one month of treatment the anaemic person should look like this. She should feel stronger. Continue treatment for another month. If she still looks pale after the first month of treatment, refer the patient to a health centre. Iron tablets cost a few paise each, but are free from Government health centres.

ANEMIA



This woman's lips and tongue are very pale. She has severe anaemia. This is dangerous. She needs treatment with 2 iron tablets taken with food 3 times a day. If the patient has pale lips and tongue, but not as pale as in this picture, give 1 iron tablet three times a day with food. Small children who have anaemia need 1 iron tablet daily with food.

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Food problems in old people and sick people

- Old people may not eat enough because they have no appetite or because they find it difficult to chew or swallow food. Or they may lack the energy to prepare food for themselves. Or they may not have enough money to buy enough food.
- Sick people sometimes lose their appetite. Or they may not feel like eating because they are in pain. Also, they may be unable to eat because they are too weak to feed themselves. This dangerous condition is known as wasting. (See page 25-2.)

Keeping your eyes and ears open

Health workers need to learn to observe people carefully.

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LOOKING AT DIFFERENT FOOD PROBLEMS AND THEIR CAUSES

[illegible]

Do families often have difficulty getting ENOUGH FOOD?
[illegible]



- [illegible]



- [illegible]

[illegible]

[illegible]

WHAT ARE THE CAUSES OF FOOD PROBLEMS IN YOUR COMMUNITY?

A CHECKLIST OF QUESTIONS

[illegible]

A. DO FAMILIES OFTEN LACK FOOD? DO SOME PEOPLE GO HUNGRY?

[illegible]

B. PRODUCING FOOD

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

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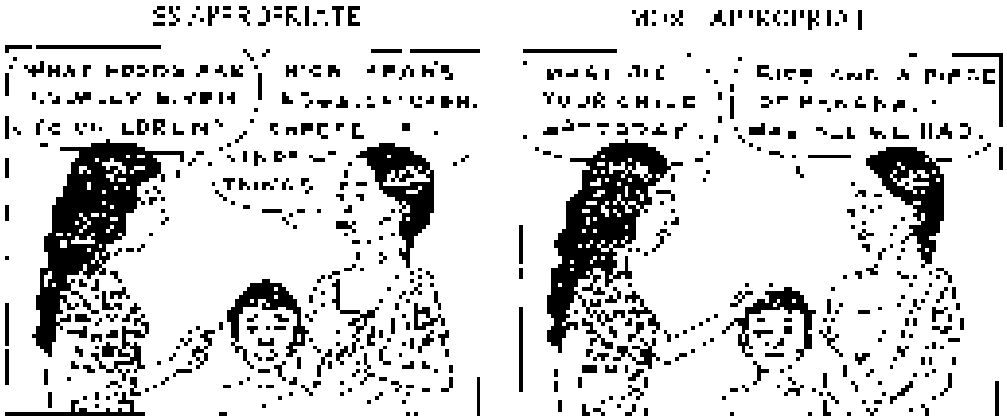
Adapting the checklist for use in your area

[illegible] checklist suggests [illegible] workers [illegible] the [illegible] communities. [illegible] [illegible] community [illegible] [illegible] [illegible]

Making survey and discussion questions specific, not general

[illegible] Ask people questions about things they know from their own experience.

LESS APPROPRIATE QUESTIONS	MORE APPROPRIATE QUESTIONS
Do the people in your village have enough food?	How many times did you eat yesterday? Breakfast? Lunch? Dinner?
What time do you usually get up?	What time did you get up yesterday? What time did you get up today?
At what age do children usually start walking?	At what age did your child begin walking? Did your other children begin walking at the same age? Which children began walking earlier? Later?
What do you usually feed your family?	What did you feed your family yesterday? What did you eat for lunch? What did you feed the children? What did you eat for breakfast?



Making questions specific helps people give answers that are closer to their day-to-day reality.

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CHOOSING WHICH PROBLEMS TO ATTACK AND HOW (A COMMUNITY NUTRITION PLAN)

A checklist like the following may help you identify many food problems that you and your co-workers should attack. Several of these problems are linked. Solving one problem will help solve another problem. Try to choose a few problems that you can solve with the skills and resources you have. Then go on to the next section and learn how to plan your attack.

EXAMPLE: Here is how one health worker answered the questions:

A. ARE THERE FAMILIES WHO LACK FOOD?
YES. Many families in my village do not have enough food. They do not have enough money to buy food, and there is no land for growing food.

B. PROBLEMS OF PRODUCING FOOD
1. Do the families have enough land to produce their own food?
YES. Many families have only a few small fields. Their land is poor quality.
2. Do the families have enough water for growing food?
YES. They have a river in the village. But in the dry season, the river dries up.

C. PROBLEMS OF FEEDING CHILDREN
1. Do mothers have enough time to feed their children well? Or are they too busy working or away from home?
YES, many mothers work in the fields or in the market. They do not have enough time to feed their children well. They give them food that is easy to prepare, but not very nutritious.

The Example above mentions several problems. Some problems are more important than others. The health worker must decide which problems to attack first. The following pages will help you make this decision.

The next step is to find out more about the problems you have chosen to work on. Talk to people in the community. Ask them to help you. They will have many ideas about how to solve the problems. Their ideas will be better than yours. They will be more likely to help you if you ask for their ideas.



Talk to the people in the community.

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CONSIDERING OBSTACLES TO SOLVING NUTRITION PROBLEMS

[illegible]

In each of the above problems, before we begin to plan, we must consider possible obstacles. [illegible]

[illegible]

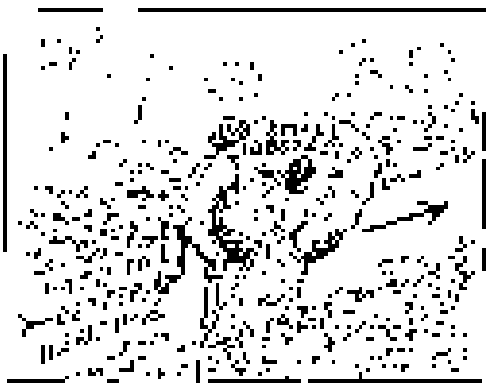
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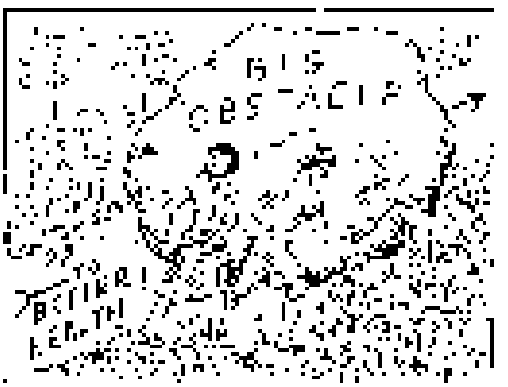
DEALING WITH OBSTACLES

Role-plays can be used to help people develop confidence to meet challenges that they may be afraid of. Their emotions, strengths and resources can then be used to overcome obstacles that exist in the community, and to encourage people to take action.

Obstacles can be handled in different ways.



Two people decide to overcome obstacles by removing them.



Eight people decide to work together to overcome the obstacle.

Here are examples of how people might be helped to think of ways to deal with problems and obstacles in the community.

Lydia lives in a village where many people are very poor. A few people own land, but most do not. Some people work as labourers on the land of others, but because they are not organized they are often cheated of their wages. Some people migrate to the city to look for work, but they usually end up living in slums and doing casual work for very low wages. As a result, the families of these women sometimes do not have enough to eat. (See the map, Problem 1, on page [illegible] p. 27.) Some women have to sell everything to pay their debts, and have been forced to move to the slums of the city.

The basic problem is that poor farmers do not have enough land to grow and sell enough food to provide for their families. Because of their poverty, they are also vulnerable to exploitation by moneylenders and landowners.

The process of overcoming poverty is the subject of Part 2 of this book. It describes how people can work together to improve their situation. In this example, the local health workers have helped people to form groups to save money and to learn about health, nutrition and other issues. They have also helped people to learn about their rights and to take action to claim them.

To overcome poverty, people also need skills to make and sell products and services. Many of the problems people face in their daily lives can be overcome by using skills that they already have, or by learning new skills.

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Now that people can borrow maize at low interest rates, they are able to keep and eat most of the food they grow.

Nobody pretends that the problem is completely solved. A few families still illegally possess most of the land. However, the success the people have had in overcoming at least a part of the problem has given them courage and hope to keep moving forward together—until the day comes when the bigger problems can be solved.



Making maize storage bins.

ATTACKING THE RIGHT PROBLEM

Each village or community has its own food problems that must be studied and analyzed carefully to design a nutrition plan that is likely to work.

Here are more examples from the Browns' book, *Finding the Causes of Child Malnutrition.* These stories can be read and discussed during health worker training. They will help people recognize **the importance of getting a clear understanding of food problems before trying to solve them.** But it will be better if you or the health workers can give similar examples based on your own experiences.

EXAMPLE 1: In Bulape Village, the families grew a lot of maize, groundnuts, and cassava in their fields. A farming teacher visited Bulape and told the people about several ways to improve their farming. "You should put your cassava plants in rows," he said. "You should plant soybeans instead of cowpeas, because soybeans grow faster. You should raise rabbits and pigeons, too."





These were all good ideas. They probably would have helped the families grow more food. But Bulape families already had enough food, so producing food was not their real problem. The farming teacher's plan was not good for Bulape.

The real problems were that mothers became pregnant too soon, stopped breast feeding their babies, and then fed them only cassava porridge. The health team at Bulape started several nutrition centers. In the centers, the families practiced mixing maize and groundnuts in a porridge for the babies. Mothers also learned ways to keep from getting pregnant too soon, so they could give each child breast milk until he was 2 or 3 years old.



EXAMPLE 2: In Eta City, the health team chose the wrong nutrition plan. They started nutrition classes to show the mothers how to pound dried fish and how to add it to the babies' porridge. But the plan was no good, because the mothers didn't have enough money to buy dried fish in the market. These mothers really needed to sell their handmade baskets. They also needed to join together to buy fish more cheaply. In Eta City, **the problems were in buying food.** A good nutrition plan had to attack those problems.





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EXAMPLE 3: [illegible] Many people believed that eating children should not eat goat meat. The school teacher believed that goat meat was a good food, so she [illegible] and [illegible] to the people in the village. [illegible] all the goats in the village. [illegible] The children enjoyed the food. [illegible] The people were very angry. [illegible] killed for meat only on special occasions, usually [illegible] **The real problem was that the family fields did not produce enough wheat and beans.** [illegible] [illegible] [illegible] [illegible] [illegible]



[illegible] [illegible] [illegible] [illegible] [



[illegible] Silica Valley [illegible] the [illegible] people in the Silica Valley are refugees from families and land [illegible]. The land around does not belong to the farmers that have lived and worked [illegible] generations. The land belongs to a few rich people who live in [illegible]. The farmers in Silica Valley work very hard all year but they still do not grow enough. **The real problem is that a few people own most of the land, while the rest of the people do not have enough land to grow food.**

The people of Silica Valley need [illegible] to help people to [illegible] reading [illegible] to understand. But they cannot attend [illegible]. They must [illegible] [illegible] [illegible]

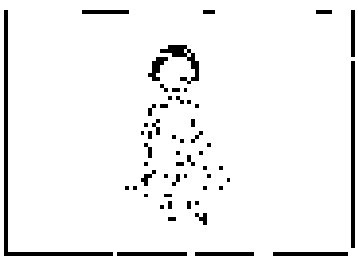
NUTRITION TRAIN NG THROUGH COMMUNITY EXPER ENCE

[illegible] [illegible] [illegible] [

POSSIBLE AREAS TO COVER IN A NUTRITION COUNSEL BASED ON SHORT TERM AND LONG TERM PROBLEM SOLVING:

Emergency problems

- [illegible]
- [illegible]
  [illegible]
- [illegible]
  [illegible]
  [illegible]
  [illegible]
- [illegible]

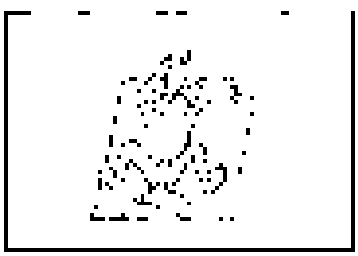


Emergency measures

- [illegible]
- [illegible]
  [illegible]
- [illegible]
- [illegible]
  [illegible]
  [illegible]

Major problems

- [illegible]
- [illegible]
  [illegible]
  [illegible]
- [illegible]
  [illegible]
  [illegible]
- [illegible]
  [illegible]



Solutions to major problems

- [illegible]
- [illegible]
- [illegible]
  [illegible]
- [illegible]
- [illegible]
- [illegible]
- [illegible]
  [illegible]

Urgent needs

- [illegible]
  [illegible]
- [illegible]
  [illegible]
- [illegible]
  [illegible]
  [illegible]



Normal conditions

- [illegible]
- [illegible]
  [illegible]
- [illegible]
- [illegible]
  [illegible]
- [illegible]
  [illegible]
- [illegible]
  [illegible]
- [illegible]
  [illegible]
  [illegible]

Underlying needs

- [illegible]
  [illegible]
- [illegible]
  [illegible]
  [illegible]
  [illegible]
- [illegible]
- [illegible]



Toward long-term solutions

- [illegible]
- [illegible]
- [illegible]
  [illegible]
- [illegible]
- [illegible]
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- [illegible]
  [illegible]
  [illegible]
- [illegible]
  [illegible]
  [illegible]

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TRAINING FOR SHORT TERM AND LONG-TERM PROBLEM SOLVING

[illegible] (page 25) [illegible]

[illegible]

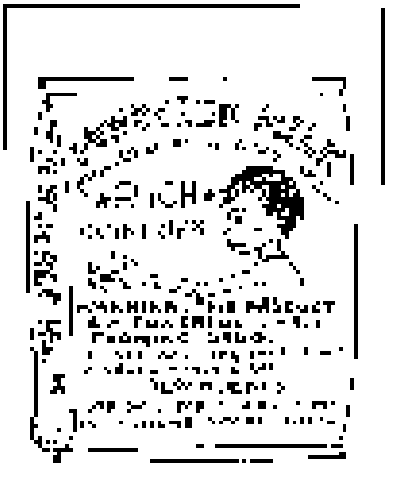
[illegible]

[illegible] can move the main focus of community action from short term to long term needs [illegible]

GAINING ABOUT FOOD SUPPLIES

[illegible]

- [illegible]
- [illegible]
- [illegible]



[illegible]

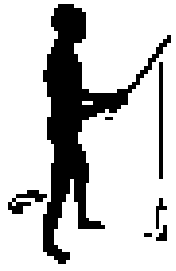
[illegible]

Discuss with health workers the dangers of accepting gifts.

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Self-help instead of handouts:





(see page 25-30)

(see page 25-31)

LESS APPROPRIATE



MORE APPROPRIATE



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WORKING WITH PEOPLE'S FOOD HABITS

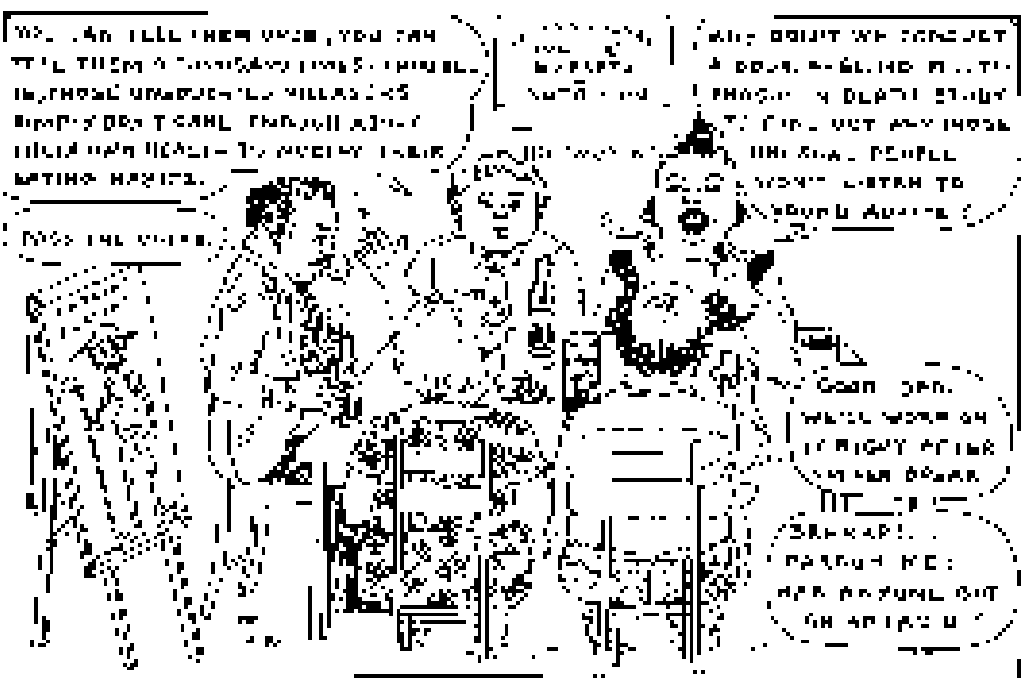
[illegible]

[illegible]

[illegible]

Community-based nutrition education should not focus on changing people's bad habits. Rather, it should try to recognize and strengthen those food habits and traditions that are healthy.

[illegible]

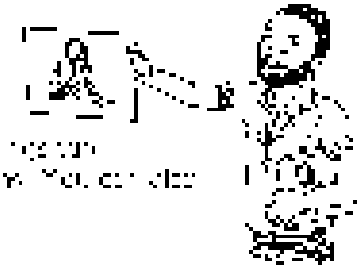


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IDEAS AND METHODS FOR TEACHING NUTRITION

Many nutrition projects will be [illegible] Health workers need to [illegible] plan and [illegible] and [illegible] Health workers [illegible] and [illegible] [illegible] [illegible]

SUMMARY OF WAYS TO TEACH AND LEARN ABOUT NUTRITION FOR HEALTH WORKERS, MOTHERS, SCHOOLCHILDREN, AND OTHERS



1. Stories that help people to think about their problems and look for solutions. There are [illegible] stories in this manual. [illegible] Each story is followed by questions to help the group think about the problems and solutions in the story. You can also use pictures to tell stories. [illegible]

For more information related to nutrition, see:

- The story of Abdou and Nafi, on page 24.[illegible]
- [illegible] on page 26-[illegible]
- [illegible] on page 13.[illegible]



2. Games with nutritional messages. There are many games you can play to help people learn about nutrition, and other things. [illegible]

For example,

- Card games or guessing games about foods according to food groups, p. 25-[illegible]
- Memory games, p. 11-[illegible]



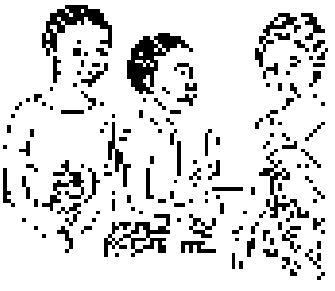
3. Demonstrations on food preparation. [illegible] [illegible] [illegible]



6. Puppet shows are a good way to [illegible] health messages. This can [illegible] make puppets and conduct [illegible] themselves.

Examples

- [illegible] Story of Pepito, pp. 24-28
- How to take care of your teeth, p. 27-3



7. Small-group discussions and learning sessions [illegible] if the people in different [illegible] by having everyone [illegible] using [illegible] Then everyone [illegible] to [illegible] Discuss appropriate [illegible] teaching aids (see Chapter 11).



8. Garden and agricultural projects [illegible] Actual practice is the best way to learn [illegible]

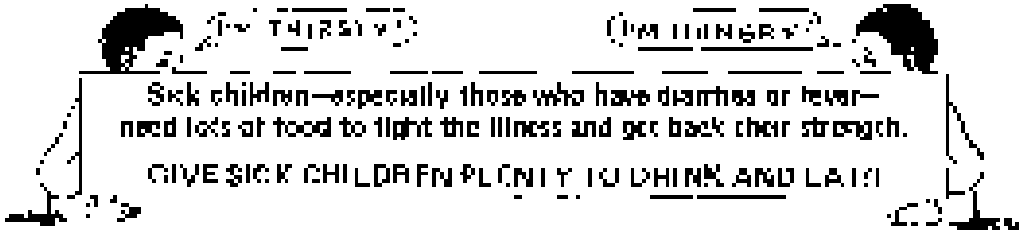
Examples

- [illegible] school gardens
- Better Seeds and Animals (see [illegible] and 29-2)
- [illegible] (see Where There Is No Doctor, Chapter 16, and Where There Is No Dentist, pp. 91-94)

9. Filmstrips, slides, films. It is a good idea to use [illegible] health workers can [illegible] [illegible] [illegible]

A TEACHING IDEA TO COMBAT THE DANGEROUS CUSTOM OF STARVING THE SICK

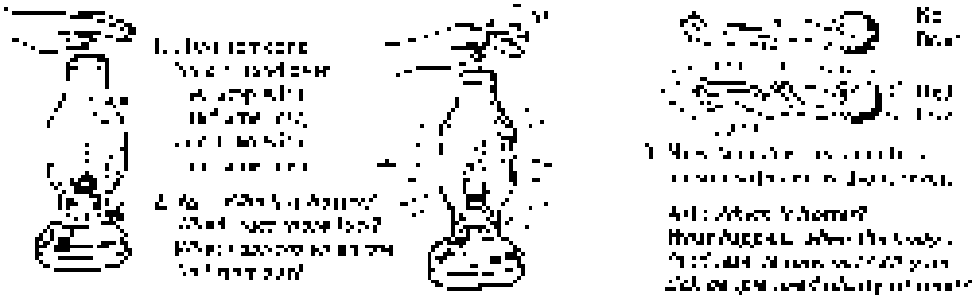
Many people believe that sick persons should not eat much food. This custom contributes to many deaths—especially of children. When a child is sick with diarrhea or fever, he becomes weak and loses weight. Often he may die from malnutrition. Instead, sick persons should get plenty to eat and drink so they will grow strong and not lose weight while they are ill.



Here is one of the most important ways a health worker can help a sick child. Give extra food to complete [illegible] with fluid.

High-energy foods are [illegible] energy and help the child [illegible] weight. Give sick persons foods that are high in energy and rich in [illegible] Fruit juice, sugar, and starchy foods [illegible] energy. Foods high in [illegible] help the body to build up the sick person's body, causing him to [illegible] and grow strong again.

Help a sick person to eat. Keep food [illegible] sick person's lap.



The child [illegible] energy and protein [illegible] illness, [illegible] Where There Is No Doctor, page 111 or Where There Is No Dentist). Fruit juice is [illegible] and [illegible] vitamins, minerals, and [illegible] Fruits [illegible] strength [illegible] sugar and starch. Fruit juice [illegible] energy [illegible] weight [illegible] the sick person.

A few diseases, of course, require special diets (see WTND, p. 124 to 130). But in general, health workers should place emphasis on the foods sick persons need, [illegible] foods they should avoid.

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A NEW WAY OF LOOKING AT FOOD GROUPS*

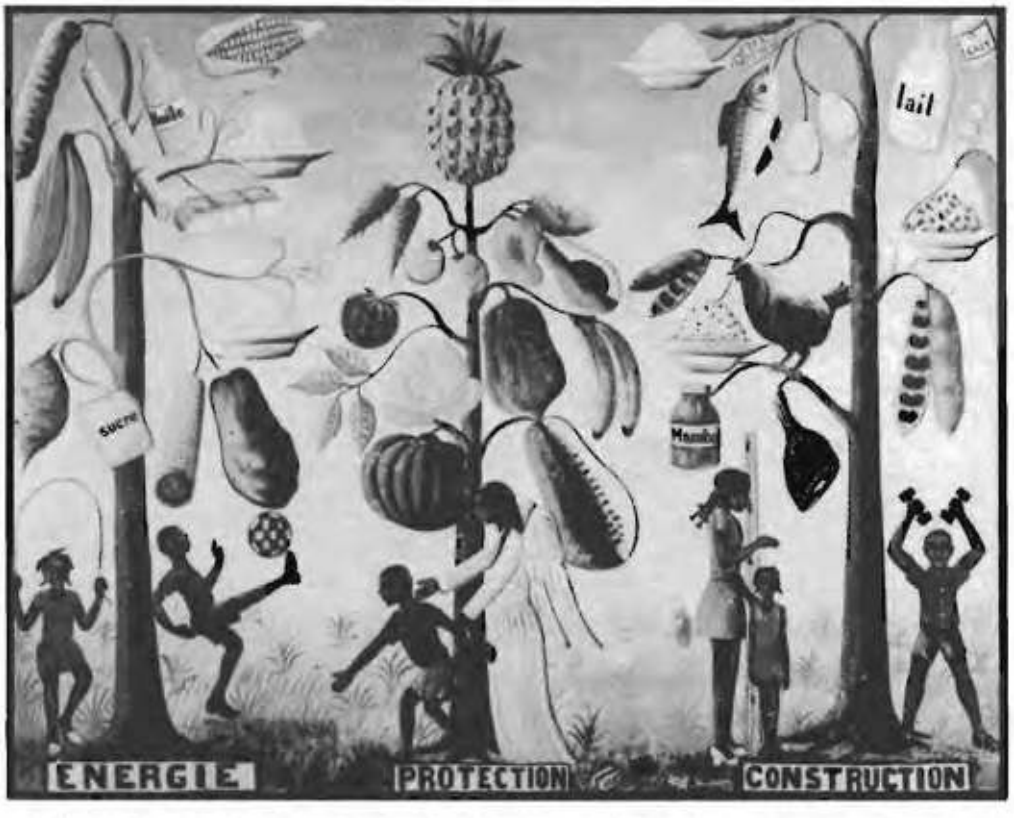
The typical food groups

To teach about nutritional needs, instructors often organize common foods into several groups. These food groups range in number from 3 or 4 to as many as 12, depending on whom you choose to listen to and where they come from.

The Food and Agriculture Organization (FAO) suggests 3 groups:

- ***Body-building foods*** (rich in proteins)
- ***Protective foods*** (rich in vitamins and minerals)
- ***Energy foods*** (starches and sugars, or carbohydrates; and fats)

In ***Where There Is No Doctor*** we use similar groups, but have divided energy foods into two groups: carbohydrates and fats.



An imaginative poster for teaching typical food groups. (By Adeline Andre, from cover of *Teaching Nutrition in Developing Countries.)*

*Many of the ideas here are adapted from "Food Classification System for Developing Countries," by Abrahamsson and Velarde, in ***Teaching Nutrition in Developing Countries,*** Meals for Millions, 1800 Olympic Blvd., P.O. Box 680, Sta. Monica, CA 90406 USA.

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The new food groups

[illegible] food groups are common to [illegible] and they [illegible] [illegible] [illegible]

A MORE APPROPRIATE WAY OF LOOKING AT FOOD GROUPS

GROW FOODS

GLOW FOODS

MAIN FOODS

WE PUT THE MAIN FOOD IN THE CENTER BECAUSE IT SUPPLIES MOST OF THE BODY'S FOOD NEEDS.

GO FOODS

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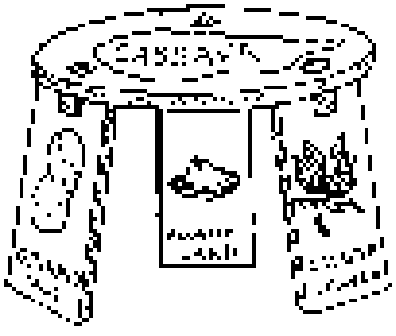
TEACHING IDEAS USING THE NEW FOOD GROUPS

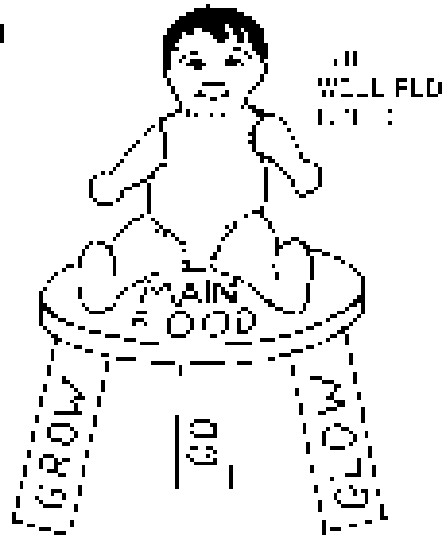
[illegible]

[illegible]

The 3-legged stool for healthy eating

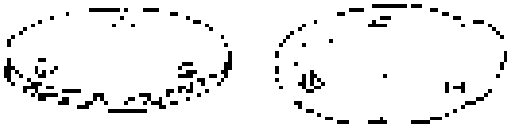
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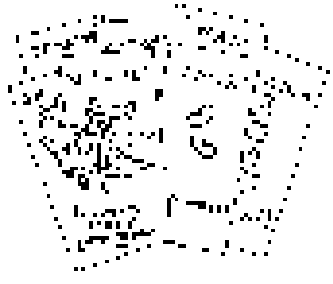


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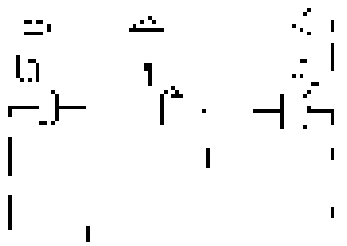
[illegible]

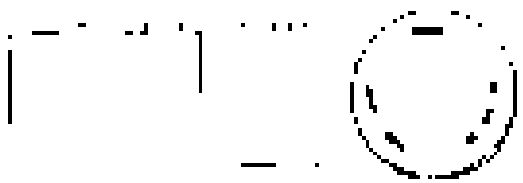


[illegible]



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THE MOST IMPORTANT FOOD LESSON: *EATING ENOUGH!*

In many nutrition education efforts around the world, the most important lesson is rarely taught. Mothers need to learn a lot more about how much food their children need to eat, and how often.

Some nutrition education programs, for example those which help families choose appropriate foods, do not emphasize enough that children need to eat more than they usually do.



But before you accept any outsider's advice (including ours), be sure to question if it is true for your situation.

Adapt your message to people's beliefs and customs.

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CHAPTER **26**

Looking at How Human Relations Affect Health

Health, says the World Health Organization, *is a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.*

Throughout this book, we have pointed to the importance of the human factor in health. Many health problems are the human result of poor human relations. People who are poor, who are oppressed by others, who are ill-treated because of their race, sex, or religion, and who are unable to control their own lives are usually the victims of ill health. Many people in the world suffer mentally due to poverty or shortage of jobs and resources. Rather than being a natural calamity, famine is often the result of human neglect, and does not mean that there is not enough food.

> Health depends as much on how we live as on what we do. The health of a person, a family, a village, or a country is related to how well they work together to meet their needs and to solve their problems in a way that is fair to everyone.
>
> HEALTH means SELF-RELIANCE
>
> for the PERSON
>
> and FAMILY
>
> the VILLAGE
>
> the COUNTRY

The health worker's primary job is to help people gain greater control over their health and their lives. But this is easier said than done.

In this book we have looked at ways to help people improve their health by improving their environment, their diet, their personal habits, and their ability to prevent and treat illness. The principles we have described are useful for all groups of health workers trying to help people, but the health workers who can help communities and groups develop greater social awareness, self-confidence, and cooperative action are rare.

Most health workers are trained to use methods to help people change their behaviour that are based on the assumption that ill health is caused by ignorance, poor motivation, or bad habits. This is known as the "blame the victim" approach to health education. It is the health worker who tells people what they should do, and why they should do it. The health worker tries to persuade people to change their behaviour by using arguments, posters, films, and other methods.

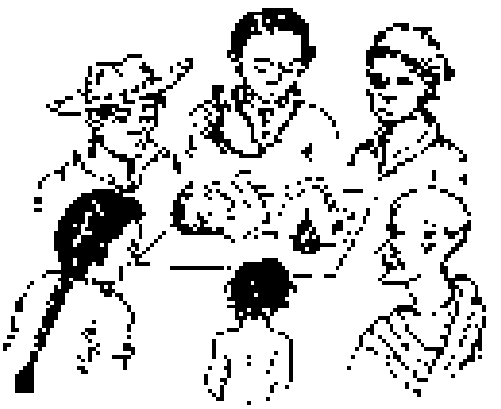
However, we have also described approaches that are based on social awareness. We called this the conscientization approach. In this approach, health workers help people to identify the causes of their health problems, and to find ways to solve them. They help people to develop the skills and confidence they need to take action to improve their health.

Briefly, we looked at the strengths and weaknesses of the two approaches to health education. A health worker who is concerned only with giving people information and persuading them to change their behaviour will

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ANALYZING THE CAUSES OF SICKNESS

Different causes have different explanations or theories.



A good worker will discuss and learn the causes of illness in his/her village and compare them with the explanations of others, including traditional healers and other health workers. (See Module 7)

Germs make many people ill. Germs are small living things that can be seen only with a microscope. They enter the body in many ways. Some germs enter through the mouth in food or water. Others enter through the nose when we breathe. Some germs enter through the skin when we touch dirty things or when we are bitten by insects. Germs cause many diseases, such as tuberculosis, measles, diarrhoea, and polio. Germs are found in all countries, but they are more common in poor countries. Germs live and increase in unclean conditions. Some people are more likely than others to get disease germs, even in unclean conditions. Why is this? Why do some people get sick more often than others? Why do they die? Poor people are usually the most exposed to germs and the least able to fight disease. So poverty must also be considered as a cause of many illnesses, and we must not overlook poverty.

Sickness usually results from a combination of causes.

It is important to understand how and why sickness occurs and to help people to overcome their different causes of sickness. Physical, social, human, and spiritual causes of sickness have been found in Mexico and Latin America, Africa, and Asia. Experience has shown that health workers can help people to analyze the causes of their sickness. Their analysis can lead to a plan for dealing with the causes. A good way to begin is by telling stories, like the ones that follow. Read them carefully and try to think of other stories that you have heard or that have occurred in your village. Then discuss them with your friends and co-workers.

Note: You may want to make a copy of the stories that follow. Then you can read them to people and ask them to tell stories that are similar to the ones they have heard.

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THE STORY OF LIPS





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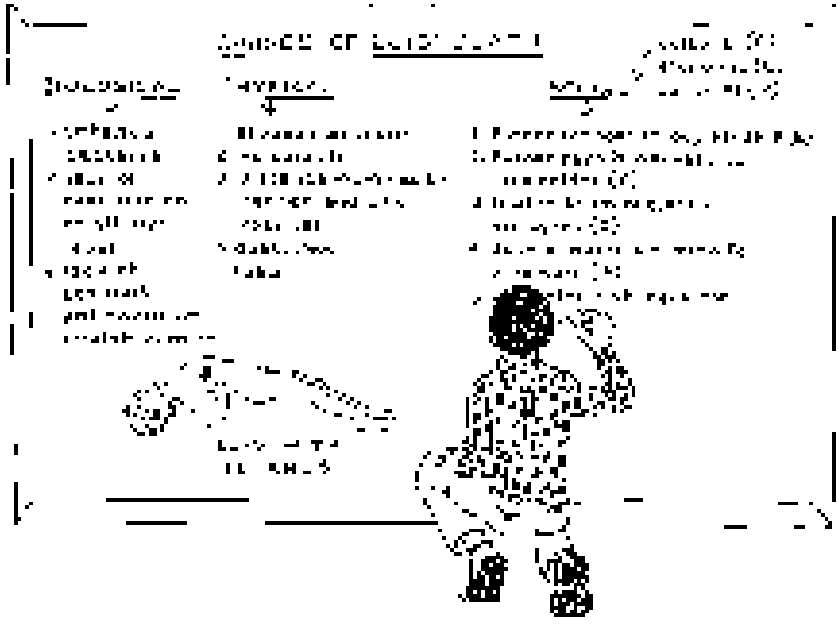
[illegible] is a key [illegible] [illegible] [illegible]

Biological, physical, and social causes of illness



- *Biological* causes are those caused by germs, such as viruses, bacteria, parasites, or insects.
- *Physical* causes are caused by some kind of injury or [illegible], such as a broken bone, a cut, a burn, poisoning, or exposure to [illegible].
- *Social* causes are caused by [illegible] or by [illegible] that can lead to [illegible]. Social causes can be divided into two groups:
  - *cultural* causes, such as [illegible], [illegible], and [illegible];
  - *political* causes, such as [illegible].

[illegible] causes of [illegible] can be divided into [illegible] groups: biological, physical, and social. For example:

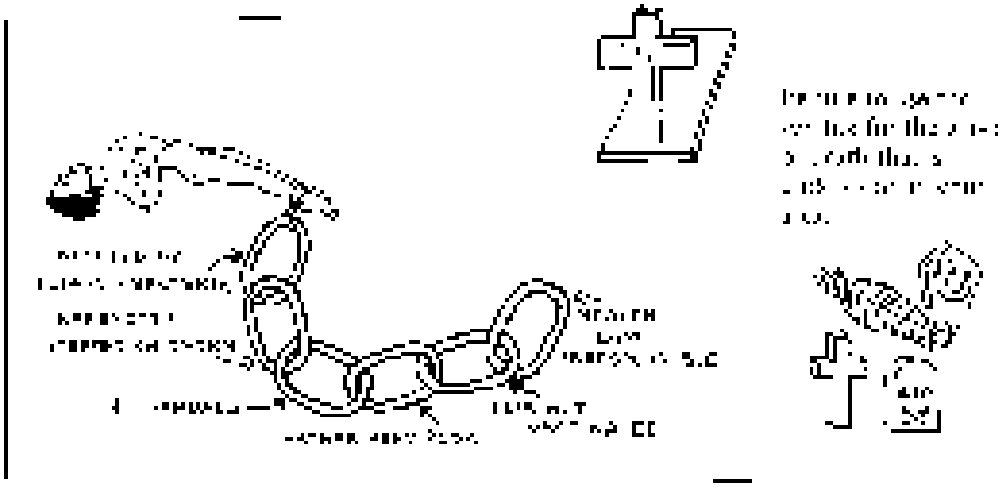


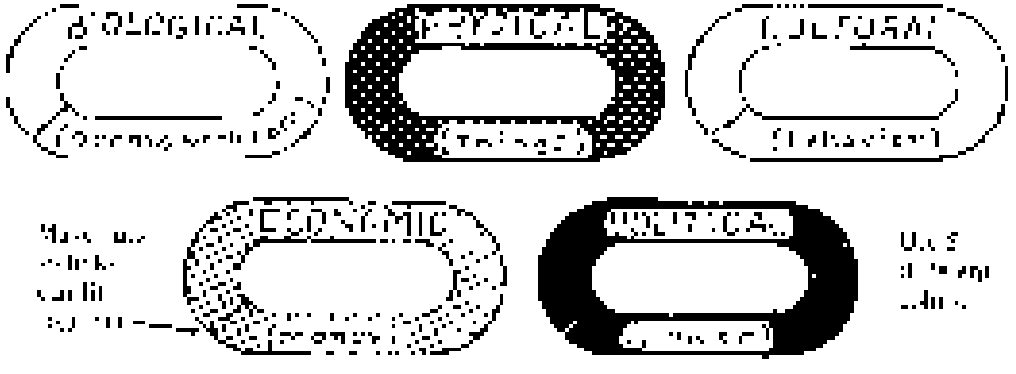
As the examples show, the first two groups are usually [illegible]. The social causes usually lie behind and are more numerous than the biological and physical causes. This is why it is difficult to [illegible] social causes, because:

- the social causes are often ignored or overlooked by [illegible] and
- it is difficult to [illegible] social causes [illegible].

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The chain of causes





Link by link, the chain grows until it reaches the grave.

In this photo, students have pieced together the 'chain of causes' that led to the death of Luis.





Here students build a chain based on a story about a child who died of diarrhea.

These teaching aids are useful early in a training course. They help increase the health workers' awareness about the different causes of health problems and the way they relate to each other. However, the aids can also be used by health workers to teach groups in their communities.

When playing the 'chain of causes' game with persons who cannot read, use local symbols on the links instead of (or as well as) words. Be sure to use symbols the people in your area will understand.



Note: You may be wise to avoid using big words like ***biological, physical,*** and ***social.*** Look for simpler terms people already use. For example, for ***cultural, economic,*** and ***political*** you might simply speak of causes related to ***beliefs, money,*** and ***power.***

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BUT WHAT CAN WE DO?

After a brief discussion of the causes of the problem, the next step is to ask: "What can we do?" It is often easier for people to think of possibilities and discuss them openly if they first consider what other people might do. For example:

"We could change our policy. Perhaps we could help prevent the death of other children if we made members of the discussion group who have made helpful suggestions responsible for telling the rest of the community."



"Perhaps we could persuade the government to pass a law that..."



"Perhaps we could persuade the men to change their attitudes and behaviour."

"Some people have suggested that we could help prevent the death of other children if we made members of the discussion group who have made helpful suggestions responsible for telling the rest of the community. Perhaps we could persuade the government to pass a law that..."



"Perhaps we could persuade the men to change their attitudes and behaviour."

"Others have suggested that we could help prevent the death of other children if we made members of the discussion group who have made helpful suggestions responsible for telling the rest of the community. Perhaps we could persuade the government to pass a law that..."



"Perhaps we could persuade the men to change their attitudes and behaviour."

As people begin to produce solutions, they will begin to feel more hopeful. They will start to think of new ways in which they can help themselves.

"Maybe we could form a group and borrow money to buy a goat. The goat will produce milk for the children and we can sell the extra milk to buy more goats. Then we will have enough money and soon we will be rich."



These and all suggestions must be accepted by the group in discussion groups in the early stages. Even if they are unrealistic, they are the beginning of community development. Only gradually will members of the group learn to evaluate their own ideas.

Sometimes people from outside the community will have ideas to help them. Such ideas should be discussed openly in the group. Sometimes people make suggestions because they think that is what the outsider wants to hear.

In some situations, it may not be realistic to make many suggestions. For example, they may be faced with serious problems such as drought. In the drought example, it may be necessary to organize some relief from outside the community. Any suggestions which are made should be realistic. For example, it would be unrealistic to suggest that a village should build a hospital.

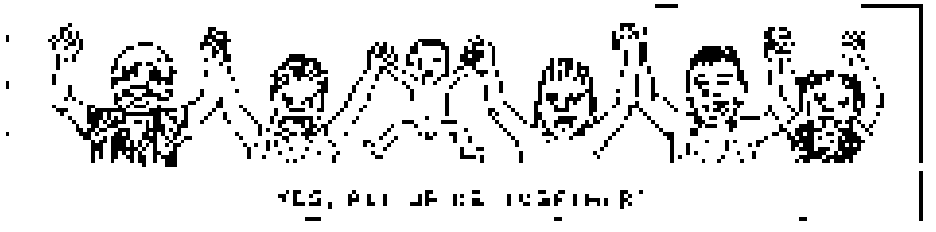


Even if we do not find immediate solutions to problems, it helps people to feel more hopeful. Instead of feeling that there is no possibility, most of the poor still feel there is very little they can do to change their situation.

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Social change, through which the poor gain more control over the conditions that affect their well-being, is the key to health for all."



DIFFICULTIES IN WORKING WITH PEOPLE TO IMPROVE THEIR SITUATION



[illegible]

[illegible]

> Those who work with people toward social change need a great deal of courage, love, and patience. For change depends on the self-realization and cooperative action of the people themselves.

[illegible]



[illegible]



[illegible]

[illegible]

■

The biggest obstacle to change is the idea that change is impossible. The most important beginning point in work toward change is an attitude centered on the success of the human movement, or community, we are trying to help. For more information on changes, see pages 28-01 through 28-03 and 28-05 through 28-07.

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THE NEED TO START WHERE PEOPLE ARE, AND WORK FROM THERE



At first, those of us coming [illegible] have a large view of the obstacles. We presume the causes of [illegible] problems. We presume that people [illegible]

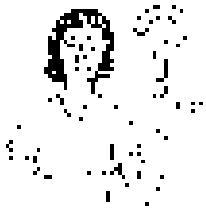
- all people are [illegible]
- all people [illegible] support [illegible]
- all people [illegible] [illegible]
- the many [illegible] [illegible]

[illegible] and distant [illegible] [illegible] [illegible] [illegible]



[illegible] [illegible] [illegible] [

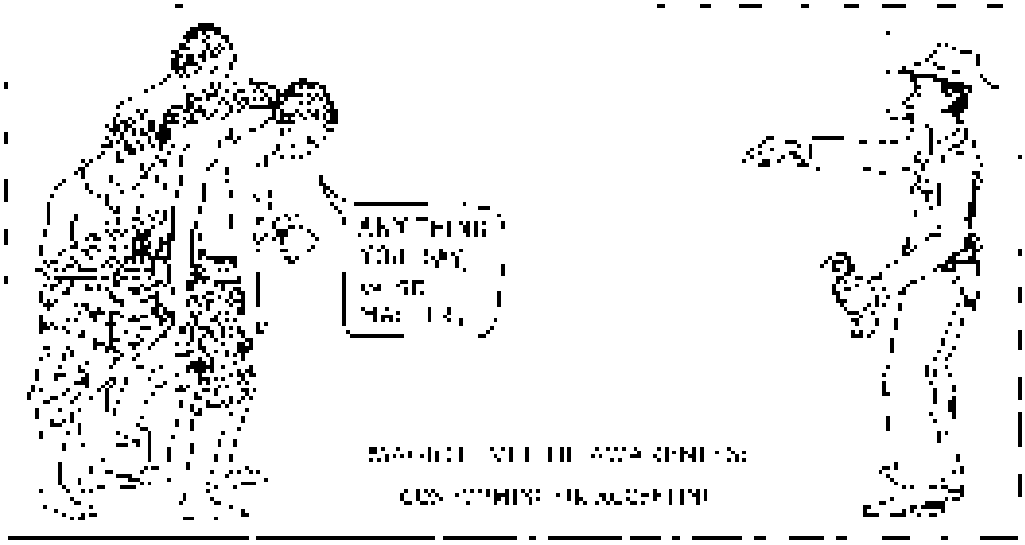
DIFFERENT LEVELS OR STAGES OF AWARENESS

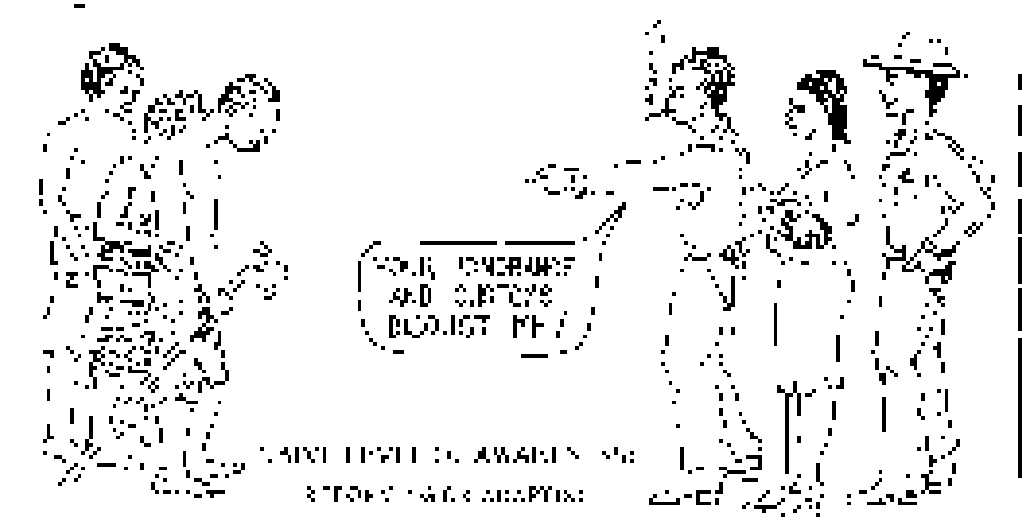


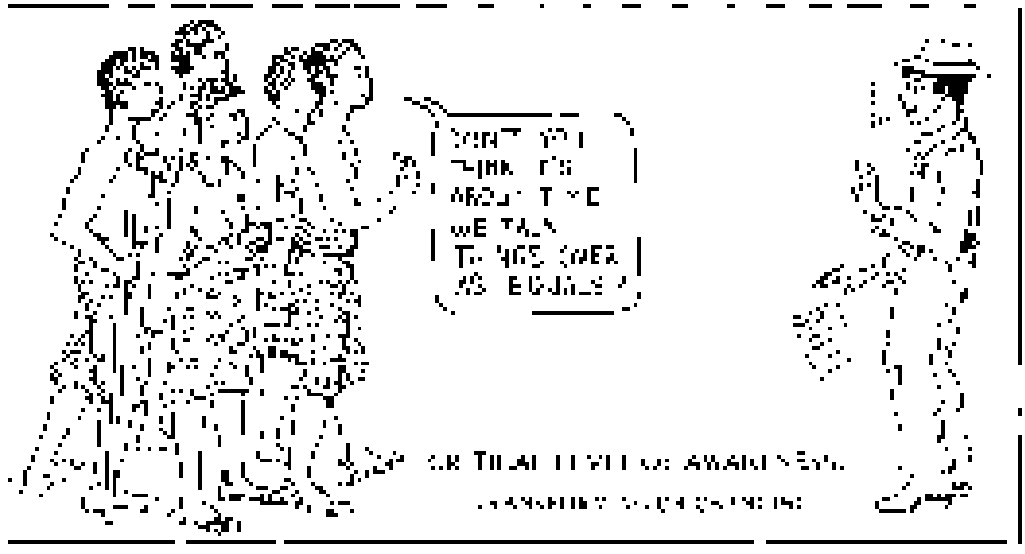
Why is it that so many people "just don't seem to care" about changing or improving their situation?

What can we do to help people awaken to their own possibilities?

[illegible] we have already discussed, it may be useful to discuss the [illegible] stages of awareness. These are steps on the road to full [illegible] Although the [illegible] are not absolute, and the steps do not always [illegible] [illegible] and [illegible] [illegible] [illegible]



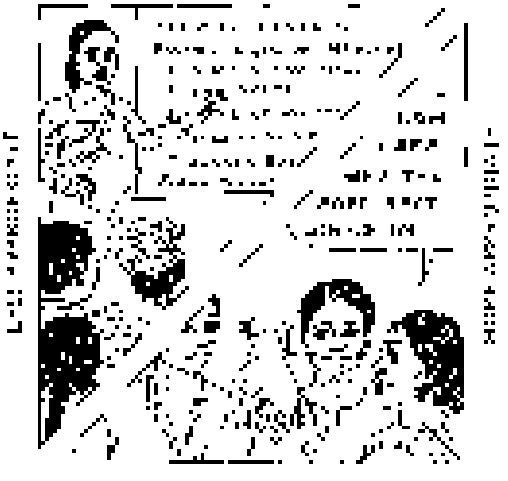




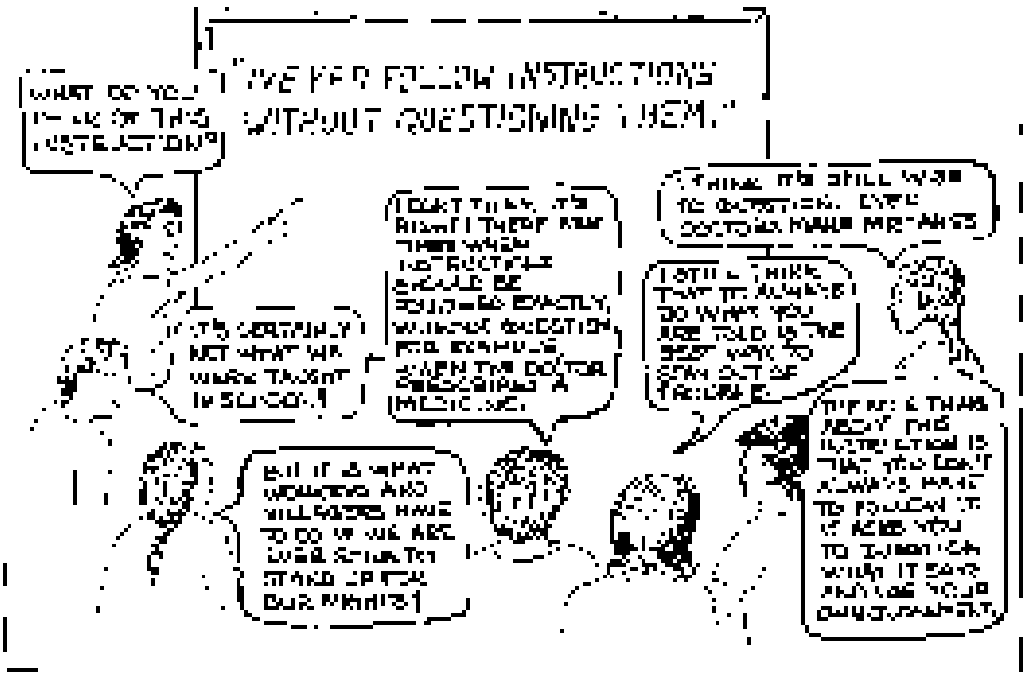
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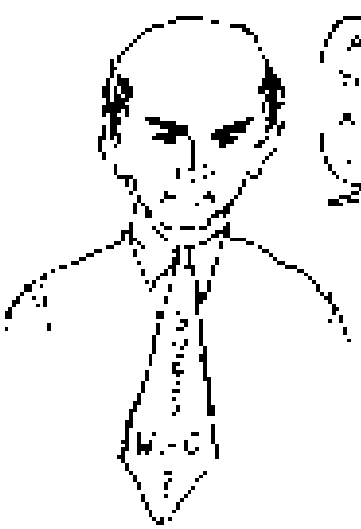


HELPING PEOPLE DEVELOP CRITICAL AWARENESS



Teaching methods that help people develop critical awareness of their situation





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PAULO FREIRE'S METHOD OF CONSCIENTIZATION

A key concept in the process of conscientization, as Freire calls it, is the development of critical awareness—an important part of learning how to take control of one's life and be self-reliant. A group of people who are working together to solve problems they have in common.

In this approach, the teacher is a leader and a learner, because the questions that are asked by the group must be answered by the group itself. There is no 'expert' who knows everything and who can pass it on to the group in the form of lectures. Instead, the process is the group's search for better understanding of their problems and their capacities. Each person's experiences and views have equal value. Everyone shares in the learning as well as the problem-solving for all participants.

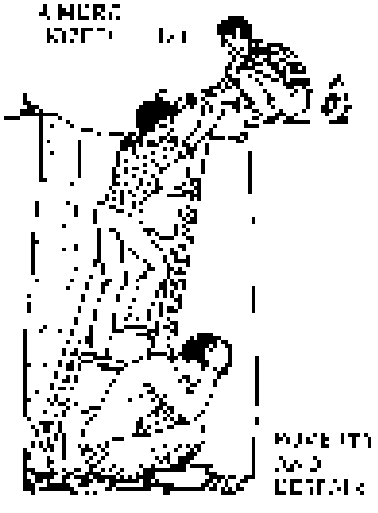
In this kind of group discussion, people's feelings are just as important as their ideas. Trust and friendship are built up as people share their experiences and their hopes. Differences, conflicts and tensions are brought out into the open and dealt with. In fact, the leader must be very sensitive to the feelings of people, and must help them to deal with conflicts and tensions.

At the start of a discussion, the members of the group have different:

- knowledge and skills (e.g. some can read, some cannot);
- beliefs (some may be afraid of change and others may be very keen to change);
- ways of thinking (some are logical, others are not); and
- ways of communicating (some are shy, others are talkative, some are confident, others are not).

It is essential that the group leader recognizes and accepts that all people in the group have their own knowledge and skills to offer. At the same time, every member has the right to be treated with respect and dignity. The leader's job is to help the group to learn from each other.

The leader's role is mainly one of asking questions. These should be questions that help the group see the world around them as a situation that challenges them to change it—not as something unchangeable and beyond their control.



By asking questions, the leader helps the group to look at the problems they have identified in a logical way. The group discusses the causes of the problems, and the possible solutions. Then they plan what they can do to solve the problems. Finally, they put their plans into action. Throughout the process, the group members learn from each other, and from their own experiences.

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The aim of the exercise is to help participants to:

1. [illegible] personal worth and [illegible] group strength; to help them gain confidence in their ability to [illegible] human action.

2. [illegible]

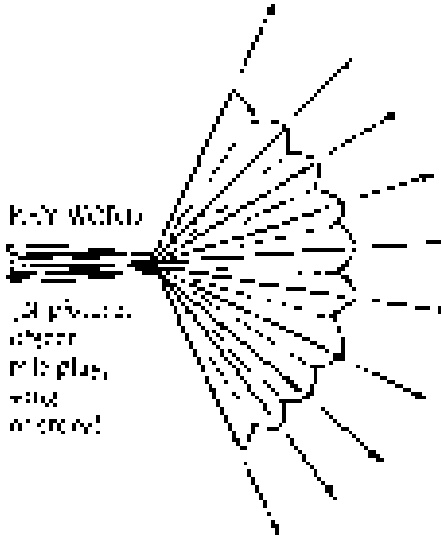
3. [illegible]



The use of key words and pictures:

In order to help [illegible] In order to start each discussion by having everyone look carefully at a specific word, thing or situation. [illegible]

The key word or picture is used to [illegible]



[illegible]

[illegible]

[illegible]

In the chapter on [illegible] key words, [illegible] discussion workers

Activities involving [illegible] key words, pictures, or stories [illegible] the use of [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] group work [illegible] [illegible]

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Linking awareness development to the learning of practical skills

[illegible] first developed the method of using [illegible] to help [illegible] learn how to read and write. Their education for [illegible] and social awareness was linked from the first with the learning of skills for practical [illegible] improvement.

This linkage was [illegible] in the use of [illegible] drawings. In their [illegible] they used [illegible] to stimulate discussion about [illegible] of practical [illegible]. Freire [illegible] to help [illegible] to [illegible] for action. Care that people [illegible] important with the [illegible] raising dialogue [illegible] [illegible] practical [illegible] [illegible] Freire [illegible] [illegible] [illegible] [illegible]

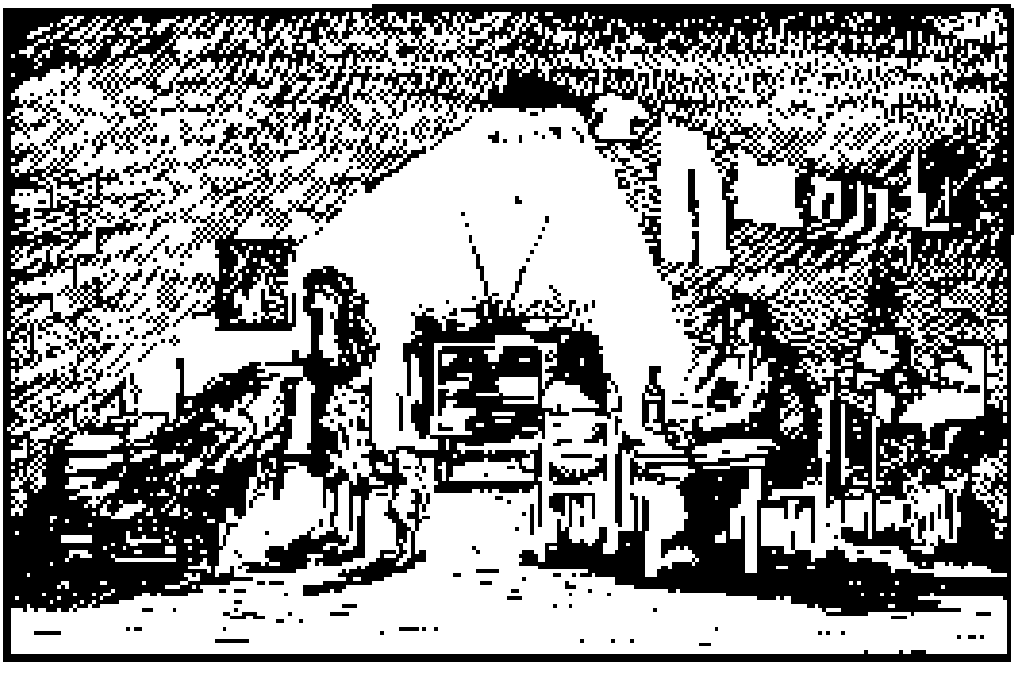
To be most effective, educational methods that increase self-confidence and social awareness should be built into all aspects of training programs and community activities.

[illegible] [illegible] [illegible] [

FREIRE'S METHOD IN LITERACY PROGRAMS

[illegible] Paulo Freire's [illegible] will become [illegible] adults of the [illegible] people's [illegible] [illegible] [illegible]

TELE



The group leader guides the discussion through 4 main areas of questions:

Viewing the programme

What do you see in the picture? How does it relate to the story? What is the message of the picture? How does the picture help you to understand the story? Is there anything in the picture you do not understand? What questions do you have about the picture?

The effects of the video on the group

Do you like the story? Why? Why not? Is the story true to life? Do you have a problem like the one in the story? Who in the group has a problem like the one in the story? Would you like to discuss your problem with the group? Why? Why not?

Causes of the main problem

What are the causes of the problem in the story? How does the problem start? Do you agree with the explanations? Are there any other causes? Does the group have other explanations? Are there any causes that are not mentioned in the story? What are the causes of the problem in the group?

Possible solutions

What can be done to solve the problem in the story? Do you agree with the solutions? Why? Why not? Do you have other solutions? What are the advantages and disadvantages of the solutions?

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HUNGER



[illegible]

[illegible]

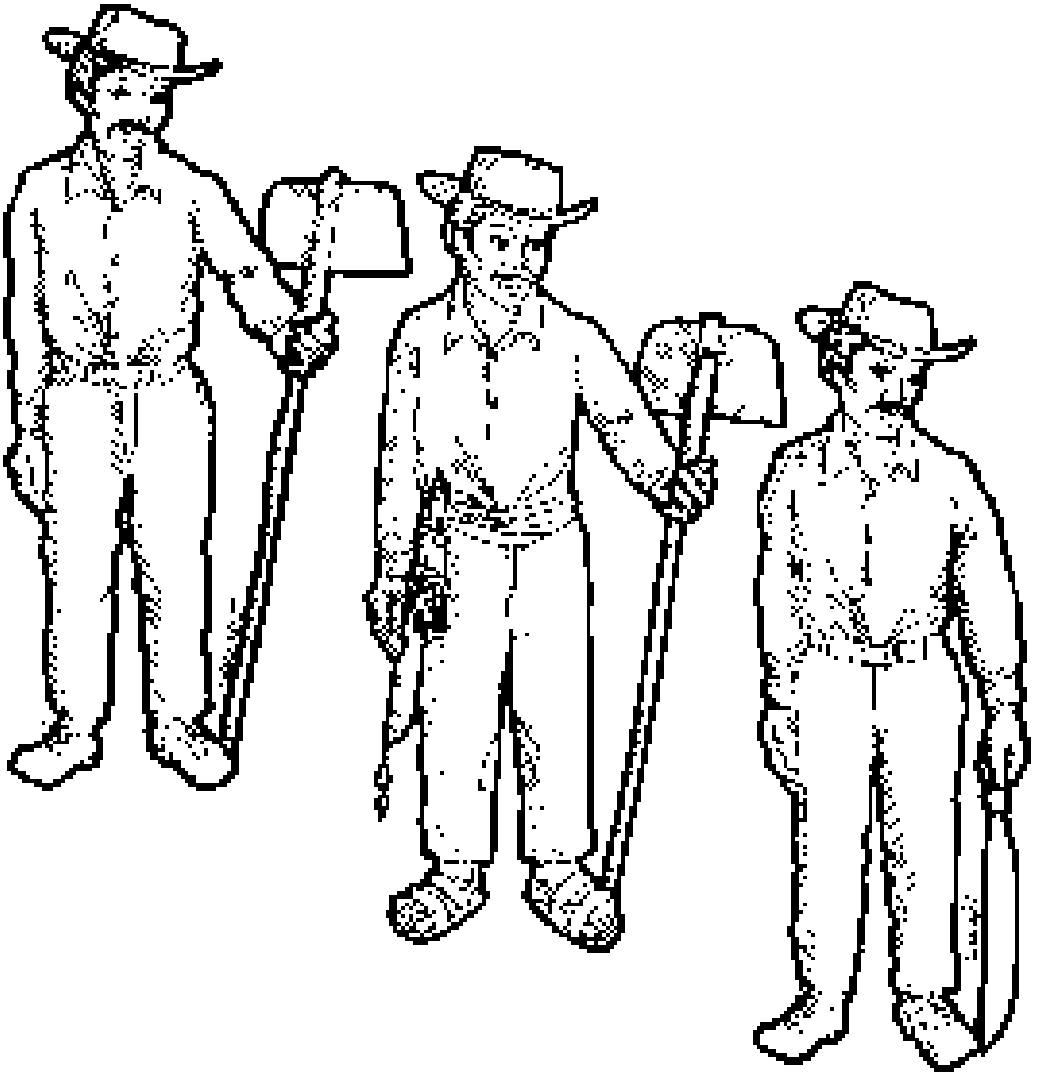
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ADAPTATION OF FREIRE'S METHOD BY HEALTH PROGRAMS IN GUATEMALA

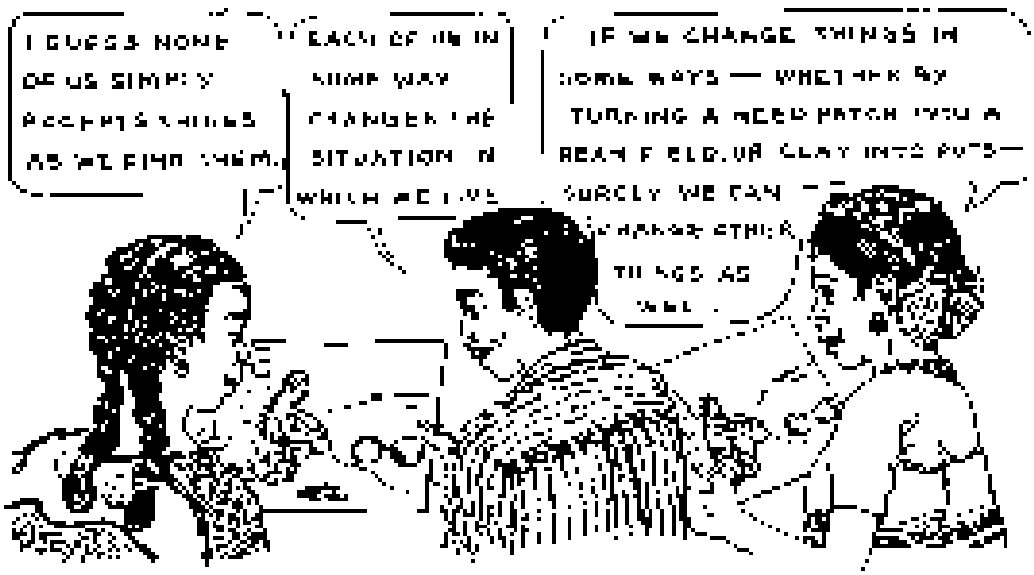
[illegible]

[illegible]

[illegible]



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These questions help people recognize the value and extent of their own knowledge. Instructors who have not fully understood this principle often underestimate the knowledge that learners have. Instead of building on what learners already know, they waste time telling learners things they already know. Instructors who ask questions that help learners recognize the value of their own knowledge can build on that knowledge. Here are some examples:

"Does anyone know why it is important to wash your hands before preparing food, or after going to the toilet?"

"Does anyone know why it is important to boil drinking water for at least 20 minutes? Why is it not enough to heat it until it is hot, or until bubbles appear on the surface?"

"Who can tell us how many months it takes for a baby's eyes to open? Who can tell us how many days it takes for the umbilical cord to fall off?"

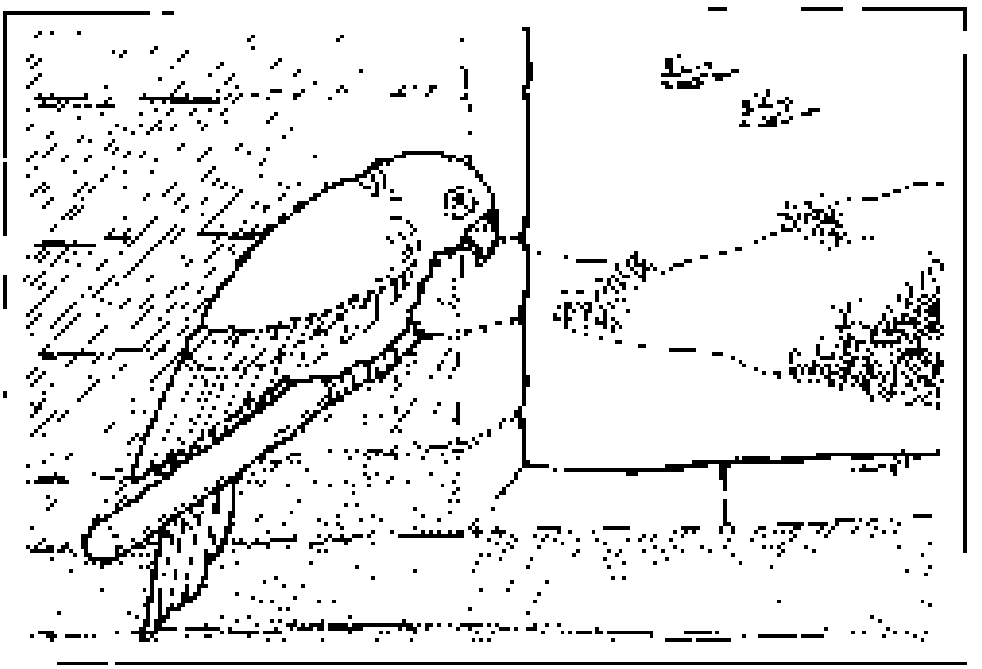
"If you could choose between two wells to provide water for your village, one that was deep and one that was shallow, which one would you choose? Why? Would the people who live in the village have different opinions about which one to choose? Why?"

"Who knows the best way to prevent malaria? Anyone else? Is there more than one way to prevent malaria? Which way is the most effective? Which way is the cheapest? Which way is the easiest for you? Is there any way that is the best for everyone? Why do you think people in this village do not always use the best way to prevent malaria? What can be done?"

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(For a discussion of the use of pictures, see Unit 10, Section 1.3, page 283 [sic].)

After the group has discussed the picture, you can encourage them to think about the health problems in the community. Ask questions such as: Are there any people in the community who are sick? Are there any people who are hungry? Are there any people who are unhappy? Are there any people who are worried about something? Are there any people who are poor?

You can also help them by asking these kinds of questions:

Why do you say this?	Be sure to ask "Why?" questions to find out the reasons for their answers.
What are these people doing?	
Where are they?	

Then, carefully listen to what they say. Ask questions to find out more about their answers. Do not correct them. Do not tell them what you think. Ask questions to help them think more deeply about what they see. Ask questions to help them think about the problems in their community. Ask questions to help them think about what they can do to solve these problems.

Here are some questions you could ask about the picture on page 25 [sic]. Do not ask all of these questions. Choose only a few questions that you think will help the group to think more deeply about the problems in their community. Do not ask questions that are too difficult for the group. Ask questions that will help them to think about what they can do to solve the problems in their community.

Why do you say that?

Why are the people in the picture sad?

Why are the people in the picture happy?

Why are the people in the picture sick?

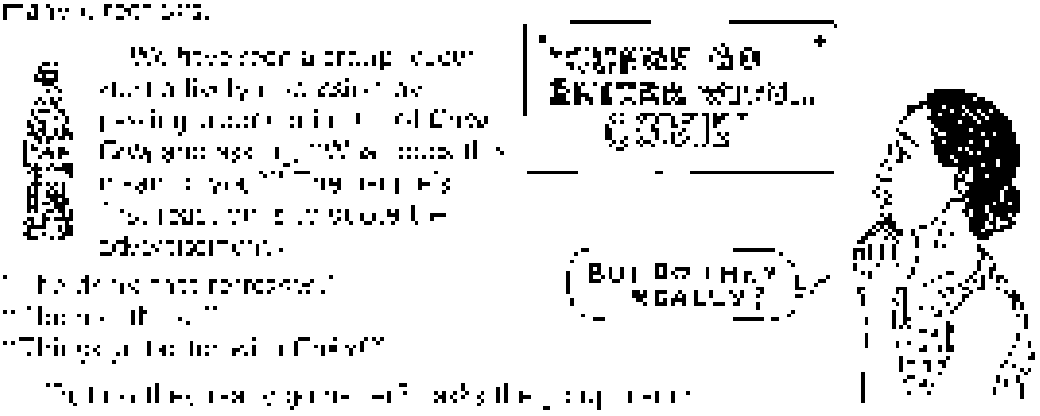
Why are the people in the picture hungry?

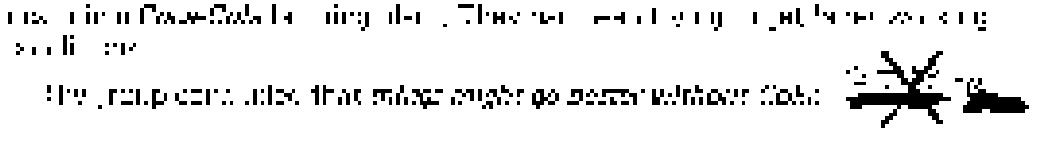
Why are the people in the picture unhappy?

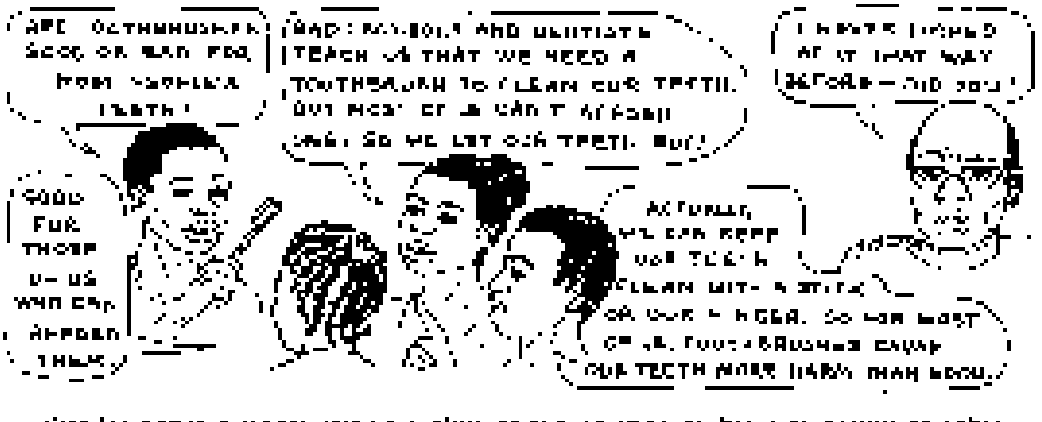
Why are the people in the picture worried?

*Why are the people in the picture poor

ALTERNATIVES TO CARTOONS AS DISCUSSION STARTERS:



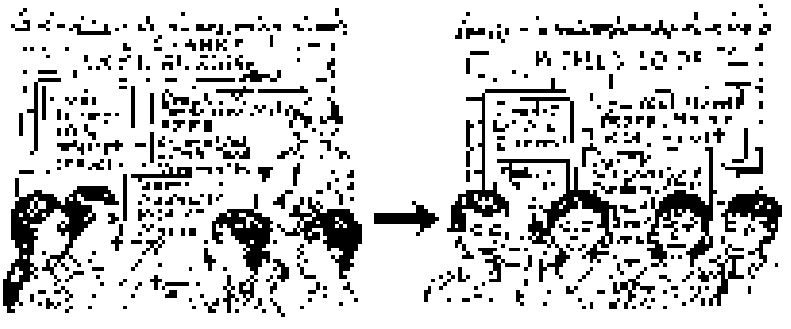




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FROM AWARENESS TO ACTION

The process of helping people develop a sense of their own power to act to bring about desired change is not always easy. But it can lead to powerful and long-lasting action.



Critical awareness is the ability to see clearly why certain things are the way they are. It is the ability to recognize and analyze the forces that affect people's lives. It is the ability to see oneself as capable of acting to change things. When the development of critical awareness is linked to meeting specific local needs, it can help people find the spirit, energy, and sense of direction required for effective action.

Critical Awareness Leads to Action

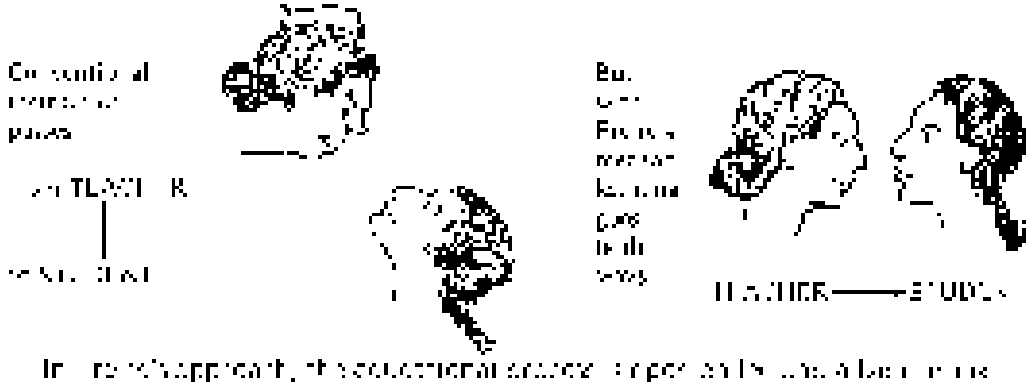
Critical awareness does not usually develop in a straight line. Rather, it grows slowly and in fits and starts. People may go through periods of "critical reflection" during which they actively seek information, ideas, and understanding that will help them solve problems. But they may also go through periods of passivity and discouragement when they feel overwhelmed by the many obstacles and powerful forces that seem to control their lives.

Participatory, problem-posing approaches to learning help people develop critical awareness and gain confidence in their ability to act. They encourage learners to "problematize" their situation—to look at it carefully and critically, to ask questions, and to find out more about the causes of their problems before they decide what to do or try to change anything

[illegible] [illegible] [illegible] [

THE DIFFERENCE BETWEEN CONSCIOUSNESS RAISING AND BRAINWASHING

Many people think that education is a process of changing the attitudes and behavior of the people. However, many educational programs change the attitudes and behavior of the rich or the powerful (page 1.26).



In the traditional approach, the educational process is controlled by the teacher. Passing on information is considered less important than changing the learner's attitudes and behavior. The teacher decides what is right and what is wrong. The learner is expected to accept the answers the teacher gives.

In a large room, there are many tables. Each table has a number on it. Each table has a different number of chairs around it. Some tables have no chairs around them. Some tables have one chair around them. Some tables have two chairs around them. Some tables have three chairs around them. Some tables have four chairs around them. Some tables have five chairs around them. Some tables have six chairs around them. Some tables have seven chairs around them. Some tables have eight chairs around them. Some tables have nine chairs around them. Some tables have ten chairs around them. Some tables have eleven chairs around them. Some tables have twelve chairs around them. Some tables have thirteen chairs around them. Some tables have fourteen chairs around them. Some tables have fifteen chairs around them. Some tables have sixteen chairs around them. Some tables have seventeen chairs around them. Some tables have eighteen chairs around them. Some tables have nineteen chairs around them. Some tables have twenty chairs around them.

THE METHOD IS THE MESSAGE.



Some of the tables have only one chair around them.

The method is more important than the information. Consciousness raising is a process of discovering answers to questions that do not already have the answers built in. The leader must be prepared to have the group come up with answers and ideas completely different from what she had expected. She must be ready to learn from the group. She must be willing to change her own ideas and to see the world in a new way. This is the method of consciousness raising.

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Make observations from pictures of patients like the ones in this guide.

> The challenge for the group leader is to help persons make their own observations and arrive at their own answers.

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[illegible]

Leader: [illegible]

Female: [illegible]

Leader: [illegible]

Female: [illegible]

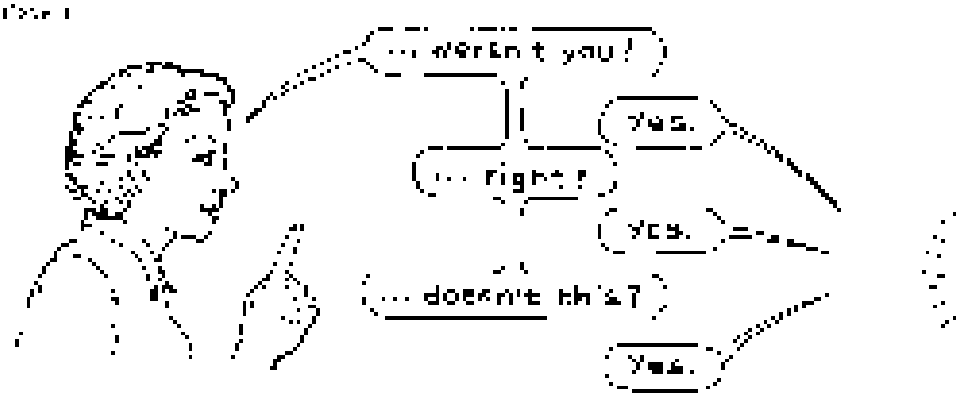
Leader: [illegible]

Female: [illegible]

Leader: [illegible]

Female: [illegible]

[illegible] none of the ideas in this dialogue came from the group. [illegible]

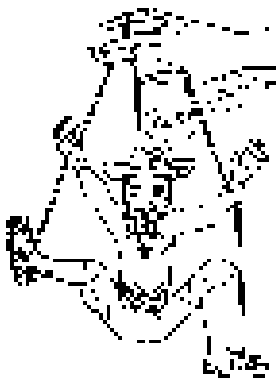


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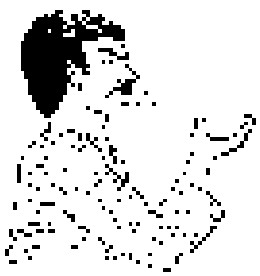
[illegible]

[illegible]

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Appreciation is shown when a participant makes a valuable contribution to the discussion.



"When you're talking to children and you're not using simple words, they can't understand you. So you have to take them on a journey. We start with a walk to the village boundary. Then we walk to the end of the line of houses. Then we walk to the end of the line of houses. Then we walk to the end of the line of houses

The difference between consciousness raising and brainwashing:

With consciousness raising, [illegible] people to look [illegible] Brainwashing, [illegible] people to [illegible] [illegible]

[illegible] "[illegible]

Suggestions for guarding against brainwashing when leading a group dialogue:

- [illegible] questions that are truly open-ended and [illegible] group [illegible]
- [illegible] "[illegible]
- [illegible] [illegible] [illegible]

THE SPECIAL LANGUAGE OF "CONSCIENTIZATION": A TOOL OR A TRAP?



[illegible]

[illegible]

[illegible]

COMBATTING EXPLOITATION AT THE VILLAGE LEVEL



[illegible] **combat injustices in one's own community before taking on the giant problems outside.** [illegible]

[illegible]

[illegible]

AN EXAMPLE FROM INDIA

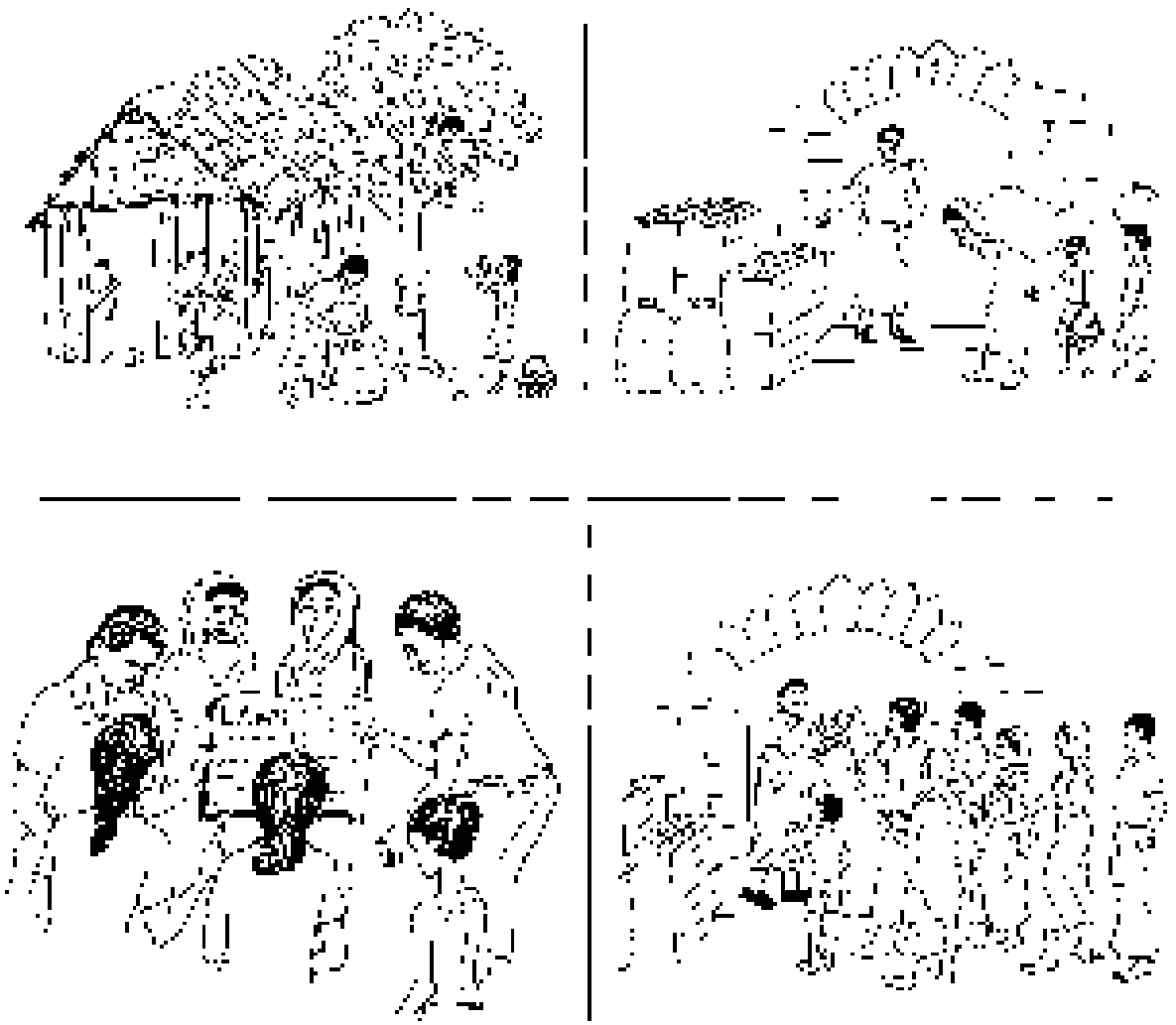


[illegible]

[illegible]

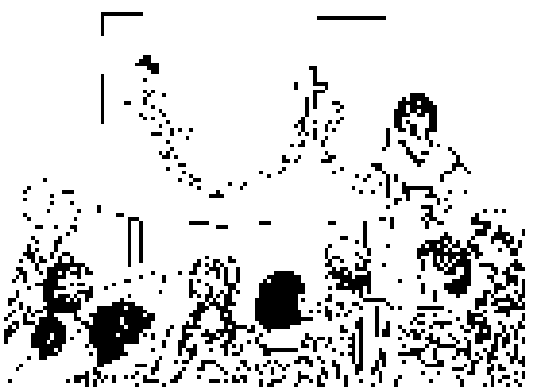
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SHARING IDEAS AND EXPERIENCES AMONG PROGRAMS



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CHAPTER 27 Ways to Get People Thinking and Acting: Village Theater and Puppet Shows

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

SOCIODRAMA or social drama is used to help the group discuss a problem. [illegible] **people's awareness of the issue, to explore possibilities for action and change.**

[illegible]



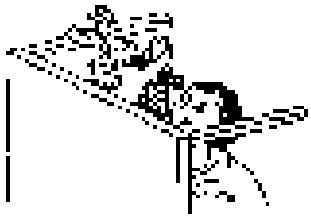
[illegible]

[illegible]

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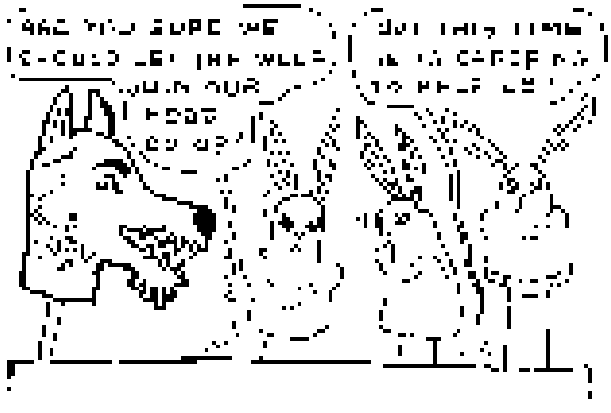
PUPPET SHOWS are a form of play using [illegible] puppets [illegible]





[illegible]

However, puppets can also be used with adults, especially for [illegible] Puppets add a sense of pretending and humor that can make the [illegible] life easier to look at.



COMBINED FORMS OF DRAMA. [illegible]

WORKING SOCIAL DRAMA INTO CLASSROOM ROLE PLAYS

[illegible]

Example: A social drama about measles

[illegible]

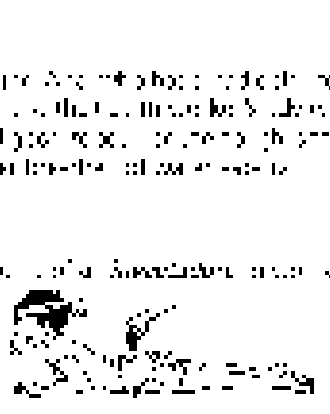
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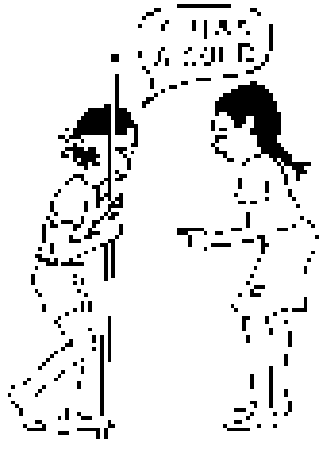
CULTURAL FACTORS: The health worker is likely to be unable to recognize should be checked out with people who know the culture well. Where there is no doctor, ... this should not prevent the health worker from giving ... *Do the people in the village have any ... for their problems?*



ECONOMIC FACTORS: ... *Do the people have enough money to buy ... Do they have to travel far to get ... Do they have to pay ... Do they have to ... Do they have to ... Do they have to







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IDEAS FOR USING DRAMA TO TEACH ABOUT HEALTH

The value of homemade, open ended drama

In this chapter we have described several plays that have been written and performed by health workers in villages and towns. But these plays are only a few of the many that could be created. They are examples of how groups of health workers, mothers, and children can create their own performances.

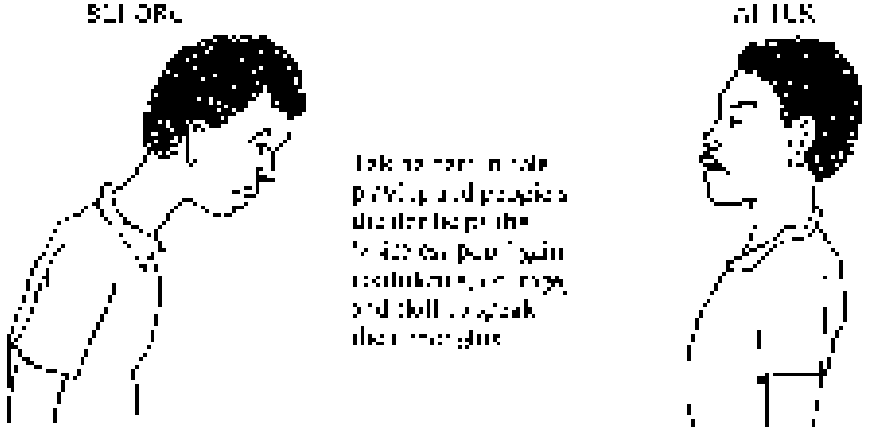
Those who present a play or skit will learn twice as much if they also take part in creating or writing it. The actors can be read-to from the script, given a set of lines to say, or told what to say. But they will learn much more and will give a much better performance if they are helped to create their own words and actions. The health worker's task is to help them discuss the health problem, to plan the play, and to make sure that the message is clear. The actors should be encouraged to improvise and to use their own words. They will learn more from the experience, and their performance will be more convincing.

1. Encouraging people to speak in their own words (not memorize parts)

Speaking in public is not easy for many people, even experienced actors. Often the worst mistake is to learn a script. Actors may forget what comes next, stop talking, and make the whole play fail. A health worker's task is not to make the actors perfect performers. It is to help them communicate clearly. If they do this in their own words, they will gain confidence and enjoy the experience. They will learn more from it, and so will the audience.

However, the ability to stand up and state one's views in public is not easy for many people. It can be particularly difficult for those who would speak for the voiceless poor. We encourage health workers to help the poor develop this ability. But this must be done gradually. It may take many months.

But go slowly. Don't push a person's confidence too far. The skit can only be used in the classroom if each actor will proudly tell others that he or she took part. The only way to do this is for the actors to feel safe and supported at the same time. As the students become more confident, they can begin to give performances for other audiences.



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Role-play can be a challenging way to help people see how their interests can grow. As they get used to the idea, they will find ways to combine role-play with other methods. For example, they might invite a visitor to speak to the group. Of course, they will not ask the visitor to give a lecture. Instead, they will ask the visitor to tell stories from his own experience, speaking informally and answering questions. Or they might ask the visitor to lead a discussion. Or they might ask the visitor to help them prepare a role-play.

3 Involving mothers and children—Be sure the drama is important to them

Health workers may be able to interest women and children in putting on plays or puppet shows for the community. People are more likely to take part if the subject of the drama is important to them.

For example, in Africa, South Asia and Latin America, puppet shows are used to teach about oral rehydration therapy (ORT) for diarrhoea. Puppets are also used to teach about immunization. (See p. 27-10.)

4 Entertainment is more powerful than preaching



Drama can be used for health education. In certain places, people like to go to see a play. They will sit and watch for hours. They will remember what they see and hear. Drama can be a very powerful way to get a message across.

Drama can be used for health education. In certain places, people like to go to see a play. They will sit and watch for hours. They will remember what they see and hear. Drama can be a very powerful way to get a message across. But if it is to be really effective—if it is to make people want to change—**more than entertainment is needed. Great care must be taken not to preach.** Few people enjoy being told what they must do, how they must live, especially when they have come to see a good play.

The more effective the message is, the more likely the play is to have negative results. The actors and actresses can be made comical. But the people in the audience will not want to be laughed at. Respect must be maintained at all times.

5 Leaving time for discussion afterwards



After a drama or role-play, the audience must be given an opportunity to express their feelings, ask questions and discuss what they have seen. Follow-up discussions are very important. They help people to see the relevance of the drama to their own lives. They help people to think about what they can do to improve their situation.

For example, in a play called "Leaves Medicine, Not Spirits Kill" (see p. 27-17), the audience learned a lot about the problem of diarrhoea in children. The actors and actresses showed people not to use witchcraft or sorcery when children have diarrhoea. They showed people that they can prevent diarrhoea by keeping children clean. They showed people that they can prevent dehydration by giving children plenty of liquids. They showed people that they can treat dehydration by giving children a solution of water, sugar and salt. They showed people that they should take their children to a health worker if they do not get better quickly. They showed people that they should not stop giving children food when they have diarrhoea. They showed people that they should give children more food when they get better.

Follow-up discussions get people personally involved!

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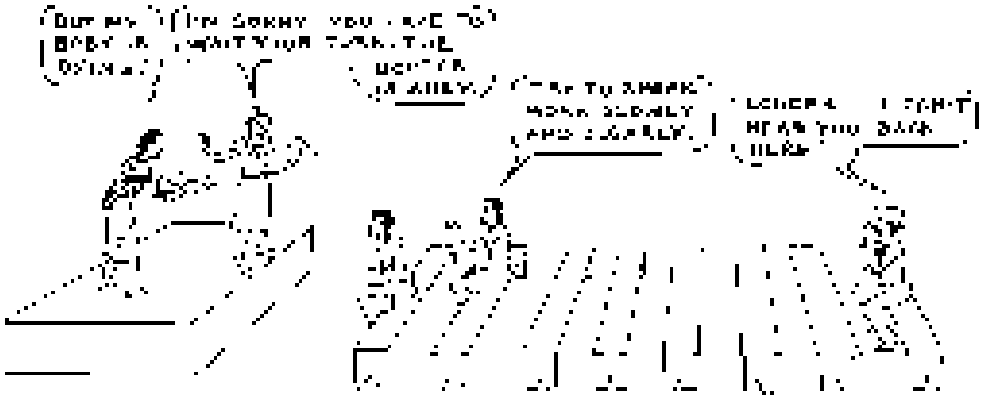
TECHNIQUES FOR EFFECTIVE, ENTERTAINING THEATER

1. The place and the stage

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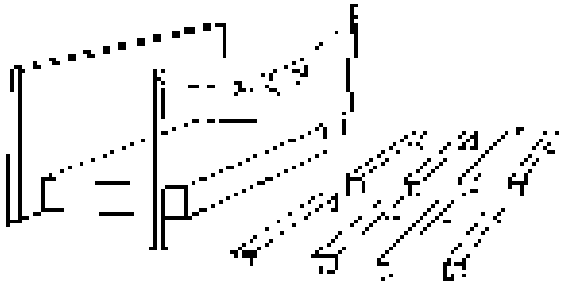
Some [illegible] stage or platform as the audience [illegible]. You [illegible] [illegible] [illegible]

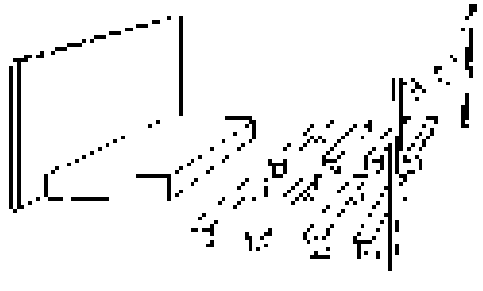


2. Lighting

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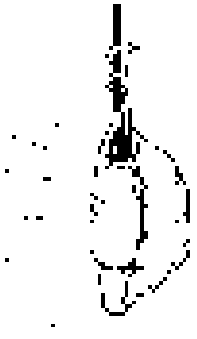
Be careful not to place the lights between the audience and the actors, or you [illegible]





[illegible]

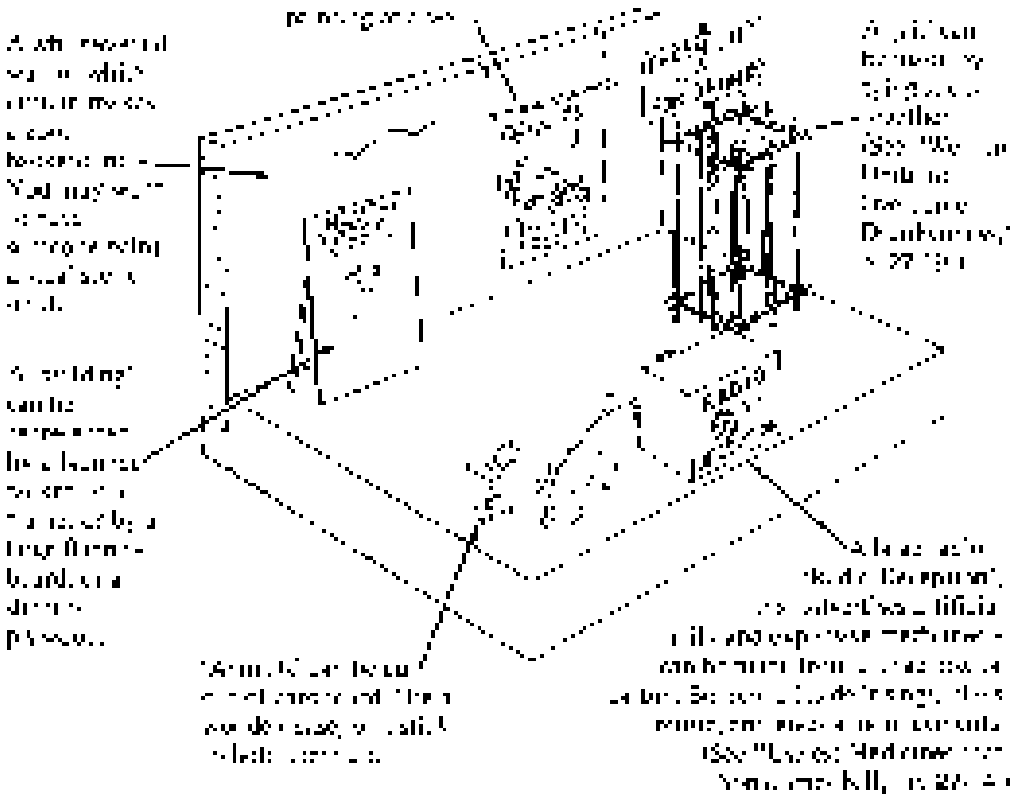
If possible, [illegible] should be aimed at the [illegible] stage.

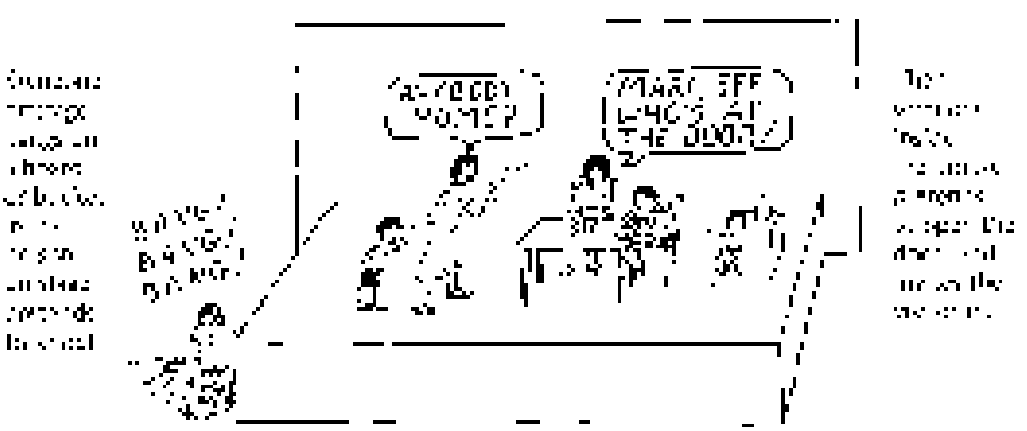




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Preparing and distributing





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Of course, the pictures should be kept simple. Refer to universal symbols [illegible]. See also the [illegible]





b. Keeping people's attention: Action, tears, and fun

[illegible] is important but may not be enough to keep [illegible]. Some amount of humor is important, but too much can spoil the [illegible]. Always remember that people's attention can be lost by [illegible] movement, noise and surprises.

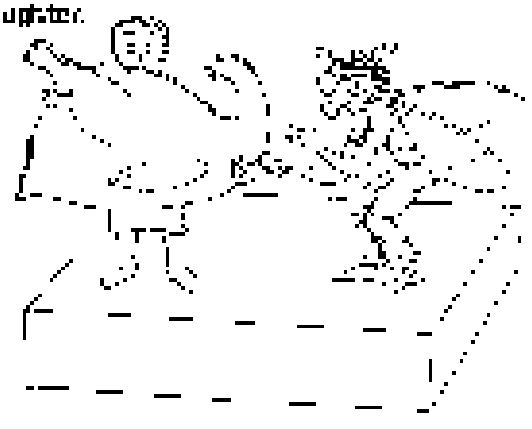
[illegible] balance between serious or sad events, and light or humorous ones. Moments of humor or [illegible] can help to relieve the tension, [illegible] the story is disturbing or [illegible]. Humor can be [illegible] in many ways. Here are [illegible] possibilities:



c) Use of strange looking or comical masks or puppets.

[illegible] is the [illegible] like [illegible] or [illegible] to [illegible]. See [illegible] for [illegible] and [illegible] for [illegible].

d) Persons dressed up as animals always bring laughter.





e) Giving amusing or symbolic names to the characters.

[illegible] "Tony" [illegible] "Symbolic Representations" [illegible] page 23 [illegible] and [illegible] "Tony" [illegible] "Tony" [illegible] "Tony"

d) **'Comic relief'**

A play called "Farmworkers Unite to Overcome Hunger" was put on by student health workers to get people thinking about how they might recover land held illegally by the rich. If irrigated, this land could produce two harvests a year and help landless farmworkers to feed their families. This serious play was made lighter at moments by the use of a papier mache donkey with two people inside it.





During one of the most serious scenes, 'comic relief' was provided by the donkey. It would nod its head in agreement with the farmworkers' decisions to take over the land.

e) **Use of songs, dance, and music**

Songs and music make a drama more entertaining. The play mentioned above opened with the singing of popular songs for which the health workers had written new words. And one scene showed a 'work festival' in which people dug an irrigation ditch to the rhythm of songs and music by the village musicians. The play finished with a celebration and dance—in which even the donkey began to dance!



Songs with health messages can be introduced through popular theater. If the songs are clever enough, people may pick them up and continue singing them. This happened in Africa with a song about preventing eye disease, called "Brush the Flies from Baby's Eyes."

You might try giving a group of health workers, mothers, or school children a line like "Brush the flies from baby's eyes . . ." and see who can come up with the best song. Then perhaps it could be presented in a skit or puppet show. (See also the songs on pages **1**-27 and **15**-15.)



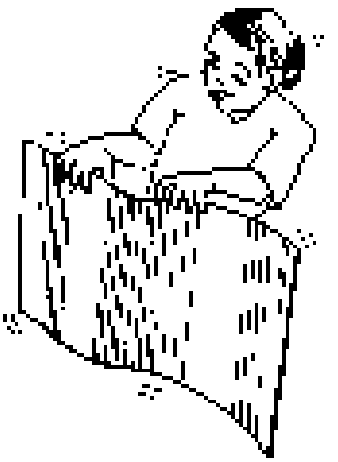
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Sound effects

Sound effects can be used in many ways. Children can also make up their own sound effects for a play.



Children can make animal noises to go with the story. Here, a child is making the sound of a lion.



Children can make sounds to tell a story. Here, a child is making the sound of a car.

Including the audience in the act

Encourage the audience to participate in the play and to feel that they have a chance to take part during and after the actors' role play.

- by asking the audience to join in songs that everyone knows a part of the story.

- by using the story to ask questions. For example, you could ask the audience to help the girl in the play decide what to do. Or you could ask the audience to help the girl's parents decide what to do. Or you could ask the audience to help the boy in the play.

- by using one of a series of the play. The actors can pause and come down from the stage and move through the audience, shaking hands and encouraging people to join in a discussion. The whole audience can be invited to join in.

HEALTH FESTIVALS AND CIRCUSES

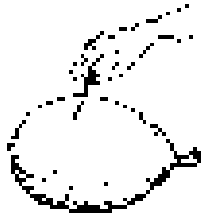
Some communities organize regular festivals or circuses to encourage children's participation in health and nutrition activities.

In Africa, television stations sponsor singing competitions for groups of children. Some of these groups are made up of children who have been cured of malnutrition in nutrition rehabilitation centres. Other groups are made up of children who have been cured of leprosy. The children perform songs and dances that tell the story of their illness and cure. Their songs and dances also tell people how to prevent malnutrition or leprosy.

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EXAMPLES OF SOCIODRAMAS AND PARTICIPATORY PEOPLE'S THEATER

VILLAGE THEATER

EXAMPLE 1: USELESS MEDICINES THAT SOMETIMES KILL

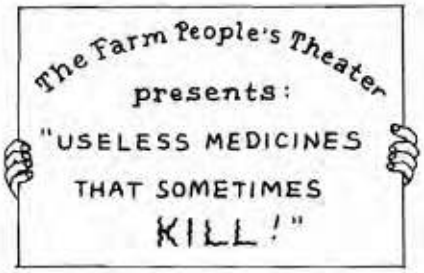
Overuse and misuse of medicines is a problem in many countries (see Ch. 18). In Mexico, this problem is made worse by international drug companies that advertise **'patent medicines'** by radio. They do this during the hours before dawn, when many farm families listen to popular country music. The medicines advertised are very expensive and of little use, yet many people are convinced by the smooth-talking voice in the radio. So they waste their limited money on vitamin tonics and other 'wonder drugs'.

Also, many rural people in Mexico and elsewhere believe that **intravenous solution** has tremendous healing powers. Villagers call it "artificial life." Instead of buying nutritious food, older people who are weak or anemic sometimes spend their last pesos to have a nurse or 'modern healer' put a liter of I.V. solution into their veins.

The following play tries to show the dangers of this kind of misuse of medicines. It was put on for the village of Ajoya by the team of local health workers, as part of a training program.

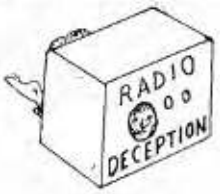


1)





2) It is nearly dawn. The rooster crows, "Cock-a-doodle-doo." (The rooster is actually a health worker in costume; see p. **27**-10.) The old man and his wife stir in bed, as they usually wake up early in the morning. Beside the bed is an enormous 'radio' with a sign that reads "RADIO DECEPTION." Hidden inside the radio is an actor.



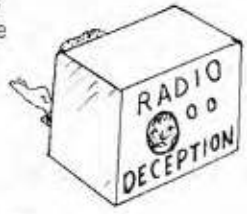


3) Old Doña Luisa turns on the radio. There are the sounds of country music. Then the voice from the radio says, "Good morning to you all. The last song was dedicated to Juanita Torres in Ajoya, Sinaloa. And now, before we play more country favorites, a word from Meyerhov Drug Company: Are you feeling weak and tired? Do you find it hard to wake up in the morning? You may be suffering from 'tired blood'. What you need are the new VITA-MEYERHOV vitamin pills. You'll wake up every morning feeling like dancing! Remember, VITA-MEYERHOV!"

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4) As Doña Luisa gets up and begins to make maize tortillas for breakfast, the music and advertisements continue. But look! Her husband, Don Lino, is still in bed! He feels too weak to get up.





5) Finally Doña Luisa coaxes him out of bed and gives him a cup of coffee. He asks what there is for breakfast. She answers, "Just tortillas. You know that's all we have."



6) Just then, they hear a knock on the door. (Bang, bang, bang.) It is their neighbor, who makes his living by selling medicines that he buys in the city.





7) Today he is selling VITA-MEYERHOV. Old Luisa is excited because she just heard about VITA-MEYERHOV on the radio. She is sure that it will make her husband wake up strong and eager to work, like before. The salesman tells them the bottle is worth 300 pesos. But since they are such good friends, he will let them have it for only 150 pesos.



8) But the old couple only has 50 pesos. So they have to sell their 2 chickens, at 50 pesos each, in order to pay for the vitamins.



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9) As their neighbor, the salesman, walks away with the chickens, the couple eagerly talks about how wonderful things will be when old Lino's health is restored.





10) The next scene takes place a few weeks later. Again it is dawn, the rooster crows, "Cock-a-doodle-dooo," and Doña Luisa turns on the radio. The beat of ranchero music drifts out into the silent dawn. The radio announcer wishes a good morning to all, and goes on with more praise for the products from Meyerhov Drug Company.



11) While the radio announcer is praising the miraculous VITA-MEYERHOV, we see old Lino is too weak to get out of bed by himself. His wife tries to pull him out.





12) Lino tries to get up, but falls to the ground. Doña Luisa cannot lift him up by herself.



13) Frightened, she runs out to get help from the village health worker. The health worker comes running.

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14) Between them, Doña Luisa and the health worker lift Lino back onto the bed. The health worker figures out that his weakness comes from not eating well. The family has barely enough maize to make tortillas, and none to trade for beans. They sold their last 2 chickens to buy the VITA-MEYERHOV vitamins.



15) The health worker explains that the eggs from those chickens would have helped Lino much more than the vitamin pills. But Doña Luisa is not convinced. She thinks that her husband should be given 'artificial life' (I.V. solution). The health worker tells her that this is just sugar water; it would be safer and cheaper for Lino simply to mix sugar and water, and drink it. But what the old man really needs is more and better food. Maybe their neighbors can get together and help them out with the food problem. He will speak to them.





16) After the village health worker leaves, the old man and his wife talk things over. They are not sure they trust the young health worker. "What does he know? He is just a villager like us! We saw him when he was born. An ugly baby at that!" They decide to get Miss Ivy, the nurse, to give Lino an I.V.



17) So that afternoon, Miss Ivy comes to the house. (To make the play more entertaining, the role of Miss Ivy is played by the same young man who plays the health worker. He has to change costumes quickly!)





18) Nurse Ivy gives Lino an intravenous solution. He says he feels a little stronger already.

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19) Because they do not have much money, the old couple gives the nurse their prize rooster as partial payment for her services. But they will still owe her money.



20) The next morning when old Luisa wakes up, she notices that Lino has a fever and seems very ill. She cannot waken him.





21) She runs to get the village health worker. He comes right away. He asks what could have happened to cause this sudden turn for the worse. Doña Luisa admits that they did not follow his advice and instead gave Lino I.V. solution.



22) The health worker examines Lino and finds that he is in critical condition, probably because of an infection in the blood introduced with the I.V. solution. He runs back to the health post to get antibiotics to fight the infection.



23) But before the health worker can return with the medicine, Lino dies. The lesson is painfully clear:

FOOD, NOT MEDICINE, IS THE KEY TO GOOD HEALTH--
ESPECIALLY FOR PEOPLE WHO ARE WEAK AND HUNGRY.
DO NOT WASTE YOUR MONEY ON VITAMINS OR OTHER
MEDICINES ADVERTISED ON THE RADIO.

BUY FOOD--NOT VITAMINS!

AND DO NOT USE I.V. SOLUTIONS TO GAIN STRENGTH.

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VILLAGE THEATER

EXAMPLE 2: THE WOMEN JOIN TOGETHER TO OVERCOME DRUNKENNESS

In many parts of the world, the drinking of alcohol is one of the biggest problems affecting family health. It is also one of the most difficult problems for health workers, mothers, or other concerned persons to do anything about.

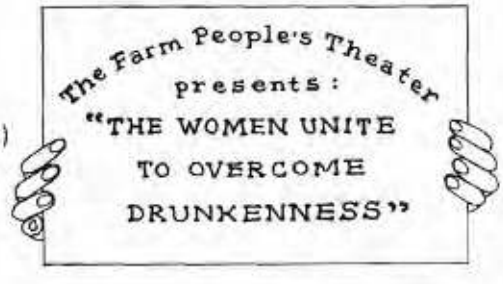
The idea for this play came from a collectively run squatter community on the outskirts of Monterrey, Mexico. Alarmed by the abuses of drunken men, the women of the community joined together to put a stop to drinking. They convinced the community leaders to make a special jail, so that men who became abusive when drunk could be locked up until they became sober. They also went with the leaders to all the local bars and whorehouses, taking away their beer, wine, and liquor. The women thought of handing it over to the health authorities, but feared it would be sold back to illegal bars. So they held a public 'bottle-smashing festival', in which they destroyed all the confiscated alcohol.

In Ajoya (200 miles away), the village women learned about the action taken by the courageous women in Monterrey. They decided to put on a play, to show everyone what a group of women could do. Many women, including some grandmothers who would normally refuse to be seen on stage, eagerly took part when they found the play was about the problem of drinking.

The men in the play were given funny names related to drinking. Also, there were many jokes and puns in Spanish. Many of them have been lost in this translation. But if you decide to try a similar play, be sure to make it entertaining by including plenty of jokes and funny names. These provide 'comic relief' (see p. 27-11).



1)





2) "Mama, I'm hungry!" With these words, the play begins. The scene is the home of Al Cole and his wife, Tristina. (*Triste* means 'sad' in Spanish.) Tristina is sweeping while her children cry with hunger. She explains that their father left an hour ago with the family's last money, to buy food at the village store. He should be back any minute. In fact, he is late. Tristina does not know what could be taking him so long. The children are hungry, and continue to cry and complain.

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3) Finally, here comes Al Cole, Tristina's husband. He has a beer bottle in his hand. (Al and the other men's parts are played by women dressed up to look like men.)





4) Tristina asks, "Where is the food you went to buy for dinner?" Al admits that he forgot. He tries to explain that he met some friends at the store. They gave him one drink, and then another and another. "And little by little, my judgement left me!" he says. "I felt I had to buy them drinks in return. So the money is gone. I'm sorry, Tristina. Really sorry!" The children begin to cry again from hunger, louder than before. Al feels ashamed and promises never to drink again.



5) At that moment, Al's drinking buddies come along, singing loudly. (One could be named Mr. Whisk, and his friends could call him Whiskey. The other could be called Lee Core.) They shout for Al to join them. "The night is young. We just bought more beer."



6) Tristina begs Al not to go. "You promised!" she cries. "And I'll keep my promise. This is the last time, honey. I swear it!" says Al, as he leaves with his friends. The children cry even harder.





7) The scene changes to the home of Whiskey, one of Al's drinking buddies. His wife, Dolores, is serving dinner to their two children. "Mama," complains the older daughter, "Why do we always eat just plain tortillas?" Her mother explains that they have no other food because Father already sold the maize crop before harvest time to get money for drinking.

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8) Here comes Whiskey now, with Al Cole and Lee Core. All 3 are drunk. Whiskey demands that Dolores feed them dinner. She answers that there is nothing but plain tortillas. He gets angry. He shouts that she is a useless wife because she cannot prepare a decent dinner.



9) Dolores shouts back, "That's because you already sold the maize crop and wasted all the money on drink! How can I feed you if you don't provide the food?" Whiskey hits her. She screams and the children begin to cry.





10) At this moment, there is a knock on the door. It is Whiskey's mother. She has heard the crying and come to see what it is all about.





11) While Dolores and the children keep sobbing, the grandmother pleads with her son to stop drinking. "Can't you see the suffering you cause your wife and children?" Whiskey turns his back on her. He and his buddies begin to sing a drunken song.



12) The grandmother sends the older daughter to tell the mayor that Whiskey has beaten his wife and that the police should come to put the drunkards out of the house.



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13) The daughter, at the mayor's house, explains the situation. Reluctantly, the mayor sends his policeman to throw the drunks out.



14) The policeman knocks on the door. He shouts, "I have come to bring law and order into this house."





15) The drunks jokingly ask him, "What's your order, beer or whiskey?" Since they are all old friends, the policeman joins in the drinking.





16) In despair, Grandmother sends the girl back to the mayor to report that the policeman is drinking with the other men. The girl insists that the mayor himself go to throw out the drunks.



17) The mayor admits, "The same thing always happens when I send the policeman. But since the county chief appoints only his relatives to police jobs, nothing can be done about it." So the mayor himself goes and knocks on the door. Grandmother explains the situation to him.

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18) But in no time the men convince the mayor, too, to join them in a drink.



19) Soon all the men, including the mayor, are shouting and shooting 'joy shots' into the air with their guns. (In the play, firecrackers were exploded inside the pretend guns.)



20) The women decide it is too dangerous to stay at home, and they leave with the children. The drunks laugh and say they are glad to get rid of them. "We can have a better time by ourselves!" they roar.



21) The scene changes back to Al Cole's house. By now, the children have cried themselves to sleep. Tristina sits alone, weeping. "How hard life is for a woman whose man drinks. What can a woman alone do when the men have all the power?" Just then, the women and children who were driven out of Whiskey's home knock on the door. They ask if they can stay with Tristina.



22) Tristina, still weeping, explains her sad story, and the others realize that it is their sad story, too. They all cry together.



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23) Other women in the neighborhood hear the loud crying and come over to see what the trouble is. They ask if they can help.

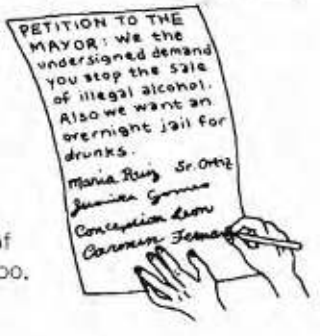


24) Together, the women discuss the drinking problem in their village. Dolores cries, "But what can a woman alone do in this world of men?" Another woman says, "Right now, we're not alone! There are lots of us here together!" She tells the others she has heard about the way women in Monterrey organized to fight drunkenness.





25) The women decide they must take action to stop the sale of illegal alcohol in their village. And they like the idea of an overnight jail for sobering up the drunks! So they write a petition and get all the women in town to sign it. Some of the men sign it, too.





26) Two days later.



27) The women's group presents their petition to the mayor. They say that if he does not meet their demands, they will go to the municipal authorities or even to the state capital to have him removed from office. The mayor shakes his head, unable to believe what he hears. "This is the first time I have ever been pushed around by a bunch of old hens!" But the women realize that united they have power. They know the mayor fears being caught for accepting bribes from the people who sell the illegal liquor--and they tell him so.

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28) One month later.



29) Here, the women's group meets in the home of Dolores. They discuss how life in the village has improved now that there is an overnight jail for drunks and less selling of illegal liquor. With their new-found strength and unity, the women are discussing other local problems and what they can do about them.



30) Just as they are commenting on how few drunks there have been lately, along come two men, singing loudly. They are Al Cole and Whiskey, drunk again.





31) They stagger into the women's meeting, interrupting with loud, rude insults. They knock Tristina down because they are angry about how hard it is to buy alcohol now.



32) The women's group goes at once to the mayor and demands that the two drunks be thrown into jail until they sober up. The mayor protests, saying that they are his buddies. But the women remind him of their agreement and their threat to have him removed from office.



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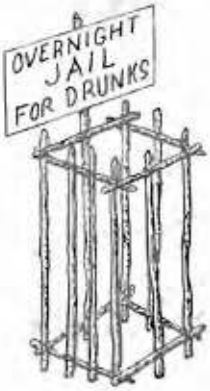
33) So, under pressure, the mayor and policeman go with the women.



34) After a short struggle, the mayor and policeman arrest Al Cole and Whiskey.



35) They throw the two drunks into jail to sober up. Here are Al and Whiskey begging to be let out. The angry women tell them they will not be released until the next morning, when they are sober.





36) At the end of the play, the women and children celebrate the strength of their unity and their efforts to improve life in their village. They cheer, "Women united will never be overcome!"

Although a lively discussion followed this skit, nothing clearly came of it until 2 years later. At that time, local officials tried to open a public bar in the village for personal profit. The community protested, and officials jailed several local health workers for being 'agitators'. The village women collected signatures for a petition against the unfair jailings and the public bar. They took their protest to the state capital, where they gained the support of newspapers, which printed this photo. As a result of the villagers' action, state officials have had no choice but to prohibit the bar from opening.

THE ACTION THAT FOLLOWED THE PLAY



HEALTH YES, PUB NO!

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VILLAGE THEATER

EXAMPLE 3: SMALL FARMERS JOIN TOGETHER TO OVERCOME EXPLOITATION

Poor nutrition is a common and serious problem in most areas, yet its causes are complicated, often rooted in social injustice.

In the Project Piaxtla Clinic in Ajoya, Mexico, health workers give advice about eating well, but often the people say, "What can we do? We don't have any land. We have already borrowed maize and gone into debt. After paying the high interest rates, we never have enough left to feed and care for our families well—no matter how hard we work!"

In this part of Mexico, poor farmers often borrow maize from the rich landholders at planting time. In return, the landholders demand 2½ to 3 times as much after the harvest. That is 150 to 200% interest in five months! This high-interest loan system is one of the main causes of malnutrition in the area. Because of this, the village health team formed a cooperative maize bank, to loan maize to poor farmers at much lower interest.

After the cooperative maize bank had been operating successfully for more than 2 years, the health workers put on this play. The play helped make everyone in the village aware of why the maize bank had been started.



1) The Health Workers present: "THE SMALL FARMERS UNITE TO OVERCOME EXPLOITATION"



2) The beginning of June.



3) This is the home of a rich landholder, Don Brutelio, and his wife, Doña Explotiva. Here, on a Sunday afternoon, they sip beer and eat chocolates. Their servant, Bootkiss, is sharpening tools for the coming planting season.

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4) And this (on the other side of the stage) is the home of Adan and Silvia, a poor family. Their supply of maize from last year's harvest has almost run out. They are discussing whether or not to borrow maize for the planting season from Don Brutelio. Silvia is against borrowing because, she says, the interest is so high that they might never be able to pay back what they would owe.

But they both know they have no other choice.



5) So Adan visits Brutelio to ask him for a loan, and Brutelio agrees to lend him 3 bags of maize. In December Adan will have to pay back 9 bags of maize for the 3 bags he borrowed.





6) Near the end of December.

The growing season is over and the harvest has been picked.





7) Adan is delivering the last of the 9 bags of maize that he owes. Don Brutelio has Bootkiss, his servant, measure it. He tells Adan that it is not enough; some maize is still owed. Adan insists that he measured it carefully at home before bringing it. But what can he do?



8) Adan is forced to give Brutelio his only donkey to complete the payment.



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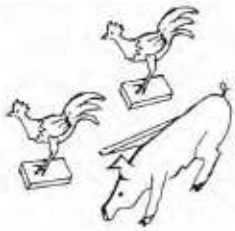
9) Adan returns home and tells Silvia the sad story. Now, without the donkey, it will be much harder to carry firewood and water to their house. They have only two bags of maize left to last them till the next harvest. Adan and Silvia suspect that Brutelio cheats them by using one scale when he lends the maize, and another when he is paid back.



10) Because it did not rain enough during the growing season, other families are also having trouble paying their debts. This man, Carlos, explains to Brutelio that if he pays all the maize he owes him, he will have nothing left for his family. He asks for an extension of the loan.



11) Brutelio refuses to extend the loan. Instead, he sends Bootkiss to take away all the family's animals. They have only one pig and two chickens. As Bootkiss takes the animals, Carlos tries to comfort his wife, who is weeping. With nothing left, they may have to move to the slums of the city.





12) When Bootkiss returns with the animals, Brutelio and Explotiva sit drinking beer and eating chocolates, as usual.





13) Doña Explotiva is overjoyed. "With what we have collected in interest this year, we can buy a color television set—this big!"



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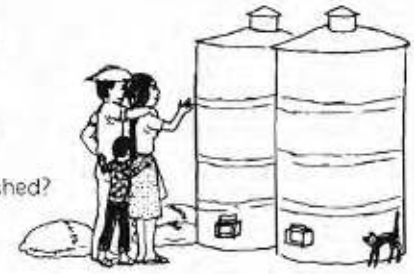
14) The next months are hard ones for the poor families in the area. Carlos and his wife, Juanita, bring their sick daughter to the two village health workers in the local clinic. The girl has chronic diarrhea and is getting very thin. While they are talking, Adan and Silvia arrive. Their daughter has a bad cold that has lasted for weeks without getting better. At night her coughing keeps everyone awake.



15) As they all talk together, they realize that both health problems are caused, at least in part, by the same thing: **not eating enough good food.** But what can they do about it? The health workers tell them about a village in Guatemala where the farmers started a co-op to loan grain at low interest rates to people in the area. Everyone agrees that, by working together, they may be able to solve their common problem. Eagerly they begin to make plans.



16) Two years later. What has been accomplished?





17) Here are the same villagers, scooping maize out of one of the co-op's homemade storage bins. This maize is loaned at much lower interest than the rich landholders used to charge. The poor farmers are now almost free from debt. They have built themselves a brighter future. Never again will they have to turn over their harvests to the rich while their children go hungry!



18) The play ends as everyone shouts,

WE FARM PEOPLE UNITED
WILL NEVER BE
DEFEATED!
HURRAH FOR THE
CO-OP MAIZE BANK!

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VILLAGE THEATER

EXAMPLE 4: THE IMPORTANCE OF BREAST FEEDING

As part of the CHILD-to-child Program in Ajoya, Mexico, school children conducted a 'diarrhea survey' in their own homes. (This is described on page **24**-17.) From the survey the children learned that, in their village, **diarrhea is 5 times more common in bottle-fed babies than in breast-fed babies.** They also found that over 70% of the mothers were bottle feeding their babies!

Some of the women in Ajoya were very disturbed by the children's findings. A group of them decided to put on this play, to make the whole community aware of the importance of breast feeding. The health workers helped the women plan and organize the play.



This bottle-fed baby, malnourished and with diarrhea, was brought to village health workers in Ajoya for treatment.

Note: The 'babies' used in this play were made from cardboard, carefully colored to make them look real. To show the 3 babies at different ages and states of health, 8 different cardboard figures were used.





1) The Farm People's Theater presents: "THE IMPORTANCE OF BREAST FEEDING AND NOT BOTTLE FEEDING"



2) First, the main characters introduce themselves. Their names are symbolic. Adapted for this translation, they are:

CHARITY:	the village health worker
VANITY:	a rich woman, but vain (overly proud)
MODESTY:	a poor woman, but modest
PRUDENCE:	a poor woman, but prudent (wise)



3) One day Modesty and Vanity meet in the street. They stop to chat about their babies. Both babies were born during the same week, and both look beautiful and healthy.

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4) Prudence arrives with her baby, also healthy and about the same age. The 3 mothers compare how they feed their babies. Modesty has decided to bottle feed hers because the radio says it is better. But she admits it will be a sacrifice to buy the milk and she might have to add a lot of water to it. Vanity says she bottle feeds her baby because it is more convenient, and "so my breasts won't sag." Prudence does not agree. In her family, breast feeding has always been the tradition. She insists that breast-fed babies are more likely to grow up strong and healthy.



5) Modesty and Vanity laugh at Prudence. They say she is old fashioned because she does not bottle feed her baby.



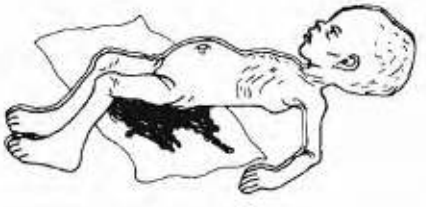


6) But let us look at the babies ONE MONTH LATER.





7) Modesty and Vanity meet in the street. Notice how thin and sick their babies are.





8) Vanity explains that her baby has had diarrhea for weeks, and does not seem to get any better. Right now the baby poops again. (She shows the dirty nappy.)

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9) Modesty says that her baby also has a lot of diarrhea. Right then her baby poops, too! What can the mothers do with their skinny, sick children?



10) Just then Prudence comes by. Her baby looks strong and healthy. It has grown a lot. The other two mothers look at it jealously. Modesty suddenly realizes that bottle feeding may be the cause of her baby's diarrhea. She wishes she could breast feed her child, but says it is too late. Her breasts have dried up. But Prudence tells her about an aunt who started to breast feed her baby again after her milk was gone. She suggests that Modesty speak with Charity, the health worker, to see if she has any advice.



11) Modesty is eager to talk with Charity. She asks Vanity if she wants to go with her. But Vanity says, "Not me!" and leaves to buy medicine for her baby's diarrhea.





12) Modesty visits Charity and explains her problem. Charity tells her that, in many cases, mothers can get their milk back after their breasts have dried up. She gives her 4 suggestions from ***Where There Is No Doctor:***

1. Drink lots of liquid--water, juice, tea, or any other drink.
2. Eat as well as possible—especially milk, milk products, and foods rich in protein, such as beans, nuts, dark green leafy vegetables, eggs, chicken, meat, and fish.
3. Get plenty of sleep, and try to avoid getting tired or upset.
4. Nurse the baby often. Put him on the breast each time he is hungry, before you feed him other food.

Modesty is eager to try the suggestions.



13) Let us see the results TWO MONTHS LATER.

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14) Modesty and Prudence meet in the street. Notice that Modesty's baby is now as fat and healthy as Prudence's baby. The 2 mothers are happy to see their children so healthy. They realize that it is because they are breast fed.

But what about Vanity's baby?



15) Just then Vanity arrives. By the black veil she is wearing, we can tell that her baby has died. With sad eyes she looks at Modesty's child. "How vain and foolish I was not to breast feed my baby. It cost his life to teach me that breast is best. If I have another baby, I'll breast feed him, believe me!"



16) At the end of the skit, the health worker comes out with two posters made by the children of Ajoya. She gives a summary of what the children found out in their survey.

BOTTLE FEEDING CAUSES DIARRHEA.



17) **BREAST FEEDING KEEPS BABY HEALTHY !**

Questions to ask health workers or people from the community after presenting this play (or the color slides or filmstrip):

- Does this problem exist in our community?
- Could the children or families here make a similar survey?
- What do you think of this idea for presenting the results of the survey in a short skit for the entire community?
- What else can we do to help solve the problem?

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PUPPET SHOWS

Using puppets is a fun way to help children learn about health. Some health workers who have had trouble holding children's attention or getting them to speak their ideas, have found simple hand puppets especially useful. Children who are afraid to speak or argue with an adult will often talk freely to puppets.



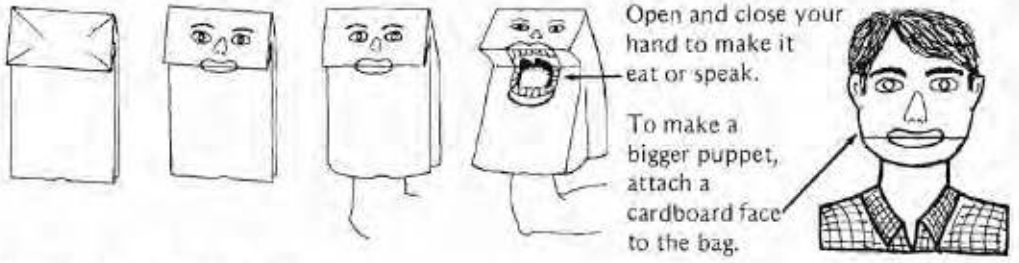
Children are more likely to say what they think when talking with puppets.

HOW CHILDREN CAN MAKE PUPPETS

Puppets that open their mouths:

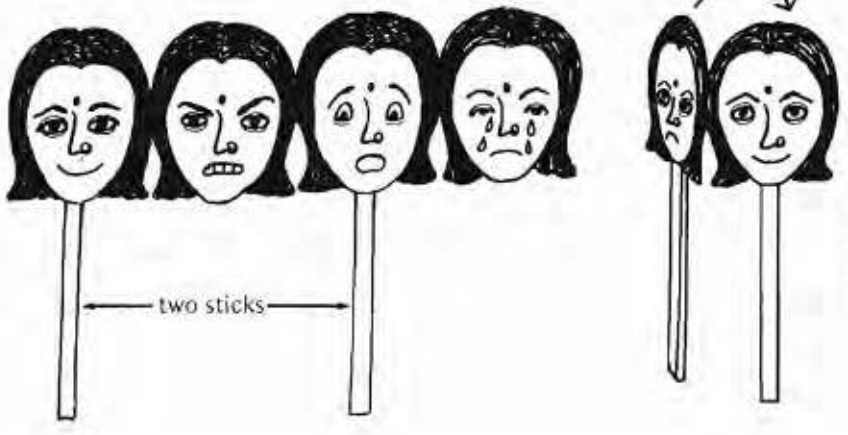
These work especially well for health skits about the mouth, throat, or teeth.

They are easy to make from a paper bag with the bottom folded over:



Puppets that change faces:

On page **24**-8 we show how 'stick puppets' can be made to change the expression on their faces. However, in the way shown, only 2 different expressions are possible. The puppet below can have 4 different expressions—happy, angry, worried, and sad. Glue 2 pairs of faces back-to-back and attach them to 2 sticks as shown here:



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

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

balloon or gourd



paste made of flour and water



strips of newsprint or other paper



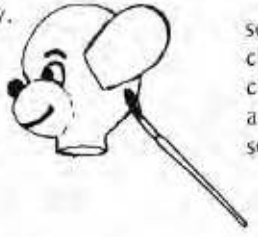
Put on several layers.





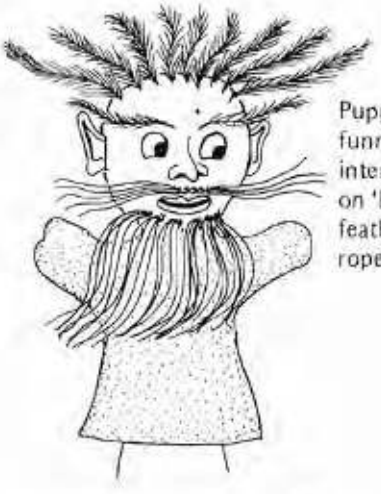
Let it dry.

Pop the balloon and paint it.



soft cloth cut and sewn





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

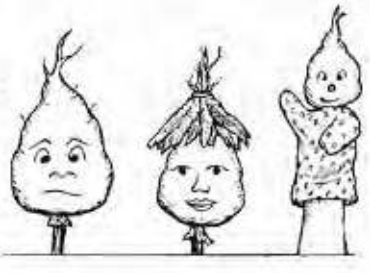


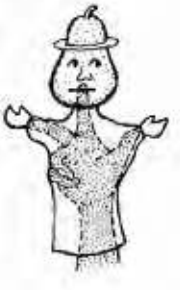
David Walker, World Education Reports

A local artist from Nepal makes a papier mache puppet.

Vegetable puppets:

Carve faces on squash, turnips, potatoes, etc.





Guidelines for children's puppet shows:

- 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.

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PUPPET SHOWS—AN EXAMPLE

HOW TO CARE FOR THE TEETH

Preparations with the children

The Ajoya training course for health workers usually ends with an evening of skits and plays for the public. These usually deal with the causes of health problems in the town.

One year the school children also wanted to take part in the 'cultural festival'. So with the help of the health workers-in-training, a group of children planned and prepared their own skit. The health workers encouraged the children to make most of the decisions themselves. The children decided:

Where to meet and practice (the school, since it was empty in the evenings).

How to present the skit. They decided to use puppets (because they had seen puppets in another festival and liked them a lot).

What idea to present. They decided on prevention of tooth cavities because many of them suffered from this problem. (Children often insult each other by saying, "You have rotten teeth!")



1) At the beginning, the children thought they could not make puppets themselves. But some of the health workers knew an easy way to make puppets out of paper bags. Because these puppets can open their mouths, they are particularly good for showing teeth. Here we see the children and one of the health workers making the puppets.



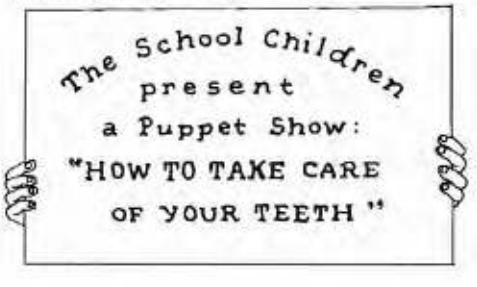
2) Each child gave his puppet a name. This boy named his puppet Sweet Tooth. It became one of the main characters. Puppets with good teeth were given names like Whitey, Pearl, and Sparkie. Puppets with bad teeth were named Candy, Sweetie, Sugar, Lolly, and Pop.



THE PUPPET SHOW



3) Here we see the children showing their puppets before going behind the curtain to present the show. The sign reads:



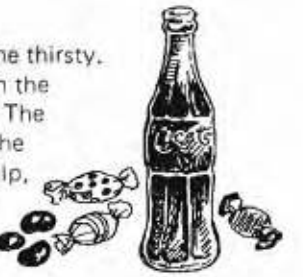
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4) The show opens with Sweet Tooth alone, eating candy. The child working the puppet puts candies in Sweet Tooth's mouth, and he chews them. Crunch, crunch, crunch. "Ahhhh, I like candy so much! I could spend all day eating sweets!"



5) "Boy, that made me thirsty. I think I'll wash down the sweets with a Coke." The child lifts a Coke to the puppet's mouth. "Gulp, gulp, gulp."





6) Sweet Tooth's friend, Pearl, appears. "Hello Pearl," he says. "My, you have such pretty teeth! How do you do it?" "I brush my teeth every day," says Pearl. "And I don't eat a lot of sweets like you do. Let's see your teeth, Sweet Tooth."



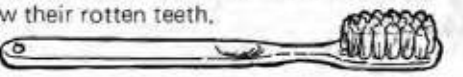
7) Sweet Tooth opens his mouth very wide. All his teeth are rotten. "Do you mean my teeth are like this because I eat so many sweets?"





8) Other puppets appear: Whitey, Candy, and Lolly. "Yes," answers Whitey, "and because you drink a lot of sweet, fizzy drinks like Coke." "And because you don't brush your teeth," adds Pearl.

"But some of us can't afford toothbrushes and toothpaste," says Candy. "Like Lolly and me!" Candy and Lolly open their mouths wide to show their rotten teeth.



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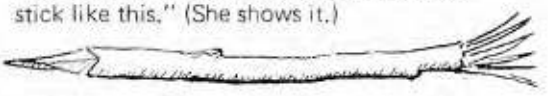
9) "But you don't need a toothbrush or toothpaste to keep your teeth clean," says Whitey. "Just look at mine!" He opens his mouth and shows his sparkling white teeth. "In our family, we clean our teeth like this, with a piece of rough cloth wrapped around a stick. Instead of toothpaste, we dip the stick in a mixture of salt and baking soda. It works great!" The child rubs the puppet's teeth with a stick wrapped in cloth.





"Maybe you're right," says Lolly. "My grandfather still has perfect teeth and he has never had a toothbrush. He cleans his teeth with a powder made of burnt tortilla, on his finger! He also doesn't eat sweet things."

10) Pearl explains, "In our family, we don't have toothbrushes either. Instead, we use a stick like this." (She shows it.)



"We chew one end, like this, to make a brush, and sharpen the other end, like this, to clean between the teeth." (She reaches up and cleans her teeth.)



11) "Hurray!" shout the puppets. "Now we know how to clean our teeth without spending money on toothbrushes and toothpaste!" "And don't forget what my grandfather says," adds Lolly. "If you want to keep your teeth strong and healthy like his, don't eat a lot of sweet things or drink sweet, fizzy drinks!"



12) Everyone shouts together:

"LEARNING TOGETHER
WE LEARN A LOT:
CANDY IS DANDY,
BUT ROT IS NOT!

WE'VE FOUND A WAY
TO FIGHT TOOTH DECAY.

WE ALL HELP EACH OTHER
STAY HEALTHY, HURRAY!

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A CALL FOR COURAGE AND CAUTION

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LIST OF ADDRESSES FOR TEACHING MATERIALS

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Berkeley, California 94704, USA
[illegible] Where There is No Doctor, Where Women Have No Doctor, Where Midwives Have No Doctor, Where There is No Dentist, Where Children Have Diabetes, and Where There is No Optometrist, and Spanish; Alan Maguire Foundation, Inc. and Women's Health Exchange (three books)

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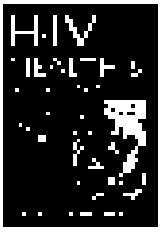
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Where There Is No Doctor, by David Werner with Carol Thuman and Jane Maxwell. This popular, easy-to-read health care manual is for people living far from medical services. It helps them to recognize, prevent, and treat a wide range of health problems, including childhood illnesses, dental problems, emergencies, and disabilities. Also covers how to improve community health. 592 pages.



Where Women Have No Doctor, by A. Hope Arole, Marie Arole, Jane Maxwell, and Katharine Shanti, combines advanced medical information with understanding of the ways people live, communicate, and relate to each other in their communities. An essential resource on the problems that affect women's health around the world. 576 pages.



HIV, Health and Your Community: A Guide for Action, by Patricia Gruber and Jonathan Sherman, is an essential resource for community health workers and other people living HIV/AIDS. It clearly explains how people become infected and how they can protect themselves from HIV. It discusses how to design HIV prevention and treatment programs. Contains an up-to-date discussion of common health problems and treatments for people with HIV/AIDS. 248 pages.



A Book for Midwives, by Susan Klein Fiedler, Ina May Gaskin, Elizabeth Davis, Robbie Davis-Floyd, Cheryl Daly, and Diane Thornton, is intended for use in training programs for midwives. It provides a comprehensive, practical guide to the care of women and babies before, during, and after childbirth. Includes information on how to help women during labor, how to recognize and handle emergencies, how to help women who have been sexually abused, and how to help women who have had miscarriages or abortions. Also includes information on how to start a midwifery program. 576 pages.

Helping Children Who Are Deaf, by Sandy Ineichen, Dave Smith, Gwen Hyde-Lay, and Diane Taylor, is for parents, teachers, and others who live or work with deaf children. It explains how to communicate with deaf children, how to help deaf children with schoolwork, and how to help deaf children with emotional problems. Also discusses language development and how to teach communication through speech, signs, and other methods. Includes many activities and games. 416 pages.

Disabled Village Children, by David Werner, covers the most common disabilities of children in developing countries, including polio, cerebral palsy, mental retardation, hearing loss, and vision problems. Explains how to help disabled children and how they can be accepted in the community. 672 pages.

Helping Children Who Are Blind, by Sandy Ineichen and Jan Tait, is for parents, teachers, and other caregivers of children who are blind. It helps them understand how blind children develop differently from sighted children and how to help them overcome these differences. Includes many activities to help blind children develop their mental abilities, mobility, and social skills. 192 pages.

Where There Is No Dentist, by Murray Dickson, shows how to prevent dental problems and gives instructions for performing many dental procedures. Includes information on how to examine patients, how to use dental equipment, pain relief, dental emergencies, and how to make dentures. 416 pages.

All books are available from bookstores or from
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