# Learning to Make, Take, and Use Pictures

Being able to make and use pictures effectively is one of the most valuable skills a health worker or teacher of health workers can learn. In this chapter we look at:

- different ways of presenting ideas through pictures

- making sure your drawings communicate what you want

- when to use cartoons and when to draw people as realistically as possible

- learning to draw

- how to draw the human body

- techniques for copying

- suggestions for taking and using photos (for ideas on use of filmstrips and color slides, see Ch. 13)

- use of symbols

- the importance of a sense of humor
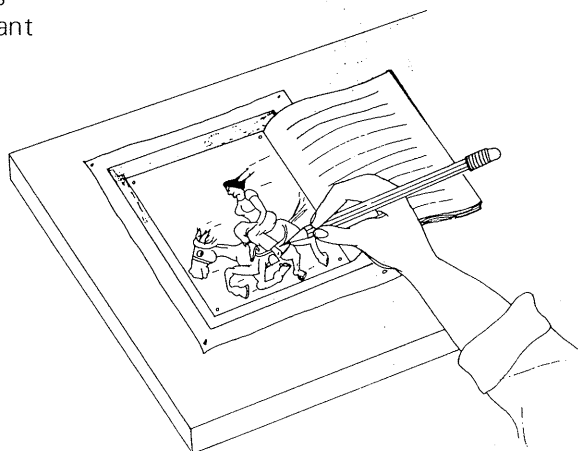
This drawing and many others in this book were done by Pablo Chavez, a village health worker from Mexico who taught himself to draw.

DIFFERENT WAYS TO ILLUSTRATE THE SAME IDEA

On the next page are 5 different kinds of illustrations: 2 photos and 3 drawings. Each kind is useful in certain circumstances.

Photos are often more exact (if well done), and they can give a sense of reality to a message. But they are more expensive to reproduce in manuals, information sheets, and posters than are line drawings. Photos cannot be mimeographed or easily copied by health workers.

Drawings have the advantage of being less costly to make and reproduce. Health workers can learn to copy drawings to use for their own teaching materials. Also, a careful drawing often can illustrate a specific health problem more clearly than a photo.

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.
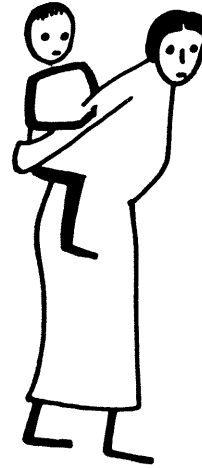
3. Shaded drawing

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.

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*These drawings and photos are from *Teaching For Better Learning,* by Fred R. Abbatt, World Health Organization, 1980.
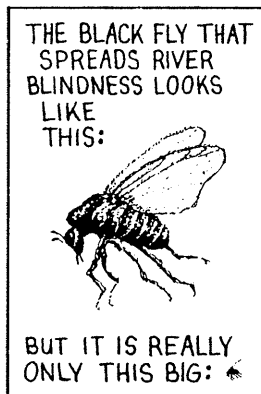
MAKE SURE DRAWINGS COMMUNICATE WHAT YOU WANT

A picture is worth a thousand words. But this is true only if the picture says what you want it to say—to the people you are trying to reach.

Confusion about size

LESS APPROPRIATE

Pictures can mean different things to different people.

For example: The instructor here believes that this huge picture of a malaria mosquito will help students tell it apart from other mosquitoes. But the students do not recognize it as anything they have ever seen. The mosquitoes that bite them are not nearly so big or frightening.

MALARIA IS SPREAD BY A MOSQUITO LIKE THIS, THAT TILTS ITS BACK END UP IN THE AIR WHEN IT BITES.

anopheles

THANK HEAVENS WE DON'T HAVE ANY OF THOSE BIG ANIMALS HERE!

I'VE NEVER SEEN ONE OF THOSE MONSTERS BEFORE!

THE BLACK FLY THAT SPREADS RIVER BLINDNESS LOOKS LIKE THIS:

BUT IT IS REALLY ONLY THIS BIG:

MORE APPROPRIATE

Whenever oversized, bigger-than-life drawings are used, it is a good idea to include a small drawing of the thing showing its actual size.

STILL MORE APPROPRIATE

MOSQUITO

LOOK ! THEY STAND ON THE EDGE OF THE JAR JUST LIKE IN THE PICTURE.

HERE'S THE REAL THING. I CAUGHT THEM LAST NIGHT.

OH SURE. THOSE ARE ALL OVER -- ESPECIALLY NEAR THE POND.

Even better than a drawing at actual size is, of course, to show the real thing—better alive than dead.

The importance of drawing people's expressions

The drawings below are part of a series produced in Guatemala for teaching mothers about child nutrition.* The health worker holds up a picture and asks, "What do you see?" or "What is happening here?" The women look at the pictures and at once they notice the expressions on the faces of the mother and child.

These expressions tell the message more clearly than words.

Be sure the expressions and 'body language' of pictures agree with and strengthen the message you want to communicate.

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*Materiales Maria Maya, Apdo. 205, Quetzaltenango, Guatemala, Central America.

Be sure your drawings communicate care and respect

This picture, from a World Health Organization manual for the primary health worker, fails to communicate what it is supposed to.* Readers will first notice the baby's ugly, over-sized head, his twisted ear, or the ink on the mother's elbow. Even the baby's eye problem is not recognizable. It must be spelled out.

Notice also that the parents have mouths, but lack eyes and brains. What does this tell you about how the authors of the manual view villagers or poor persons?

Artwork like this is typical of manuals prepared for the poor by highly paid experts. It communicates the authors' carelessness and unspoken disrespect for the 'primary health worker' and others at the village level.

————●————
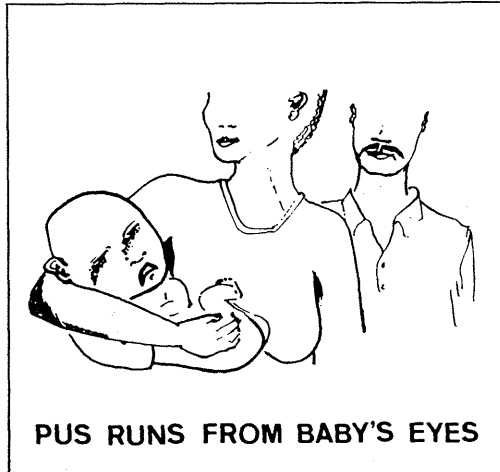
This picture, from a flipchart called *"Las Moscas"* ("The Flies"), was produced in Peru by the Summer Institute of Linguistics and the Ministry of Education. It, too, shows a child with pus running from her eyes. But here the child looks real. Anyone looking at the drawing notices the eye problem at once— because when people are real, we look first into their eyes.

The picture also tells us something about whoever was responsible for this flipchart. He or she cared. The drawing is warm and human. It communicates deep respect for the health workers and other persons who may use or see the flipchart.

LESS APPROPRIATE

PUS RUNS FROM BABY'S EYES

MORE APPROPRIATE

Clearly, not everyone can draw this well. But if we all try to do the best we can, people will at least see that we care. And that is one of the most important health messages of all.

————————

*In a newer edition of the WHO manual, the pictures are much better.

Techniques for illustrating parts of the body

1. **Avoid making people look inhuman.** Make drawings as human and friendly as you can.

LESS APPROPRIATE

MORE
APPROPRIATE
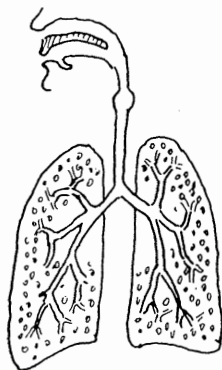
from Peru

from WHO

from Indonesia
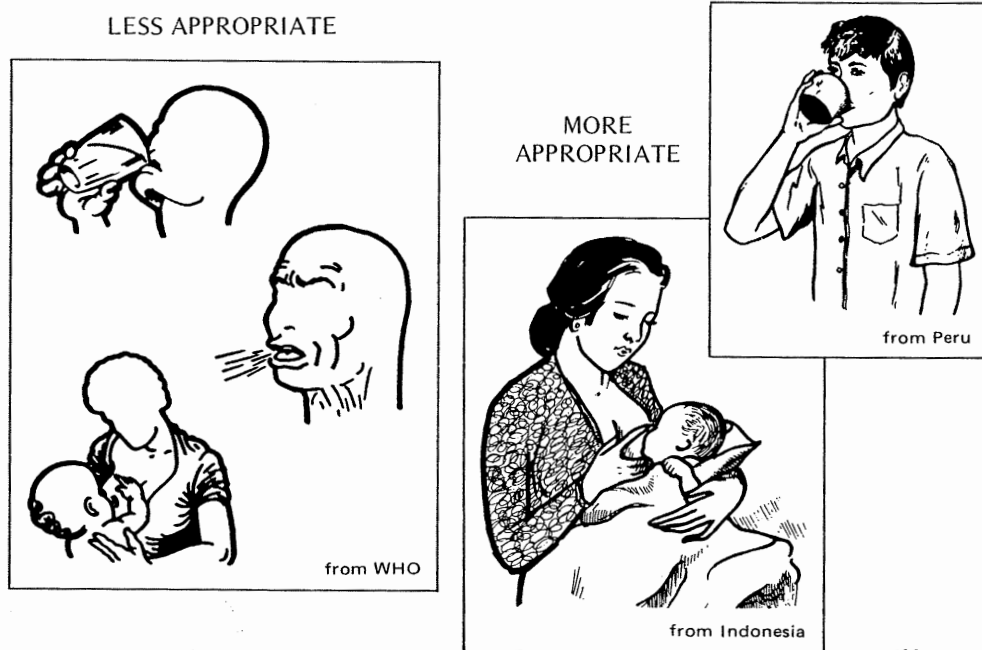
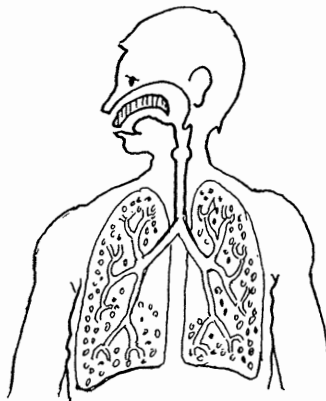Whatever you do, **give people faces—eyes, mouths, noses, ears:**

2. **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 breathing system:
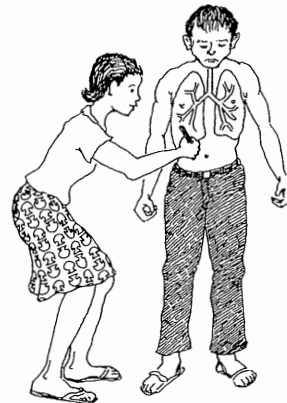
LESS APPROPRIATE   MORE APPROPRIATE   STILL MORE APPROPRIATE

Instead of drawing
only the insides,
like this . . .

draw also the
outline of the
body, like this.

Or better still, draw
directly on a person,
like this.

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
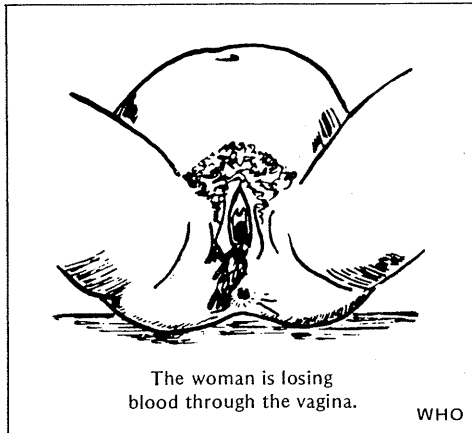
Here we must read the caption to find out what is happening. We cannot tell from the picture.

MORE APPROPRIATE
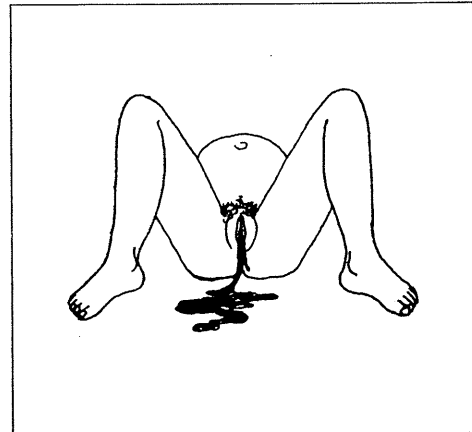
Here we do not need to be told. We see what is happening.

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
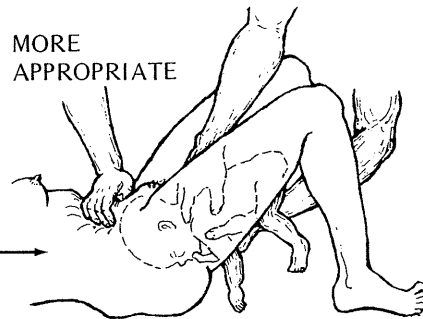
rather than **inside anatomy** (what people do not usually see and may not recognize).

LESS
APPROPRIATE
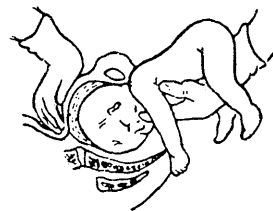
From *Manual Practico Para Parteras,* by Esther Gally, Editorial Pax, Mexico, 1977.

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.

When to use cartoons and when to make people look real

APPROPRIATE FOR SOCIAL CRITICISM

Cartoons and 'caricatures'—or drawings that change people's looks in order to criticize or make fun of them—should only be used in special circumstances. They are particularly useful for consciousness raising or social criticism.———→

But cartoon figures usually should **not** be used for illustrations in which precise details are important, as in the picture below.
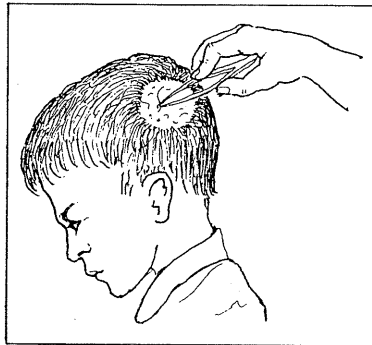

Cartoons make people look strange or funny on purpose.

Here a health program turns people into sheep.

APPROPRIATE WHEN ACCURATE DETAIL IS NEEDED

Carefully done line drawing with correct physical proportions

When showing how to do something or how to tell different health problems apart, try to make the drawings as lifelike as possible. The details should be clear and accurate.

APPROPRIATE WHEN FINE DETAILS ARE NOT IMPORTANT

Free artistic sketch

Freer, less precise, or more artistic drawing can be used when fine detail is not so important.

But notice that, although the drawing shown here is less detailed and some lines are not complete, the physical proportions are quite accurate. This is what gives the drawing life.

LEARNING TO DRAW

Learning to draw is mainly a process of learning to see! To be able to observe things accurately and draw them well is a skill of great value to a health worker or instructor.

Almost anyone can learn to draw. What it takes is care and practice.

To draw fairly well you do not need to be an artist, or to study art. You do need to look at things carefully. And you need lots of practice.
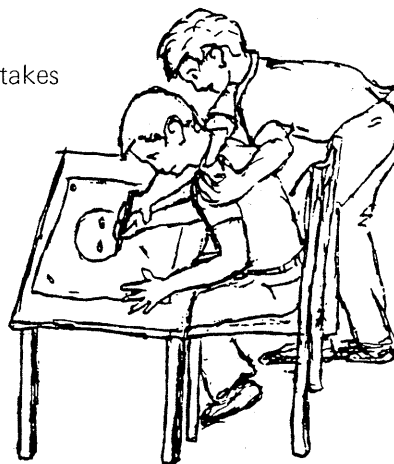
Tracing and copying from others
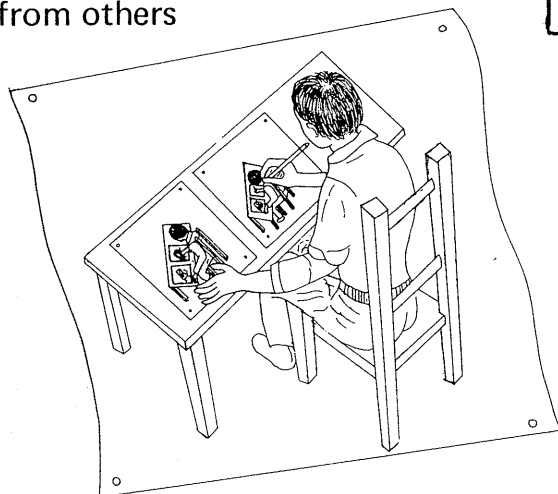
One of the best ways to learn how to draw is to practice copying other drawings or photographs. At first this often is easier than drawing people or things from real life.

In making posters, leaflets, working guides, and other teaching materials, do not be afraid to 'borrow' from other people's work. Lots of people do it.

Drawing people

When drawing people, do not start with details. First sketch the general shapes in light pencil, and check if the proportions are right.

If you want your drawings of children and adults to look convincing, watch for these 3 important things:
- relative **size of the head**
- relative **position of the eyes** on the face
- relative **length of arms and legs**
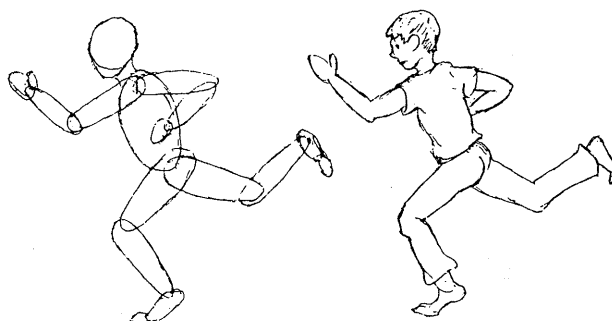
When drawing people, remember their muscles and bones! It helps to draw bodies naked first and then add the clothes.

Proportions

In order to draw people so they look human, try to get the proportions right. This means making sure the different parts of the body are the right size in relationship to one another.

Notice that **in children the head is much bigger, relative to the body, than in adults.** Also, **young children's legs are relatively shorter.** Notice how the halfway line gets lower as the child grows.
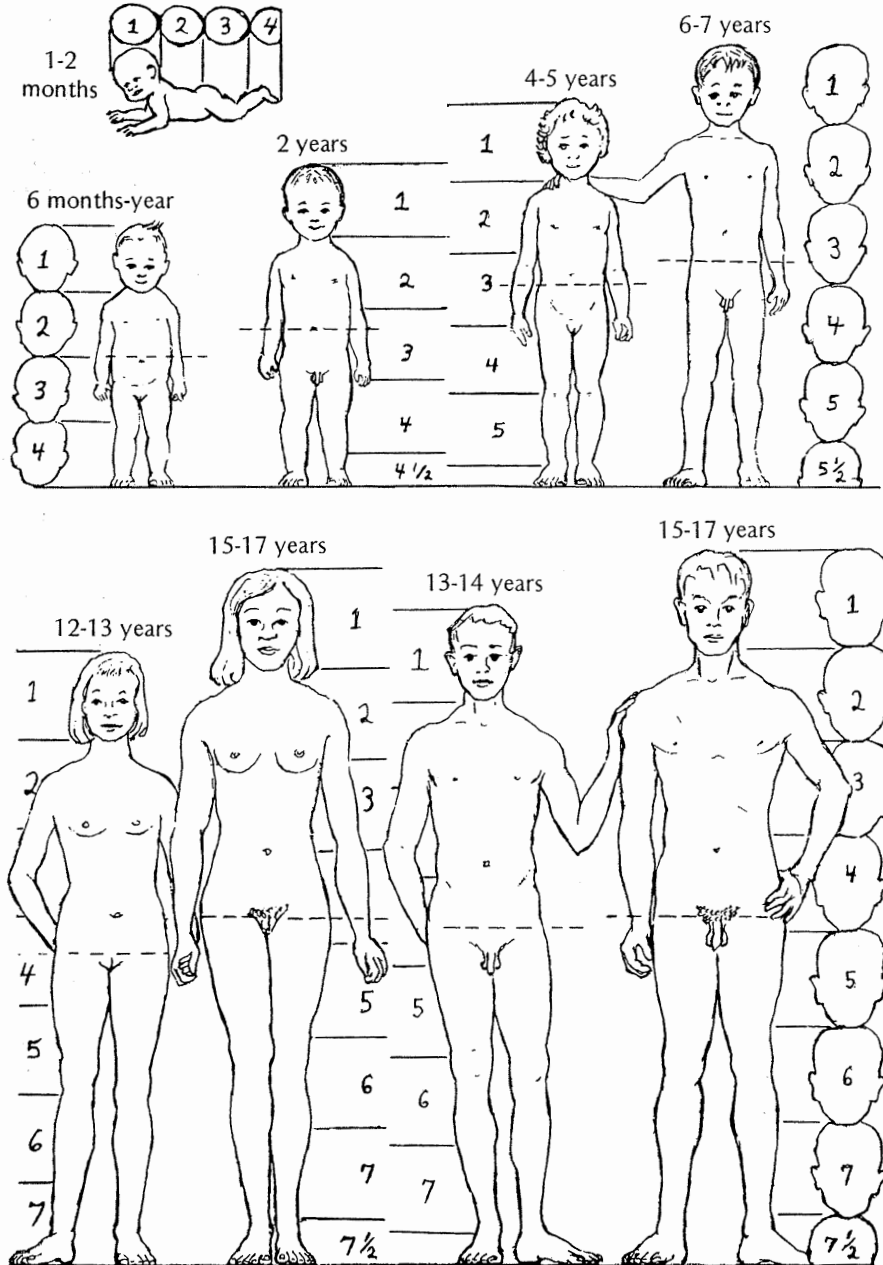
Use these drawings to check the proportions on your own drawings.

Drawing faces

CHILD

skull→

eye to nose

face

nose to chin
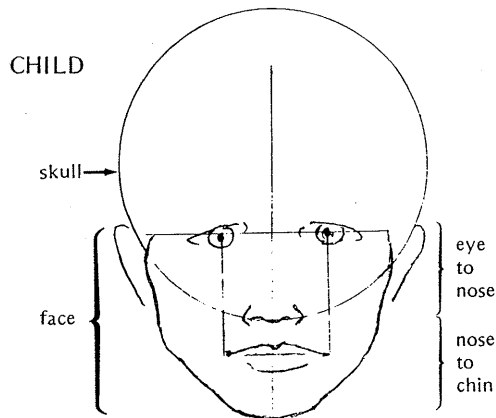
You can practice drawing heads by first putting a circle for the skull. Then add the line of the jaw.

Notice that in both drawings shown here, the nose lies on the circle. And the distance from eyes to nose is about equal to that from the nose to the chin. So the lower you put the line of the eyes, the smaller the jaw should be—and the younger the child you draw will look.

The child has a smaller face and jaw.
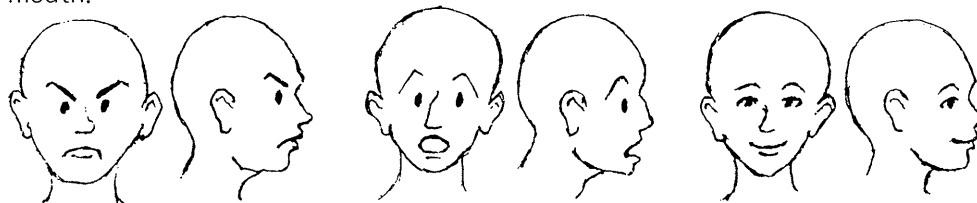
In the adult, the face is relatively big.

ADULT

←skull

face

Note: The skull of a child is big compared to the face and body because a baby's brain normally grows very fast in the first months and years of life. This is why good nutrition in early life is so important for the development of a child's mind.
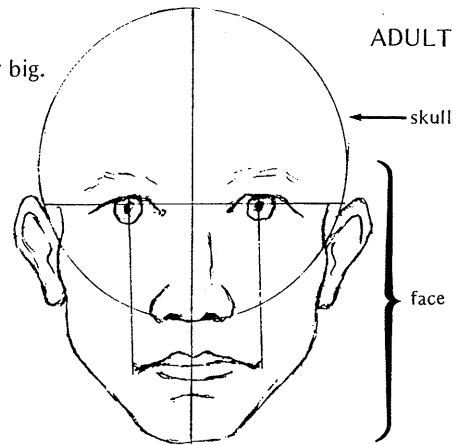
Face features: Try to make them like those of people in your area. Pay special attention to the shapes of the forehead, nose, and lips.
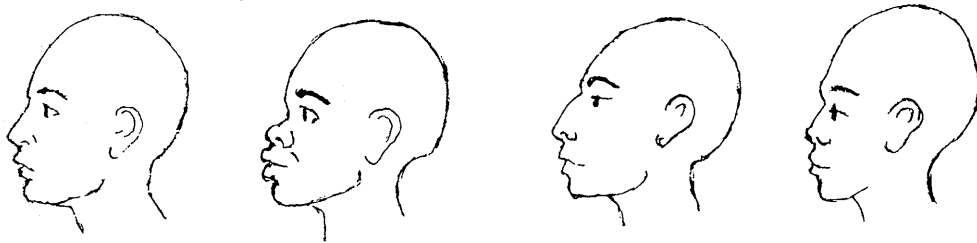
Face expressions: To change expressions, change the shapes of the eyebrows and mouth.
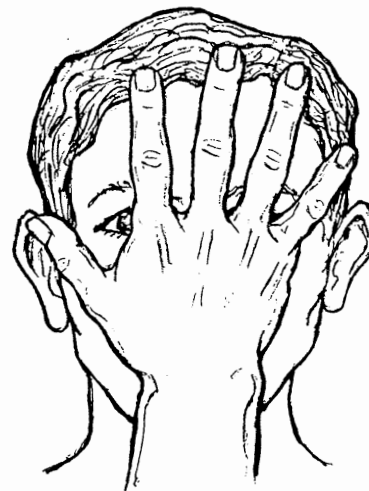
Face proportions

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

halfway line
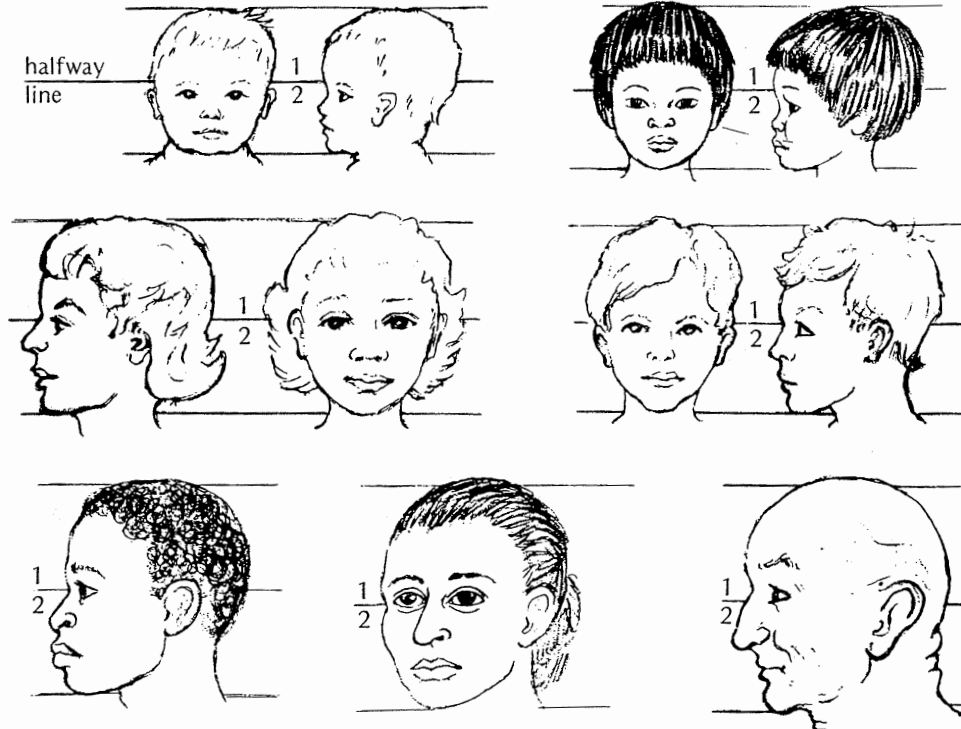
Drawing hands

Hands are hard to draw. Practice drawing your own and copying good drawings or photos.

One common mistake is to draw hands too small. Notice that an adult's hand is almost as big as his face. (Children's hands are relatively smaller.)
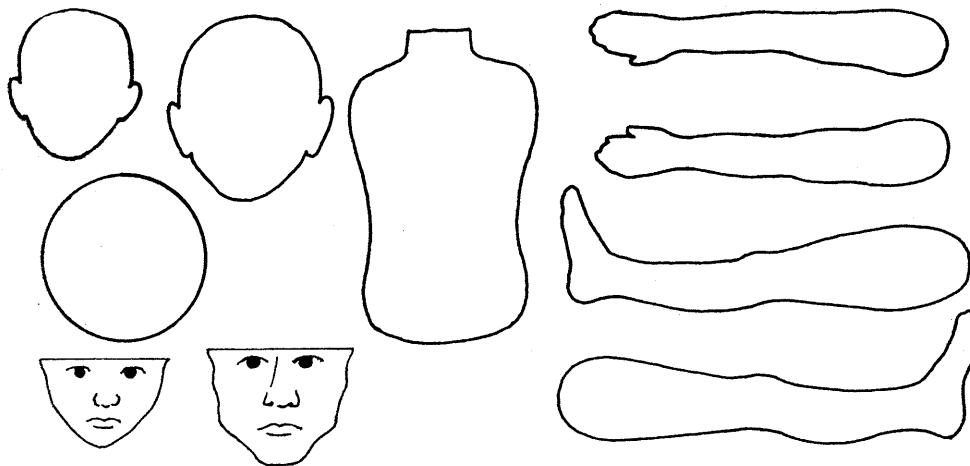

SOMEBODY DREW MY HAND TOO SMALL!

"My hand is normal size."

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.
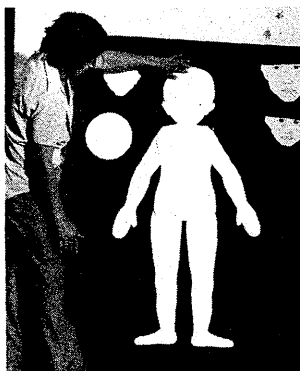
Have students cut out figures like those below, but much larger. They can be made of flannel, or cardboard fixed for flannel-board use.
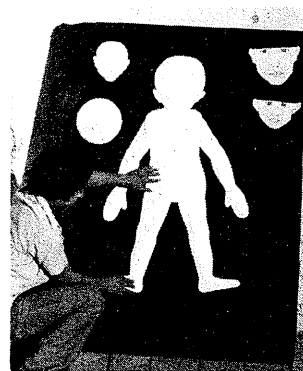
By putting the pieces together in different ways, the students can form persons of different ages.
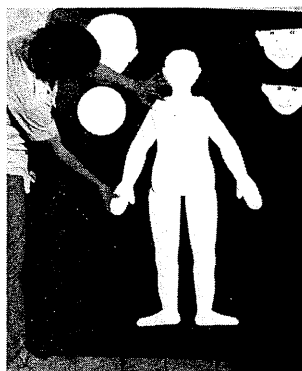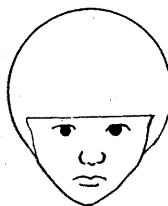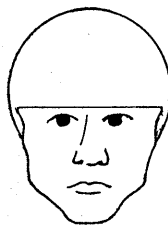
The small head on the body forms an adult.

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.
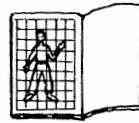
TECHNIQUES FOR COPYING

When copying, again it is important to get the proportions right: the head the right size in relation to the body, and so on. There are several 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 lines (in light pencil) to form even squares over the picture you want⟶ to copy.

Then draw the same number of squares, but larger, on poster paper or cardboard.⟶ Copy the drawing carefully, square for square.

To make copies without marking up the original, and to save time, you can prepare a sheet of plastic by carefully drawing squares on it. (Use heavy, clear plastic. An old X-ray plate is ideal. Clean off the dark emulsion by soaking it in lye or caustic soda and then scrubbing it.) If ink does not mark the plastic well, try scratching the lines into the plastic with a pointed piece of metal. Then ink over them.
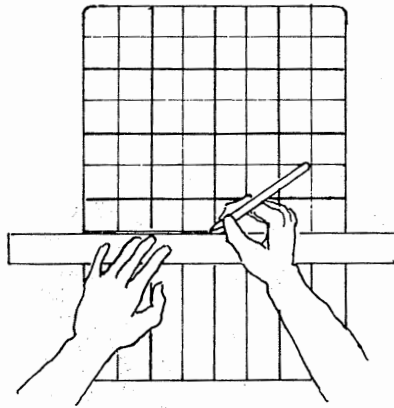
It helps to make every second or third line darker.

To copy, simply place (or pin) the marked sheet of plastic over the picture you want to copy. Draw the same number of squares on poster paper, and copy.
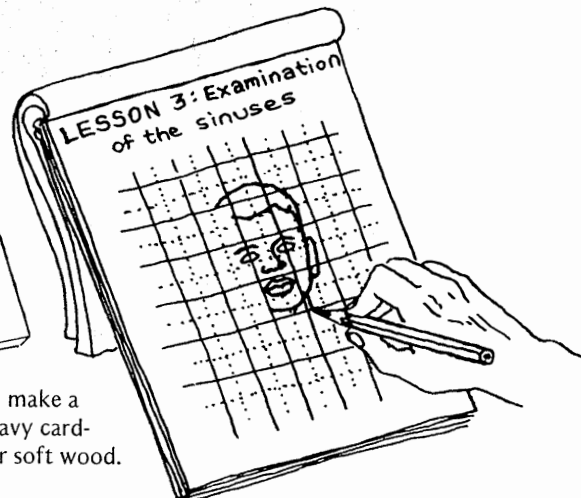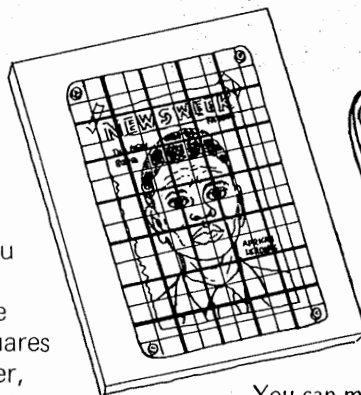
You can make a drawing board of heavy cardboard, fiberboard, or soft wood.

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).
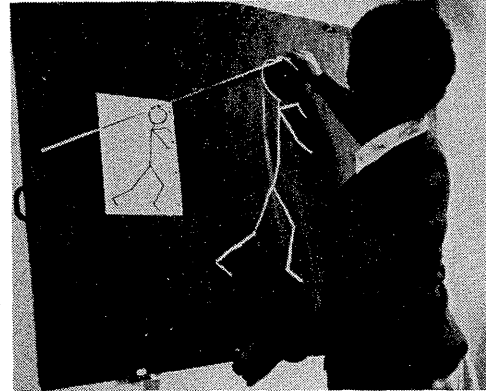
Now begin to copy, taking care that the knot in the string follows the outline of the original drawing.

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.
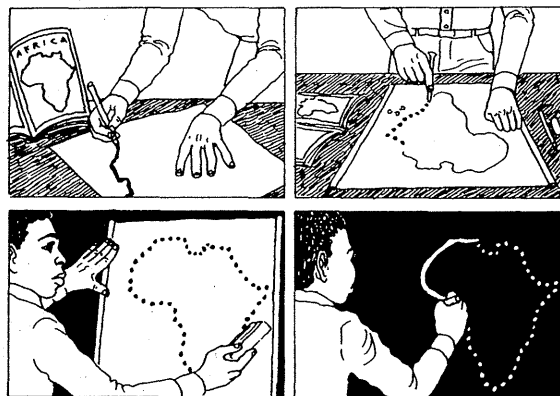
*These ideas and photographs come from a booklet entitled "Blackboard Tips." It was developed in a workshop in Botswana and published by the Werkgroep Ontwikkelings Technieken, Technische Hogeschool Twente, Postbus 217, Enschede, Holland.

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
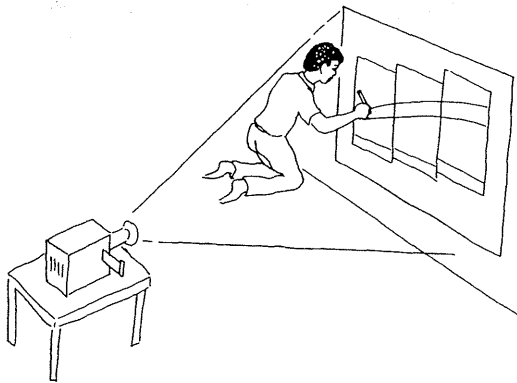
This is a good way to make accurate enlargements of pictures from color slides or transparencies. Project the slide against a large paper or a wall. Then trace the picture exactly.

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 scrap-

BABY BODY

LIST OF EXTRA GOOD BABY PICTURES IN BOOKS WE HAVE (continued)

7. KING -"Primary Child Care" pages: 152, 285, 340, 413, 444

8. ARMS -"A Season To Be Born" pages: 90, 92, 93

9. GALLY -"Manual Practico Para Parteras" pages: 406, 452, 487, 488, 526, 529

10. WERNER -"Where There Is No Doctor" pages: 271, 273, 274, 302, 316, 317, 319

11. REICH - "Children of Many Lands" pages: 2-5, 8, 4, 9, 104

FACE HANDS MOTHER HOME FOOD

book (notebook or album). It is also helpful to keep a list of books and the pages with pictures you may want to copy.
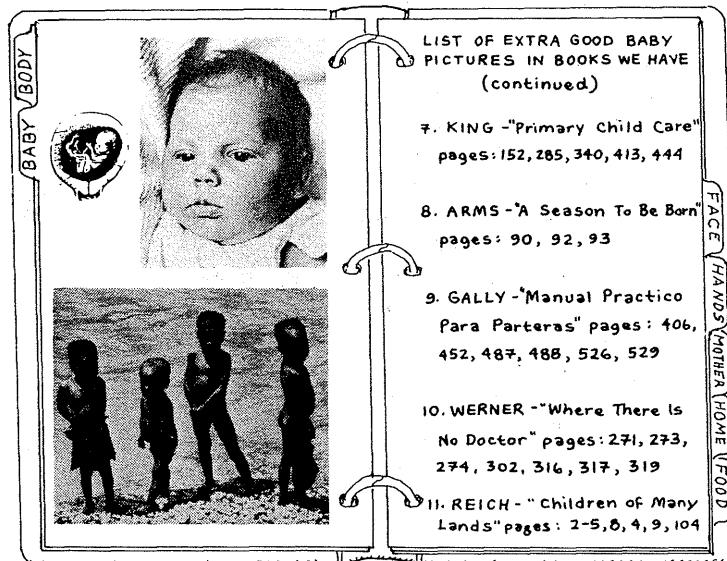
USING PHOTOGRAPHS AS TEACHING AIDS

Photographs can be used for teaching in many ways:

- in pamphlets and books
- on posters or flannel-boards
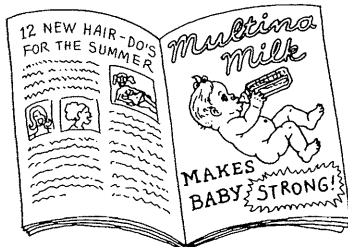- in the form of filmstrips or slides for projection (see p. 13-11)
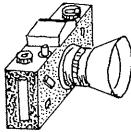
If your program can buy or borrow a camera and afford the film, you can take many photos to use for health education. A 35 millimeter camera is usually a good choice—especially for taking color slides.

Whether you have a camera or not, good photos can be cut from magazines or newspapers to make posters, flannel-board figures, and other teaching aids.
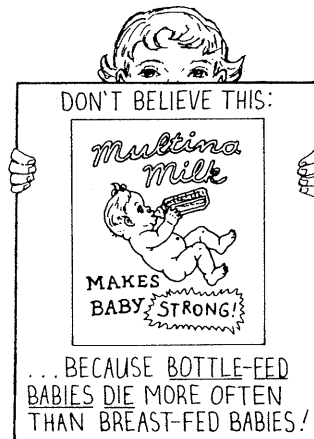
BREAST is BEST

Good photos can help bring ideas to life and make them convincing.

Advertisements with <u>harmful</u> health messages, like this . . .

. . . can be used to make posters with <u>helpful</u> messages, like those below.

DON'T BELIEVE THIS:

. . . BECAUSE <u>BOTTLE-FED</u> <u>BABIES</u> <u>DIE</u> MORE OFTEN THAN BREAST-FED BABIES!

NOT APPROPRIATE

For persons who cannot read, this poster still makes bottle feeding look desirable.

Pictures should strengthen, not contradict, the message.

MORE APPROPRIATE

DON'T BELIEVE THIS:

. . . BECAUSE <u>BOTTLE-FED</u> <u>BABIES</u> <u>DIE</u> MORE OFTEN THAN BREAST-FED BABIES!

This poster is better, but the message is negative.

MOST APPROPRIATE

MOTHER'S MILK

MAKES BABY STRONG!

BREAST IS BEST!

This positive message uses part of the advertisement and a line drawing.

Be sure the picture carries a helpful message—with or without the words.

How to get better photos with your camera

In this book we cannot explain how to use different cameras. You will want to read an instruction book or, better still, to learn from someone who has experience.

Here are just a few suggestions for getting good quality pictures.

1. **Film speed**

Fast film gives less blurring but coarser quality (grain).	Use faster film (ASA rating above 200) such as Kodak Tri-X (ASA 400) for black and white prints, or Ektachrome (ASA 400) for color slides when photographing . . . •indoors •where the light is poor •or when the subject is moving fast	) except when } using flash) **close up**
Slow film may give more blurring (if camera moves), but finer quality (less grain) and better color. Better for enlargements.	Use slower film (ASA rating below 200) such as Plus X (ASA 125) for black and white prints, or Kodachrome 64 (ASA 64) for color slides when photographing . . . •in direct sunlight •in a very well lighted place •or when using flash close up (within 7 to 10 feet)	} when subject } is still or } moves slowly

Sharper, more detailed pictures usually can be made by using slower film in good light—but only if the camera is kept steady.

2. **Keeping the camera steady**

For sharp pictures, hold the camera as steady as you can, especially when using slow or color film in poor light. If possible, use a tripod. Or rest the camera on a wall or chair, to keep it from moving.

If possible, use a shutter speed no slower than 1/125 second. If you must take it slower (1/60 second), try to rest the camera on something steady. Pictures taken at 1/30 second or slower are very hard to keep from blurring unless you use a tripod.

Keep the camera as still as you can.
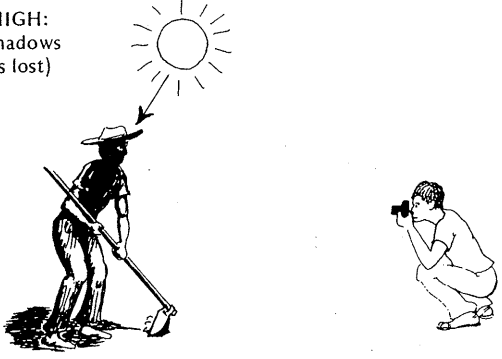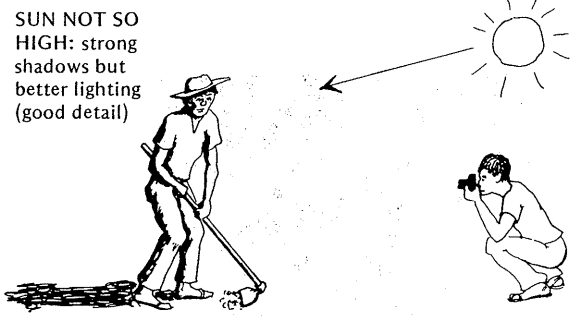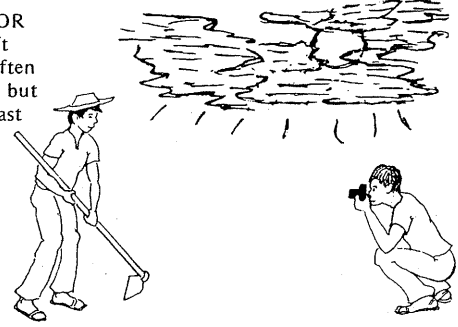
3. Lighting

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.

USUALLY NOT SO GOOD—SHADOWS TOO DARK

SUN HIGH: dark shadows (details lost)

GOOD FOR PHOTOGRAPHING PEOPLE OR ACTIVITIES

SUN NOT SO HIGH: strong shadows but better lighting (good detail)

GOOD FOR PHOTOGRAPHING PICTURES, FLANNEL-BOARDS, CHARTS, SKIN PROBLEMS

CLOUDY OR HAZY: soft shadows, often good detail but little contrast

GOOD FOR PHOTOGRAPHING DISPLAYS, PICTURES, CHARTS, FLANNEL-BOARDS, ETC.

INDIRECT LIGHTING: shadows soft, but good contrast (details good)

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,

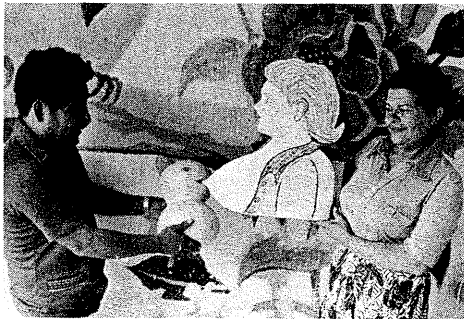3. **not detract** or take attention away from the main subject.

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	MORE 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.

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.)

USE OF SYMBOLS IN PICTURES

By combining things in unexpected ways, drawings can make people stop and think.

For example, a gun is a well-known symbol for killing. When tablets are compared with bullets, people can at once see how dangerous medicines can be.

REMEMBER: *MEDICINES CAN KILL*
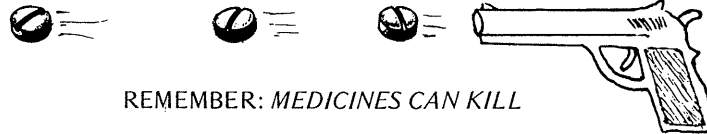
Here, an umbrella is used as a symbol of protection. However, the symbol will only work where people use umbrellas. (From *The Control of Tuberculosis, Course of Instruction for Community,* AKAP, Philippines.)

CAUTION: When using pictures—especially those with unexpected symbols or comparisons—try showing them to a few people first to see what they actually understand and remember. (This is called 'field testing'.)

The importance of a sense of humor

In health work as well as in other human activities, it is important to keep a sense of humor. Humor takes us by surprise and makes us laugh. But it also makes us think.

The idea for these drawings appeared in a health care manual printed in a city slum in Mexico. Pictures like these (drawn by a village health worker) catch the imagination, especially of children. There is no harm if they laugh!
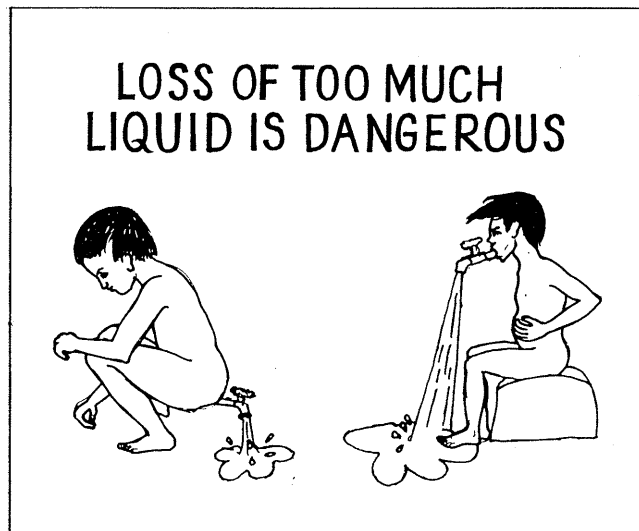
After seeing these, they will not forget the danger of losing too much liquid with diarrhea or vomiting.

**LOSS OF TOO MUCH LIQUID IS DANGEROUS**

Surprising, ridiculous pictures or remarks by the instructor help people realize the need to question and doubt everything educators and experts say. Help your students to keep asking, "How many of these ideas are appropriate for my work?" "How much of all this is nonsense?" Here is a good example to use with your students. Is this appropriate or nonsense?
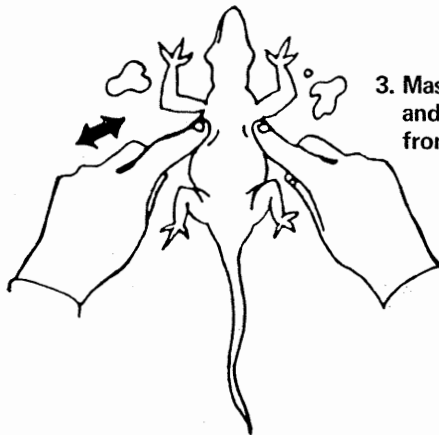
HOW TO RESUSCITATE A LIZARD

1. Scoop lizard from pool.
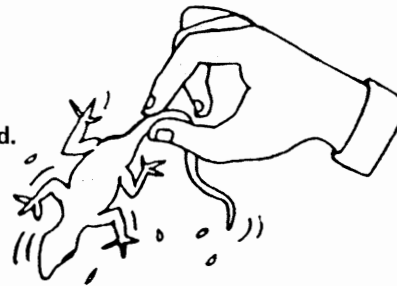
2. Shake out lizard.

3. Massage lizard's torso, applying on and off pressure, directly behind front legs.

4. Apply mouth to mouth resuscitation to lizard's mouth, breathing slowly and forcefully.