

PREPARATORY UNIT 2

MALNUTRITION AND ITS CAUSES



CONTENTS

1. Terminology
2. Effects of malnutrition
3. Recognizing signs
4. Reforming A ... (optional)
5. What's wrong with E ...? (optional)
6. The causes of malnutrition
7. The role of education
8. Summing up

Poster material: MALNUTRITION AND ITS CAUSES

Key to Activities



WHAT YOU NEED

People Ask a nutritionist or health worker knowledgeable in nutrition to run this session or to sit in as an adviser. School Health Service personnel would be particularly welcome as well.

Information Your own experience of local children's behaviour.

Course documents The poster from Preparatory Unit 1 should be on display.

Equipment A large flipchart sheet to make a poster, and coloured marker pens.

N.B. As far as possible, adapt the content of this unit to the local situation, substituting local foods and food practices.

ACTIVITY 1

TERMINOLOGY



20 minutes

Start by getting the vocabulary right. Here are some of the terms used when talking about malnutrition:

- Undernutrition
- Malnutrition
- Overnutrition
- Hunger
- Protein-energy malnutrition
- Micronutrient
- Deficiency

1. Discuss the differences between them.

- Which is the most general term? Which other terms are covered by it?
- Which terms are the result of specific lacks in the diet?
- Which terms have to do with quantity?
- Which is the most subjective term?

2. Check your ideas on the page of POSTER MATERIALS at the end of the unit.

ACTIVITY 2

EFFECTS OF MALNUTRITION



15 minutes

How do doctors recognize different kinds of malnutrition? What are the warning signs?

In the table below are some of the commonest forms of malnutrition.

- What effect do you think they have on the body?
- How do they affect learning behaviour – how would you recognize them in school?

1. Discuss and make notes on the table – the first row has already been filled in.
2. Compare your answers with Table 8, *Conditions of malnutrition and their effects on learning* in the Reader, Preparatory Unit 2, page 48, or with the shortened table in the POSTER MATERIAL at the end of the unit.

Condition	Clinical signs	Effects on education
Protein-energy malnutrition (PEM) Lack of food energy, protein and other nutrients	<i>low weight for height, low height for age</i>	<i>Tired, listless, inattentive, restless, irritable, poor memory</i>
Short-term hunger Long gaps between meals temporarily reduce the body's energy supply
Anaemia (iron deficiency)
Vitamin A deficiency (VAD)
Iodine deficiency
Vitamin B deficiency
Overweight/obesity
Parasites , especially worm infections

ACTIVITY 3

RECOGNIZING SIGNS



40 minutes

Let's apply this theoretical knowledge to some cases.

1. **Before starting**, discuss these questions:

- Is expert diagnosis a teacher's job?
- Is it a teacher's job to be aware of children's health problems?
- Are there any problems of recognizing symptoms of malnutrition in class?
- What do teachers normally do if children are not paying attention?

2. **The signs** – Sometimes malnutrition is not easy to recognize. Read the three case reports on the next page and underline the signs and symptoms which sent alarm signals to the teachers concerned. You may like to form groups of three, divide the three cases among you, read one each, then come back together and report on them.

3. **Categorizing the signs** – Recognizing the signs sometimes requires detective work. Apart from physical signs, learning difficulties and behavioural factors can also be strong indicators. Put the signs and symptoms you underlined into the categories below. Add any others from your own experience which you think are important.

4. Check your answers in the Key to Activity 3(3).

Signs of malnutrition

Physical signs	Learning signs	Other behavioural signs
e.g. <i>walks slowly</i>		

ACTIVITY 3 *contd.*

5. **Guessing causes** – A proper diagnosis is a job for professionals; the best you can do is make a good guess. Look again at Table 8, *Conditions of malnutrition and their effects on learning* (Reader, Preparatory Unit 2, p.48) or in the Poster Material, and re-consider the cases of A, E and J. What do you think are the physiological causes of their problems? Check with the Key to Activity 3(5).
6. **Own cases** – (Optional) If you can supply a case history of your own, narrate it to the others, or record it or write it down. If your group has rich experience, discuss how it can be used. For example, it might be valuable to make a collection of case histories for discussion with the health services or with the PTA, or for teacher training and development. (If you do this make sure that you use false names so that the identities of the children concerned are protected. It is often a social disgrace to be regarded as malnourished.)

A CASE STUDY

The original names of these three children were Amos, Edith and Joshua. Before you start reading the case studies, substitute names which are familiar to you.

Case 1

'A' is always tired at school. He hates learning because he does not understand what the teacher is saying – he would much rather be outside, lying under a tree.

'A' never eats before he leaves for school at seven in the morning. He never has time, because he likes to sleep late. He has a five-kilometre walk to school and hurries so as not to be late. He only drinks water at school; he does not take anything to eat with him. By the time he gets home in the afternoon he is very hungry. However, he does not look sick or underweight and he doesn't miss lessons.

His teacher was concerned about him and suspected that he might not have proper eating habits. She thought it was worth investigating and so paid the family a visit one Saturday afternoon to discuss the problem with his mother.

Case 2

'E' is twelve and has lived with her aunt since her mother died four years ago. She has two sisters, and her aunt has three children of her own – so the house is crowded and there is a lot of work to do. Since she is the eldest girl she started school later than the other children in her class, because she had to help her aunt and uncle with the household and other children.

'E' misses school lessons regularly and has skipped ten days of lessons in the last six weeks. The school doctor told E's teacher last week that she isn't growing properly and is underweight. Her stepfather says she should stay at home and help her aunt but her aunt wants her to have some schooling, and so far has had her way.

Sometimes when food is short E and her brothers have to ask the neighbours for food, but they seldom go without a meal. There isn't much variety – fish soup (which she hates!) bread, and sometimes maize. When she comes to school she looks tired and can be irritable and aggressive with the other children. She never does her homework because she says she doesn't have time. She doesn't seem to be able to concentrate in class either, or follow the lessons.

Her teacher is worried because she is falling behind the other children in her class, especially in the literacy programme. The teacher also noticed that E's throat is swollen, although the doctor said nothing of any other problems.

Case 3

'J' is eight years old and finds it difficult to follow lessons. He is a shy child and sits at the back of the class, which contains 40 pupils. He can't write the things the teacher puts on the blackboard because he can't see them well. He is the oldest in his class.

The teacher noticed he had difficulty reading and that he never wrote anything in his book. He also seemed to be reluctant to play with other children – especially outside games – and was often unhappy.

The teacher spoke to the doctor who came to see the child. The doctor tested J's eyes and found that he couldn't see well. He asked if 'J' ate fruit, or yellow, orange and green fruit and vegetables, but 'J' felt shy and didn't answer clearly.

ACTIVITY 4

REFORMING 'A'



15 minutes

(Optional)

Can some problems be solved easily? Read the conclusion of Case 1 which describes a solution found for A's poor dietary habits.

'A' is a boy. Give him an appropriate name before you start.

Case 1: Conclusion

The teacher told A's mother that 'A' was always tired at school and was not learning very well. They discussed the importance of a good education. Together they decided on a way to help 'A'. He was given the responsibility of putting some food aside, covered, in a clean place for his breakfast the following day. He could choose to eat this at home with some tea, or on his way to school. His mother also agreed to put some leftover food from the evening meal into a clean container for him to take with him to eat at school.

At first 'A' was not very enthusiastic about getting up earlier to eat breakfast and having to carry a lunchbox with him to school. He thought that the heavier school bag would make him even more tired than usual.

After a few days of this arrangement he was surprised to notice that he was no longer tired during classes, and that what the teacher had to say was actually rather interesting. In fact, after a few weeks, 'A' decided that he quite liked school after all. After a few more weeks he decided that getting up a few minutes earlier each morning in order to eat breakfast was fine, and that he really looked forward to going to school. The year progressed and the teacher was happy to report to A's mother that 'A' was managing much better at school. At the end of the year, 'A' even received a prize – as the student who had improved the most.

This case was chosen to demonstrate how a child can be empowered to improve his or her situation. How realistic do you think it is?

ACTIVITY 5

WHAT'S WRONG WITH 'E'?



A role-play (Optional)

(‘E’ is a girl – give her an appropriate name before you start.)

A child’s behaviour at school can be an alarm signal to teachers – especially when obvious physical signs of disease or malnutrition are not evident. The first aim of this role-play is to help you to observe and understand the social complexity surrounding the case of a malnourished child and her achievement at school.

But what kind of action is possible? The second aim is to help participants recognize the importance of different players in understanding and dealing with the problem. There is no single solution to the role-play, and a certain amount of unpredictability is part and parcel of the activity. The comments on the role-play are as important as the role-play itself.

To make sure that all the groups finish at the same time and can share their reactions, set time-limits to the role-play (15 minutes) and to writing up comments (10 minutes).

How to do the role-play

It is Saturday. The teacher pays a visit to E’s family.

1. Divide into groups of four.
2. The group re-reads Case 2 in ACTIVITY 3 to understand the background.
3. Each member of the group chooses one of these roles and gives the person a name:
 - ‘E’ (a 12-year-old schoolgirl)
 - E’s school teacher
 - E’s aunt
 - E’s uncle
4. Each “character” reads his/her role card, below, twice (don’t read the other cards).
5. Decide yourselves how to begin!

When you have finished the activity make a few notes as a group in the “Observations” box on the next page, then share your conclusions with other groups.

ACTIVITY 5 *contd.*

Role card 1: E's teacher

You are worried about 'E' – a 12-year-old girl in your class of mainly 10–11 year olds. She never does her homework and when asked why, she says she has no time. You think she is a bright girl with potential, but you have seen her be aggressive and unfriendly to other children in her class. The letter you sent back with her two weeks ago received no reply. The school doctor says she isn't growing as she should be and is a little underweight. You have also noticed that she has a swollen throat. You are going to visit the family because you want to see if they are aware of these problems, or know where to seek help. You would also like to learn a little about her home life. The doctor says she is underweight. Is she eating properly? Perhaps you can help or give some advice to E and her family.

Role card 2: 'E' – the child

You don't like school very much because the other children are younger than you. You work a lot to help your aunt and you usually help your uncle in the field – you never have time to do your homework and your aunt never asks you about it. You don't like fish soup, which your aunt makes sometimes, and you try to eat other foods – you're a bit thinner than you were six months ago and you often feel tired during the day. You lost the letter your teacher gave you for your aunt and uncle, and anyway, you forgot all about it.

Role card 3: E's aunt

Your niece 'E' is a good girl; she is very helpful with the housework and with looking after the other children. You want her to go to school so that she can get a job in adult life and earn her own living. Your husband has other ideas – about an early marriage with another farmer – but you think 'E' is a bright girl and could make something better of her life. You have noticed that your niece has been a bit irritable recently, and thinner too. She never eats fish when you make it – even though fish is a rare and special treat. This upsets you. Why is she becoming so difficult? She eats maize and rice and she likes soybeans. You're glad to see the teacher because you have had no news about E's progress, and you want to know what you can do to help her. You also have other pre-school children.

Role card 4: E's uncle

When your wife's sister died you were worried about looking after her three orphaned daughters. You have grown fond of the kids, but you struggle to make ends meet. Occasionally you have to ask the neighbours for help. You have a little plot for maize, and you fish now and then in the river, but there aren't many fish these days. When you do catch one your wife makes a special fish soup for the family. However, there's always a fuss with 'E' – she won't eat it! You sell some produce to the local market but keep most for the family. E is a good girl and helps you in the fields when you need it. You think she should marry soon and your friend's son is looking for a bride. Your wife has some modern ideas and wants her to go to school and get a good job. Sometimes you argue with her over this – but nothing serious. You would like to know what E's teacher thinks of her chances. You picked up a letter for your wife from the school about ten days ago. You put it in your pocket but forgot all about it.

Observations after the role-play activity:

Dealing with a malnourished child

ACTIVITY 6

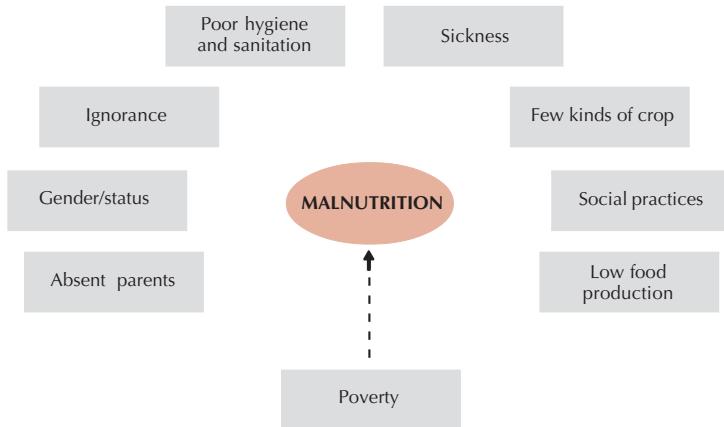
THE CAUSES OF MALNUTRITION



30 minutes

People often think that malnutrition is caused by lack of food *due to poverty* – see the arrow on the diagram below. Indeed, this is one of the main causes. But malnutrition is part of a whole web of interacting forces.

- Look at the diagram below. Discuss the connections between the various factors and draw arrows between them.
- Come together and explain the connections you have made. Draw the diagram large on a flipchart sheet and collect and explain all the connections.
- Look at the discussion in the Reader Preparatory Unit 2, Part C, CAUSES OF MALNUTRITION, and add to your diagram. You may want to get someone to read it out as you check your picture.



ACTIVITY 7

THE ROLE OF EDUCATION



30 minutes

In the picture you have drawn above, what could be the role of education?

1. Look at each point on the “malnutrition web” in Activity 6, one by one. Brainstorm the ways in which education may have an effect at each point. Note down your ideas below, then share them.

2. Trace the cause and effect connections in the figure below, showing causes of malnutrition. Is there anything in common with your country’s situation? Where could education play a role? Add to your list of ideas above.



ACTIVITY 8

SUMMING UP

POSTER

Recording information

On the next page is poster material which summarizes the main points and ideas of this unit. This should be enlarged and displayed throughout the curriculum planning exercise. It can be photocopied, or copied onto a large sheet of flipchart paper.

Presenting information

If you are in a group divide the tasks below between you and prepare them for five minutes. Then make short presentations to the whole group for each task (not more than five minutes each). Keep strictly to the time limit. The audience should correct and comment as necessary.

If you are working on these preparatory units alone, work through the tasks one by one and answer the questions, referring to the Reader, the Activities and the Poster Material as necessary.

TASKS

- a) Explain the terms *malnutrition, overnutrition, undernutrition, protein-energy malnutrition, micronutrient deficiency, hunger*.
- b) “Malnutrition is caused by poverty.” Is this true? Explain.
- c) “The answer to malnutrition is simple – more food.” Explain why this is not quite true.
- d) What are the warning signs that teachers should look for in the classroom?
- e) Take one Key Message each, explain it and give as many examples as possible (one minute for each Key Message).

POSTER MATERIAL

MALNUTRITION AND ITS CAUSES

TERMINOLOGY

Malnutrition – health disorders due to too much or too little food energy or nutrients. Malnutrition includes *overnutrition* as well as *under-nutrition*.

Hunger is the subjective feeling caused by lack of food. It is sometimes used to refer to undernutrition in entire populations.

Undernutrition is a lack of food energy and nutrients. It can be divided into protein-energy malnutrition and micronutrient deficiencies. But in real life they generally go together.

FIGHTING MALNUTRITION

- Adequate income
- Sufficient, nutritious food
- Good health and sanitation
- Care and caregivers
- Knowledge and education

CONDITIONS OF MALNUTRITION AND THEIR EFFECTS ON LEARNING

Condition	Clinical signs	Effects on education
Protein-energy malnutrition (PEM) Lack of food energy and protein	<i>Mild</i> : low weight for height (wasting). <i>If chronic</i> : low height for age (stunting). <i>Severe cases (marasmus, kwashiorkor)</i> are not likely to be seen in the classroom.	Tired, listless, restless, irritable, poor attention, poor memory.
Short-term hunger <i>Dip in energy in long gaps between meals.</i>		Listless, inattentive, easily distracted.
Anaemia (iron deficiency)	Pale inner eyelid and beneath the nails. Most common in girls.	Tired, often breathless; problems with learning; often sick.
Vitamin A deficiency (VAD)	Night blindness and sometimes total blindness. Higher risk of infection. Measles and other infections make it worse.	Sees poorly in dim light; often sick and absent; doesn't do well at school.
Iodine deficiency	Goitre (swollen thyroid gland in the throat); slow growth and brain development; higher risk of infection.	Often sick; problems with learning and also with speaking (deaf-mutism).
Vitamin B deficiency	<i>Severe/chronic</i> weak muscles, paralysis, mental confusion, nervous disorders, digestive problems, cracked skin, severe anaemia, heart failure.	Clumsy (poor motor control); pain in legs; learning difficulties; frequent absences.
Obesity/overnutrition More food energy in than out	Fat and slow; high cholesterol and blood pressure; chronic diseases in adulthood.	Little interest and (at the worst) finds it hard to move around.
Parasites especially worm infections	Poor growth; diarrhoea and dehydration; nutrient deficiencies	Tired and weak; often absent.



MALNUTRITION AFFECTS LEARNING.

MALNUTRITION CAN BE DIFFICULT TO RECOGNIZE.

TEACHERS SHOULD RECOGNIZE WARNING SIGNS.

MALNUTRITION HAS MANY CAUSES.

EDUCATION CAN FIGHT MALNUTRITION.

KEY TO ACTIVITIES FOR PREPARATORY UNIT 2

■ ACTIVITY 3 *Recognizing the signs*

(3) Categorizing the signs

SIGNS OF MALNUTRITION		
Physical signs	Learning signs	Other behavioural signs
walks slowly tired hungry underweight swollen throat poor eyesight	no concentration falling behind with work problems understanding problems reading and writing	absent often irritable aggressive skips homework shy unhappy doesn't want to play

(5) Guessing causes

- *A's problem* looks like short-term hunger, and may be quite easy to resolve.
- *E's problem* seems to include iodine deficiency, which can also be resolved quite easily. But there may be other micronutrients lacking, since she doesn't have a very varied diet.
- *J'* could be suffering from Vitamin A deficiency, but again there may be other forms of malnutrition.

PHASE A:
CONCEPTS AND PRINCIPLES

UNIT A1

HEALTH AND HEALTHY LIFESTYLE



CONTENTS

1. What is health?
2. A definition of health
3. Conditions for health (optional)
4. Healthy and unhealthy behaviour
5. The healthy lifestyle game (optional)
6. Food and health messages
7. What do you drink and why?
8. What creates food behaviour? (optional)
9. Goals and objectives
10. Knowledge and behaviour
11. Summing up

Display Document: DEFINITION OF HEALTH;
KEY MESSAGES;
GOALS AND OBJECTIVES;
NUTRITION LITERACY

Key to Activities



WHAT YOU NEED

People Health workers and nutritionists could contribute a great deal to this session.

Information Your own experience is all you need.

Equipment A flipchart sheet to act as a poster, and coloured marker pens.

UNIT A1

ACTIVITY 1

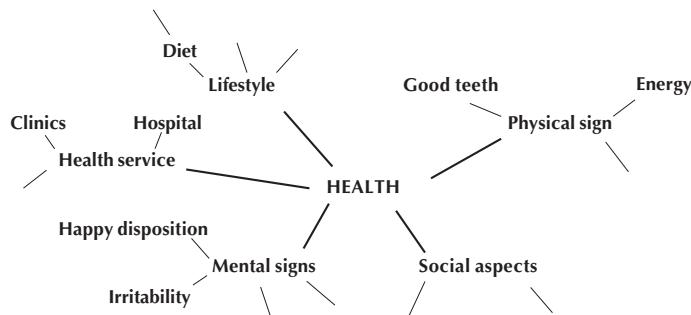
WHAT IS HEALTH?



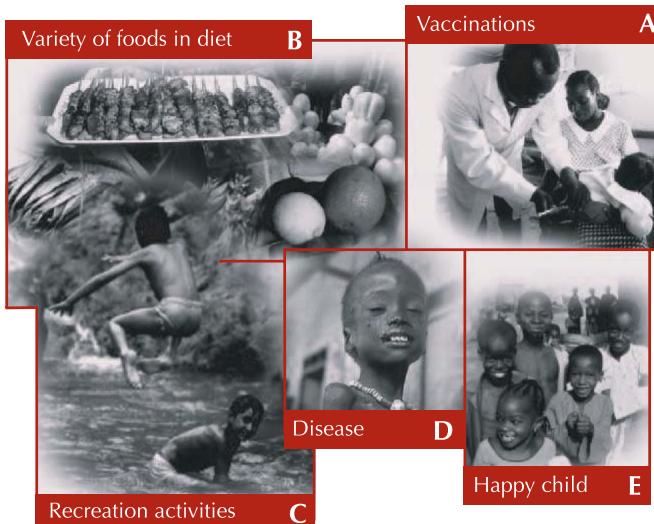
15 minutes

When you think of health, what first comes into your mind? What are the signs of health?

Write up the word HEALTH, brainstorm the question and collect a few ideas onto a spider diagram. Sort them as you go. For example:



Use the pictures below as a stimulus to add ideas.



ACTIVITY 2



20 minutes

1. Discuss the reasons behind your choices in Activity 1. Do you agree that health involves social and mental aspects as well as physical?
2. Sum up your idea of good health in not more than 30 words in the space below. Make sure that you cover mental and social aspects, as well as physical. For example:

For me health means a general feeling of well-being.

3. Bring your definitions together. Select the widest one and write it up, then read out the others. Add to and refine the first definition until you all agree. Keep it under 30 words.
4. Look at the WHO definition in the Reader, Unit A1, Figure 11, or in the display document CONCEPTS, PRINCIPLES and OBJECTIVES at the end of this unit.
5. Compare the WHO definition with your own. Are they essentially the same? Can they contribute anything to each other? Finalize your own definition of health.
6. Do you agree that social, psychological and physical factors interact? Can social problems make you physically ill? Can psychological illness lead to social problems? Can you give examples?

ACTIVITY 3

CONDITIONS FOR HEALTH

(Optional)



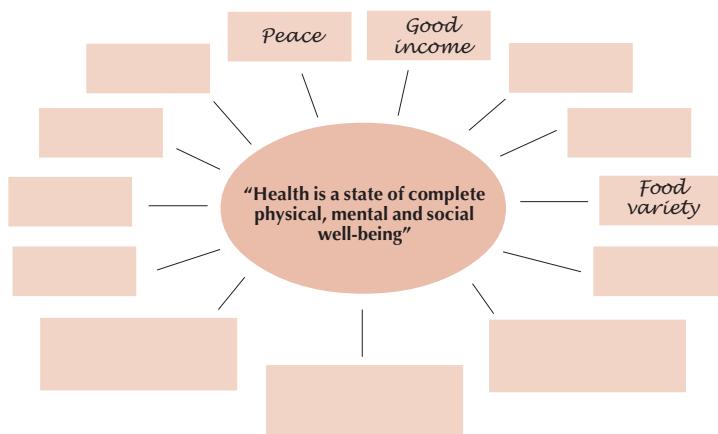
15 minutes

Health depends on many things and some of them are outside our personal control.

What are the essential factors for health in any society? For example, *peace* is essential. What other factors make an essential contribution?

Discuss and enter the essential conditions in the bubbles below.

Compare with Figure 9 in the Reader, Unit A1.



ACTIVITY 4

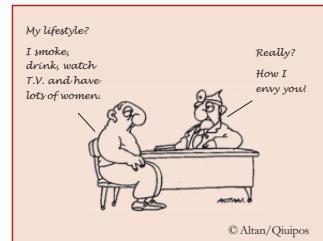
HEALTHY AND UNHEALTHY BEHAVIOUR



20 minutes

1. Think of what *behaviour* affects our health – both positive and negative behaviour. Remember the expanded concept of health – mental and social behaviour as well as physical.

Add examples to the lists in the box below. Think not only of your own behaviour but of your friends and acquaintances, and your children.



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2. Afterwards, pool your lists.

Positive behaviour	Negative behaviour
<i>physical exercise</i>	<i>smoking</i>
<i>regular medical check-ups</i>	<i>worrying/anxiety</i>
.....
.....
.....
.....
.....
.....

8. Look at what you have collected in the left-hand column.

- a) Would you agree that this *healthy behaviour* is one of the main targets of health education?
- b) Would you agree that if health education does *not* result in healthy behaviour, it has failed?

4. In the box is the beginning of a definition of a healthy lifestyle. Complete it.

<i>Physical</i>	<i>What we can do with our bodies to achieve well-being</i>
<i>Mental</i>
.....
.....

5. Check the definition in the Reader, Unit A1, p.6.



HEALTH DEPENDS ON A HEALTHY LIFESTYLE.

UNIT A1

ACTIVITY 5

THE HEALTHY LIFESTYLE GAME

(Optional)



30 minutes

The concept of a healthy lifestyle is well illustrated by the board game on the next two pages. The fact is that learning behaviour is very close to playing games! The game is adapted from a teaching manual on health education for developing countries. There is a board, with instructions, and a number of chance cards. Schools may be able to adapt the game for their own use.

If there is not enough time for this activity in your session, take a little time to look at it at home and consider if it would be suitable for your schools.

1. Examine the board game. What behaviours does it encourage concerning the individual? the family? the community? the environment?

Individual (mental and physical)	Social (family and community)	Environmental

2. How would you change some of the messages on the 'CHANCE' cards to match your local circumstances? Write three more in the space below. Don't forget to mention rewards or penalties.

a)

b)

c)

Game Instructions

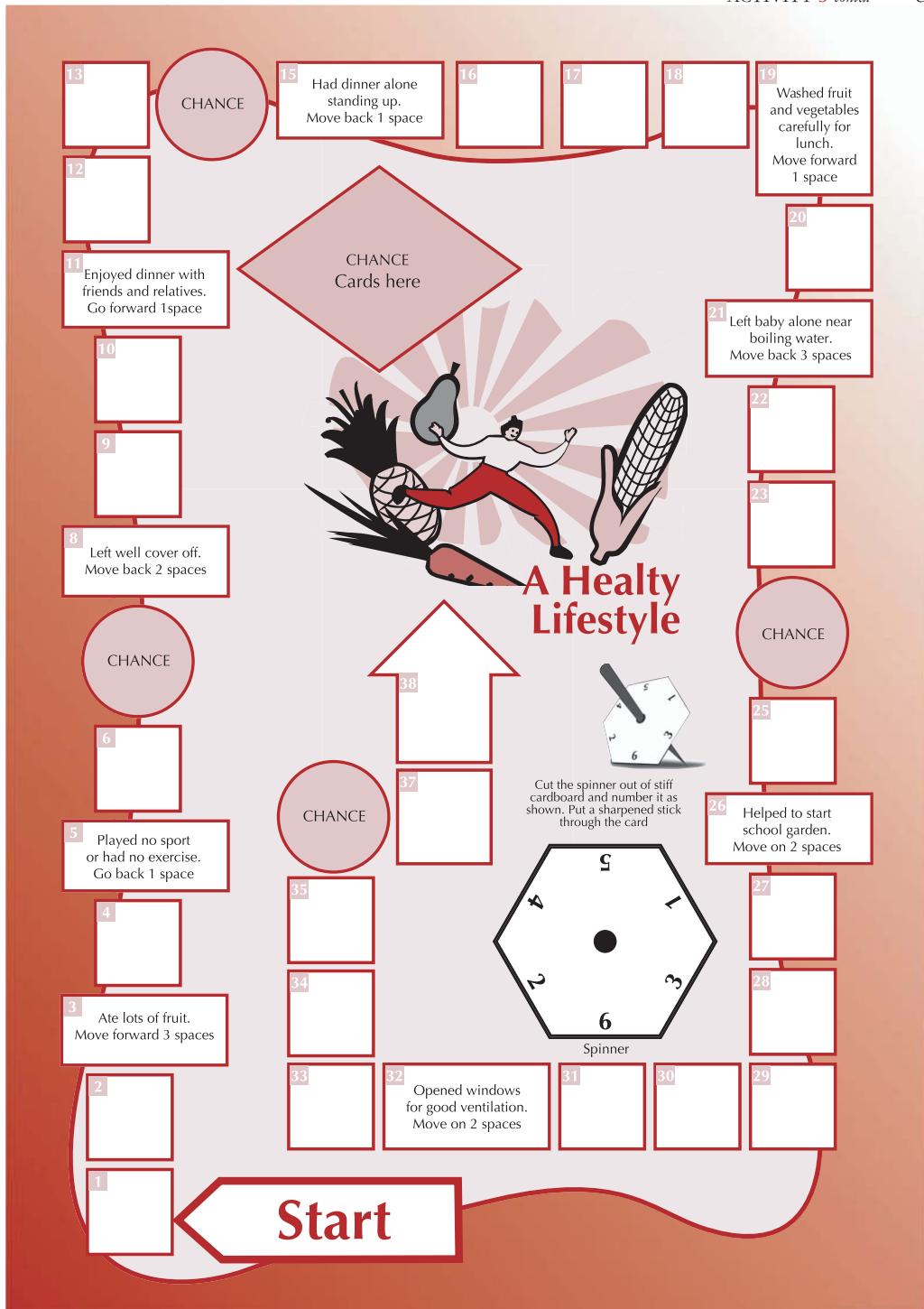
The board game on the next page is designed to highlight behaviours for a healthy lifestyle in a fun way for children.

With the board and a spinner, the class is divided into teams. Each team is asked a question on the same topic. When a team answers correctly, they use the spinner to determine how many spaces forward they move on the game board.

Some squares contain instructions to follow, involving either extra moves forward or penalty moves backwards. Other squares are marked CHANCE. When a team lands on one of these, they take a card from the pile of CHANCE cards and follow its instructions.

If a team cannot answer a particular question, or answers it incorrectly, the question passes to the next team.

The winners are the first to reach the 'healthy lifestyle' square on the board. You will find CHANCE cards on the page following the game board.



UNIT A1

ACTIVITY 5 *contd.*

CHANCE CARD You throw a dead cat into the lake. Miss 2 turns.	CHANCE CARD You write a short play for the school fair to show people how diseases can be spread by flies. Move forward 2 spaces.	CHANCE CARD You prepare a cake for your neighbour's daughter's birthday. Move forward 1 space.
CHANCE CARD You let a dog lick food from your plate at lunch. Lose 2 turns.	CHANCE CARD You have helped your father and other villagers fill the cracks in the inside walls on your home and neighbours' and whitewash them. Move forward 2 spaces	CHANCE CARD You went with your classmate to see the doctor who came to your school. Move forward 2 spaces.
CHANCE CARD You forgot to clean your family's water container. Move back 2 spaces.	CHANCE CARD Your teacher doesn't wash his hands before lunch! You don't say anything. Lose 2 turns.	CHANCE CARD You help serve food at the local orphanage. You always try to smile and be friendly with the kids there. Move forward 2 spaces.
CHANCE CARD You explain to the man selling chicken at the market why he must keep the flies off the meat. Move forward 1 space.	CHANCE CARD Your teacher has started a nutrition programme in your school; you want to do well in this course. Move forward 2 spaces.	CHANCE CARD You are caught urinating in the river. Lose your next turn.
CHANCE CARD You are caught urinating in the river. Lose your next turn.	CHANCE CARD You have been congratulated by the community worker for helping to build a new latrine for your home. Move forward 2 spaces.	CHANCE CARD You prepare some nutrition posters with your classmates to show villagers how to store food safely. Move forward 2 spaces.
CHANCE CARD You learn a good recipe at school and offer to cook it for family and friends. Move forward 1 space.	CHANCE CARD You refuse to eat the green vegetables your mother prepares for you. Move back 2 spaces.	CHANCE CARD You keep arriving late for dinner. Lose a turn.
CHANCE CARD You start a fire in a farmer's corn field. Move back 2 spaces.	CHANCE CARD You don't wash your hands before helping your mother prepare the dinner. Lose a turn.	CHANCE CARD You help your father recycle food leftovers to make a compost heap. Move forward 1 space.
CHANCE CARD	CHANCE CARD	CHANCE CARD

ACTIVITY 6

FOOD AND HEALTH MESSAGES



15 minutes

In our daily lives, we all recognize that *nutrition education is lifestyle learning*. Giving advice and instruction about eating and drinking behaviour is one of mankind's favourite activities.

What messages about healthy eating and drinking have you received from other people? What messages have you yourself given to others?

1. Think of some messages you have given or received about a few of the items below.

- Were the messages good ones?
- Are they still valid?
- Were they taken to heart or ignored?

My mother told me that all the old women in the village warned her not to eat chilli when she was pregnant with me – otherwise I would be born without eyes. But my mother also told me that she found it particularly difficult to eat tasteless food during pregnancy and that she would often rather go without eating at all.



My parents gave me fish every week and spinach and insisted I eat it all up because it was good for me. I hated spinach and fish but I had to eat them. The trouble is that this education didn't work. I still hate them both and I never eat them.



Someone has been putting out the message that we should eat five different sorts of fruit and vegetables every day. I don't know where they came up with that number.



FOOD AND HEALTH MESSAGES

Topic	Example
Food and growth	<i>Don't skip meals. Eat regularly.</i>
Eating habits	<i>Don't eat so quickly. Have sit-down meals with the family.</i>
Food and health
Commercial products
Shopping
Keeping food
Preparing food
Food and hygiene
Teeth
Water

2. Would you agree that these messages are a kind of popular nutrition education?

3. Would you agree that they are aiming at lifestyle learning?



NUTRITION EDUCATION IS LIFESTYLE LEARNING

WHAT DO YOU DRINK AND WHY?

Where do our eating behaviours come from? How are they created, maintained and strengthened? How important are they to individuals, and how hard are they to change?

1. In plenary session, read the bubbles and discuss what motives are influencing these people.



2. What do you personally drink in the morning, and why? Go round the group, collect the reasons for your behaviour (you may each have more than one) and try to classify them.

Name	Drink	Reasons

3. Check your reasons against the bubble chart *Influences on food behaviour* in the Reader, Unit A1, Figure 10. Can you identify all your reasons on the chart?
4. Would it be easy to change your habits and preferences? Why? Why not? Discuss.
5. In conclusion, would you agree that:
 - many factors contribute to people's eating and drinking behaviour?
 - it may be difficult to change eating and drinking behaviour?



LIFESTYLE LEARNING HAS MANY SOURCES.

ACTIVITY 8

WHAT CREATES FOOD BEHAVIOUR?



30 minutes

(Optional)

What are the most powerful influences on food behaviour?

1. Choose a few pieces of behaviour from the list below for each pair/group. Discuss and record the influences which create and reinforce it. Think of the general public rather than your own social group. Use the bubble chart *Influences on food behaviour* (Reader, Figure 10) as a checklist.
2. To feed back from groups, draw a rough sketch of the bubble chart on a flipchart. Group reporters circle the causes and motives on this main poster each time they mention them, so as to build up a picture of those which are most frequent.
3. What appear to be the main motivations for food behaviour? Does the marked-up bubble chart give a realistic picture?

Food behaviour	Influences which create and reinforce it
Eating a lot of fresh fruit and vegetables.	
Eating meals at a particular time.	
Trying an attractive looking dish.	
Eating a lot of fast food.	
Having a particular kind of food at a festival.	
Avoiding a lot of animal protein.	
Eating a particular kind of staple food (e.g. rice, maize, potatoes).	
Eating regularly with other people.	
Cooking a particular dish for visitors.	
Refusing to eat a particular kind of food.	
Drinking a heavily-advertised drink.	
Eating chocolate or some other favourite sweet.	

UNIT A1

ACTIVITY 9



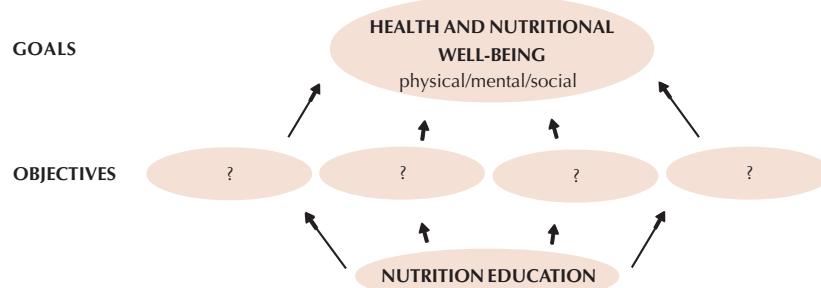
20 minutes

THE GOALS AND OBJECTIVES OF NUTRITION EDUCATION

It is time to define goals and objectives more precisely.

1. Do a little brainstorming on the objectives of nutrition education.
 - The goals are health and nutritional well-being.
 - The objectives should lead to these goals.
 - Nutrition education should assist in achieving the objectives.

What would you say the objectives are? What do we want to achieve?
Discuss and fill in the bubbles with the question mark.



2. Compare your conclusions.
3. Compare your conclusions with the diagram in the Reader, Unit A1, Figure 11, or with the objectives in the display document CONCEPTS, PRINCIPLES AND OBJECTIVES at the end of this unit. Discuss the differences and come to any compromises you think are important.

ACTIVITY 10

KNOWLEDGE AND BEHAVIOUR



20 minutes

Nutrition education is concerned with physical behaviour and social action as well as with knowledge and understanding. What are the effects of dealing with these separately, rather than integrating them?

Here are three cases. In each case the school has to decide what is the best thing to do. Divide them between you, discuss them and decide:

- what are the strengths and weaknesses of each course of action;
- what action (or combination of actions) you would recommend;
- how these actions relate to the objectives of nutrition education developed in Activity 9.

Then come together to report. Comments to aid you are in the Key.

Case A

Many of the children suffer from mild Vitamin A deficiency and frequently fall ill because their bodies are not well protected against infections. Donors are ready to help. There are cheap foods rich in Vitamin A in the district, but the children don't eat them. What is the best thing to do?

- a) Start a programme of Vitamin A supplementation and make pills available to all children. The school will help the children learn to take the pills themselves.
- b) Persuade the school feeding programme to increase Vitamin A rich foods in the menu.
- c) Persuade children/families to seek out available Vitamin A foods and build them into their diet.
- d) Give three lessons a year to all school years on "food for health", about which foods are particularly valuable in protecting against disease.

Case B

Diarrhoea-related diseases are rife in the area. They are picked up when children go swimming in polluted water, or wash their hands in dirty water, or forget to wash them. What should we do?

- a) Teach children in their science classes about bacteria and how they spread disease.
- b) Teach children to purify drinking water by boiling or chlorinating.
- c) Make rules about where to swim and when to wash hands and make sure they are enforced.
- d) Take children to the river and ask them to explain where one should swim and why.

UNIT A1

ACTIVITY 10 *contd.*

Case C

Food vendors come into the school playground at break time. A lot of the snacks they sell are unwrapped and attract flies. What action should the school take?

- a) Allow only vendors with hygienic products to enter the school grounds.
- b) Make a rule that children must only buy from certain vendors with hygienic products.
- c) Give two lessons every year about vendors and snacks – calling on the children’s knowledge – to discuss the risks, and role-play the transactions between vendors and children.
- d) Provide healthy snacks for the children.

ACTIVITY 11

SUMMING UP



30 minutes

The purpose here is to establish consensus on the concepts and principles discussed in the unit, and to display them for future reference. This will be the first document in an ongoing display of objectives, principles, needs and action plans which will be built up through the workshop (see the Display Diagram on the back of the Activities booklet).

On the next page, in the document PRINCIPLES, GOALS AND OBJECTIVES, are the WHO definition of health, the definition of nutrition literacy, the key messages, and the goals and objectives of nutrition education.

Start the display – Copy each box from the next page onto a single piece of paper and stick them up side by side where everyone can see them clearly. Make a long strip, as in the diagram below. Leave plenty of space below it for further documents.

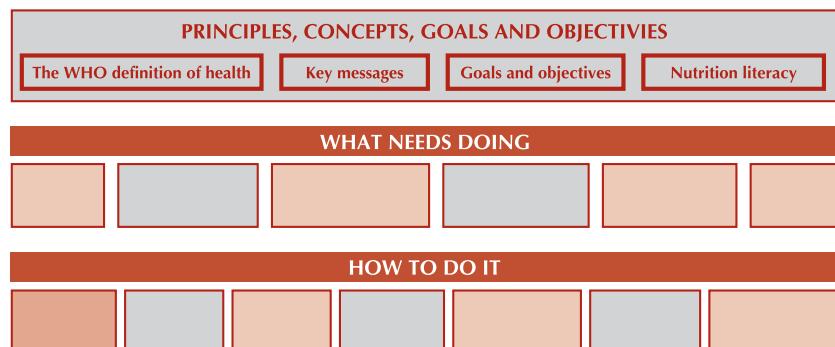
Prepare to present – One or two volunteers “adopt” each item and prepare to present them – that is, they elaborate on the message or diagram, saying what it means and giving examples if possible. Set a time limit of five minutes for each presentation.

Presentations – The presenters present their items. The meeting should:

- say if it agrees on the meaning as presented;
- say if it endorses the message fully or would like to modify it;
- write in any important qualifications, modifications or comments on the displayed documents.

Display – The principles and objectives should be on display at every session. a

DISPLAY DIAGRAM



UNIT A1

DISPLAY DOCUMENT

THE WHO DEFINITION OF HEALTH

"... health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity."

WHO Ottawa Charter (1986)
(or use your adapted version)



KEY MESSAGES

HEALTH IS PHYSICAL, MENTAL AND SOCIAL WELL-BEING.

HEALTH DEPENDS ON A HEALTHY LIFESTYLE.

HEALTHY EATING IS PART OF A HEALTHY LIFESTYLE.

NUTRITION EDUCATION IS LIFESTYLE LEARNING.

LIFESTYLE LEARNING HAS MANY SOURCES.



GOALS AND OBJECTIVES

Goal: Health and nutritional well-being

Objectives: Healthy eating, nutrition literacy

A PERSON WHO IS NUTRITION-LITERATE ...

- can apply nutrition principles to his/her own situation and can make informed and critical decisions about food and eating habits;
- is able to influence others (e.g. siblings, peers and own children);
- is able to see the implications of his/her food choices and eating habits on the environment, and can protect and change the environment.

KEY TO ACTIVITIES FOR UNIT A1

■ ACTIVITY 10 *Knowledge and behaviour*

Nutrition education objectives aim at both behaviour and understanding. Nevertheless, these are quite different kinds of target. This difference is illustrated in the following examples.

Case A

- a) If the children learn to take the pills, this would be quick and effective. If a donor offered them, we could not say “no”. But it is only a temporary solution: we can't go on giving pills for ever.
- b) This is a “food solution”, which is good, and it may develop in the children a taste for the right sort of food. Our first nutrition objective will be partly achieved. But there is no guarantee that children will continue to eat these foods out of school, or when they leave school.
- c) This too is a “food solution” and if it is successful it will create good long-term habits. It contributes directly to the first NE objective of healthy eating. Moreover, health would be in the hands of its owners, not in the gift of the donors.
- d) The lessons on their own would not have much impact if it meant changing existing food practices. The lessons need to be linked with what is actually done, and what needs to be done (for example, “c”). If children know why they are changing their food habits, they will be able to teach their own children. The problem of VAD will be solved – not only for this generation, but also the next.

Case B

- a) Children certainly need to know about bacteria. But they can learn lessons and pass exams with top marks and *still* forget to wash their hands! Lessons learned in school are often not applied.
- b) This is an essential routine where water supplies are not safe. It won't in itself lead to understanding, but it will meet the first objective of nutrition education – healthy eating practices.
- c) This will protect the children (if it works), but not educate them.
- d) This only concerns swimming, but it is a step in the right direction. It tries to look at what children actually *do* and help them to make the connection between knowledge and action.

Case C

- a) The children are better protected on the school premises – but not outside.
- b) If they obey the rule, the children are now less at risk – however, they still do not know why.

UNIT A1

KEY TO ACTIVITIES *contd.*

- c) A lesson about this in class would set standards in children's minds, turn the school vendors into a constant reminder, and make children think twice before buying from other vendors. The school should realize that its own environment is one of the best "readers" it has, but it needs to be "read".
- d) A good idea, but limited. If the children were involved in deciding what snacks to sell and in preparing and selling them, this could really lead to "nutrition literacy".