

203.2

89 DA



Dak Makare E Tie Nam

Healthy Living Beside Lake Victoria



This manual was designed by the Community Health Division
KENYA WATER FOR HEALTH ORGANISATION (KWAHO)
for the Mfangano Island Water and Sanitation Project.

Developed and Illustrated by Juliet Waterkeyn.

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BACKGROUND INFORMATION

Culture specific

This booklet has been developed for a specific project on Mfangano Island in Lake Victoria. For this reason the illustrations attempt to reflect that particular society in detail. Modes of dress, types of houses, cooking utensils and kitchen arrangements have all been observed and faithfully portrayed. By making the illustrations "Culture Specific" it is hoped that the inhabitants of the area portrayed will feel an identity with the subject matter and be more inclined to accept the health messages being put across.

The health messages

Although the traditional ways may reflect a limited society, the health problems depicted are shared by most communities beside a lake such as Lake Victoria. The problem is usually not one of no water but of the necessity to use contaminated lake water. There is generally little awareness of how diseases relate to water, and of the simple ways that these problems can be combated in the home. By tackling the basic concept of invisible germs and how they cause disease, it is hoped that this booklet will form the basis of more detailed health education. Having understood the concept, it is then easier to move on to diseases and their particular causes, symptoms and cures. For this reason this booklet may be an appropriate introduction for most communities living around a lake.

The technologies

It has been assumed that all those taught with this booklet will have been provided or have access to protected water of some sort. The main technology portrayed has been the Afridev Handpump, since this has been used extensively in the Mfangano Project.

For areas where clean water has been provided

Not much detail has been included on how to treat contaminated water because so much controversy exists about how effective different methods are. What is unanimously agreed, is there are no perfect solutions, except perhaps boiling (if it is methodically done and the water meticulously stored afterwards). But in this case the problem of lack of firewood is a central issue. Added to this is the strong argument that it is unfair to teach women that their water is damaging their health, if there is nothing they can do about it immediately. *Therefore this teaching manual is for projects where water has been supplied.*

The format

When these illustrations were pretested there was continual demand from the mothers themselves to actually have their own copy so

that they could teach their own families. Provided they have attended a basic health training course themselves, this is of course the most effective transfer of knowledge that health educators could wish for. The booklet was the most convenient format to meet this demand. However, the illustrations have been enlarged to A3 size and are used by health workers as picture codes when teaching with women's groups.

The literacy drive

There is a shortage of appropriate reading material in adult literacy classes. This publication would make ideal material for functional reading. With the increasing literacy in the rural areas in the last few years we notice that most women under forty, and all young mothers are semi literate. At workshops there is a high percentage of women taking notes and attempting to read from the board in both Swahili and English. The lack of reading material in most rural homes means that women with a basic education are intellectually starved once they leave school. The demand for personal copies can only encourage a "teach yourself" approach, helping to increase literacy as well as encourage improved home hygiene.

The text

Text has been included so that it provides a reference should details of the teaching be forgotten. Although most rural women are only semi-literate, we are working on the principle that we are not dealing only with individual talents. In most extended families someone can read, and school children are rapidly becoming useful in this way. By giving each woman a text book of their own, they will be able to take it home, where it will be seen by many more people. How much use does the average flip chart receive? For so much of the time it is hidden away in the health workers files. By printing individual copies, health material sees the light of day for far longer.

Field testing

It is commonly held that for a community training material the illustrations will be adequately understood if a comprehension rate of over 80% has been achieved. All the illustrations have been thoroughly pretested and adapted twice, and the booklet itself has been pretested in the field. We are thus confident that this publication is appropriate for the communities for which it is intended.

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Dak makare e tie nam

Healthy Living Beside Lake Victoria



Gik punjo molosi ni jotich mag thieth mag South Nyanza kod District duto mag Western Kenya, mondo ochiw ne Riwrnok mon ma wacho Dholuo kod Riwrnok mag weche pi mag jo modak eding nam kuonde ma pi maler ose chope.

A teaching aid developed for health workers in the South Nyanza and Western Districts of Kenya, for distribution amongst Dholuo speaking womens groups and water committees living beside the lake, where protected water has already been obtained.

Chairman's Foreword

KWAHO has embarked on many serious programmes to accelerate community training in water and sanitation in support of government overall objectives of achieving health for all Kenyans by the year 2000.

The provision of safe drinking water is one of the most fundamental requirements in the project areas where KWAHO operates. However, it is important that water provision is coupled with the full understanding by the communities of the connection between personal hygiene and methods of water utilization with many water-related diseases. This is also one of the key elements of Primary Health Care which is being addressed in Kenya, in the Child Survival and Development Programme.

Although KWAHO has an extensive network of "water for health assistants" working in the field, providing the training that is so vital a component in any community-based project, these field officers have little in the way of teaching aids to make their message clear. This booklet was therefore developed as part of a series that aims to provide a manual for each project area, dealing specifically with the technologies used in the area and relating to the particular health problems of the district.

Three such booklets have been produced to date, relating to water supply projects in Kwale District (in Swahili), Tana River District (in Swahili) and this particular one, which reflects the problems of those communities living on the shores of Lake Victoria, South Nyanza (in Luo). The illustrations are intended to provoke discussion and convey specific messages on health matters related to each particular community, and for this reason, the booklets should be used only in the areas for which they were designed.

It is a pleasure to note that KWAHO in its small way is contributing towards the remedy of these problems by developing a training system that should create a more general awareness among the communities living in the project areas.

This booklet is intended to supplement what the Ministry of Health is striving to achieve in these areas and this effort is highly appreciated. It is therefore my sincere hope that this booklet will be made use of in the way that it deserves and that it will go a long way towards ensuring that the training activities in KWAHO's project areas achieve the desired goal of improving community health through the knowledge and practice of better hygiene in the home.


James A. Arino

Chairman, KWAHO

Executive Summary

Kenya Water for Health Organization (KWAHO) is an indigenous Non-Governmental Organization which supports community efforts in the rural areas to achieve safe drinking water and better sanitation facilities.

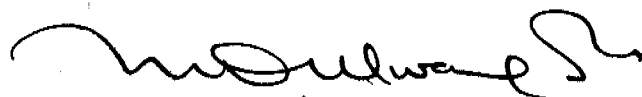
To achieve sustainable projects, KWAHO places great emphasis on community mobilization at every stage of the project. To this end, methodologies have been developed whereby rural communities are involved from the beginning, with project identification and planning, and follow through with the implementation of the project. KWAHO's role is to train community leaders and village technicians in operation and maintenance, so ensuring an ongoing water supply. The training of men and women at the village level has, therefore been one of KWAHO's major concerns.

Whilst the primary goal is to supply clean water, this benefit to health can be lost through poor hygiene practices due mainly to ignorance of health hazards. With effective training, these habits can be changed without undue demands on the workload of the women themselves, or on their income, so ensuring a more healthy life for communities where clean water is already available.

For this reason, KWAHO has set up a division of Community Health, with a section producing health education material suitable for the project areas concerned. Although to date these messages have focused on the much needed subject of water-related diseases and sanitation, there are many other concerns besides these that are crucial and need to be addressed if a healthy family is our objective. With the formation of a Women in Development Division within KWAHO, there is the need to focus on a more broadly based type of training material, which should encompass nutrition, immunization and home industries.

This booklet therefore, developed for the Luo and Aba-suba communities living on Mfangano and Rusinga Islands and along the shores of Lake Victoria, is intended as the basic training manual in water-related diseases, for KWAHO's Water and Sanitation Programme, where an extensive health education drive is taking place.

As KWAHO has water projects in every province throughout the country it is expected that eventually each area will be catered for, until a comprehensive series of training material exists. In this way, KWAHO hopes that this will also help to compliment government programmes in these areas.



Margaret Mwangola

Executive Director, KWAHO

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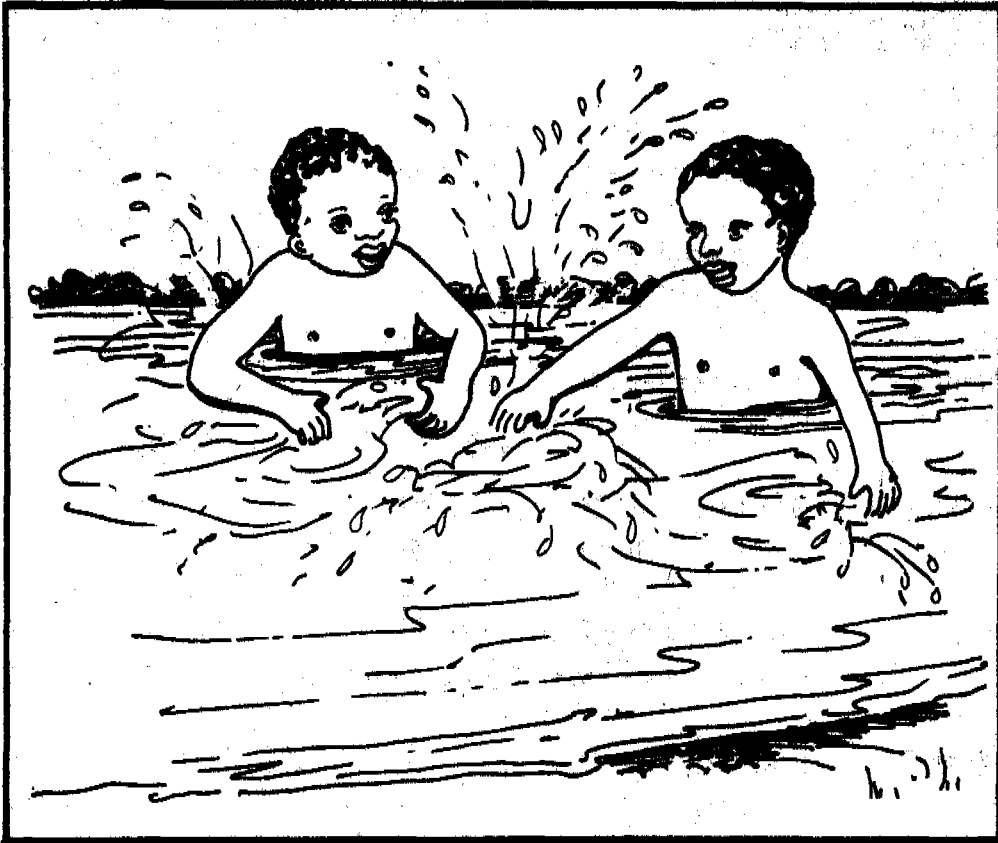
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Watiyo gi nam eyo mane?

1



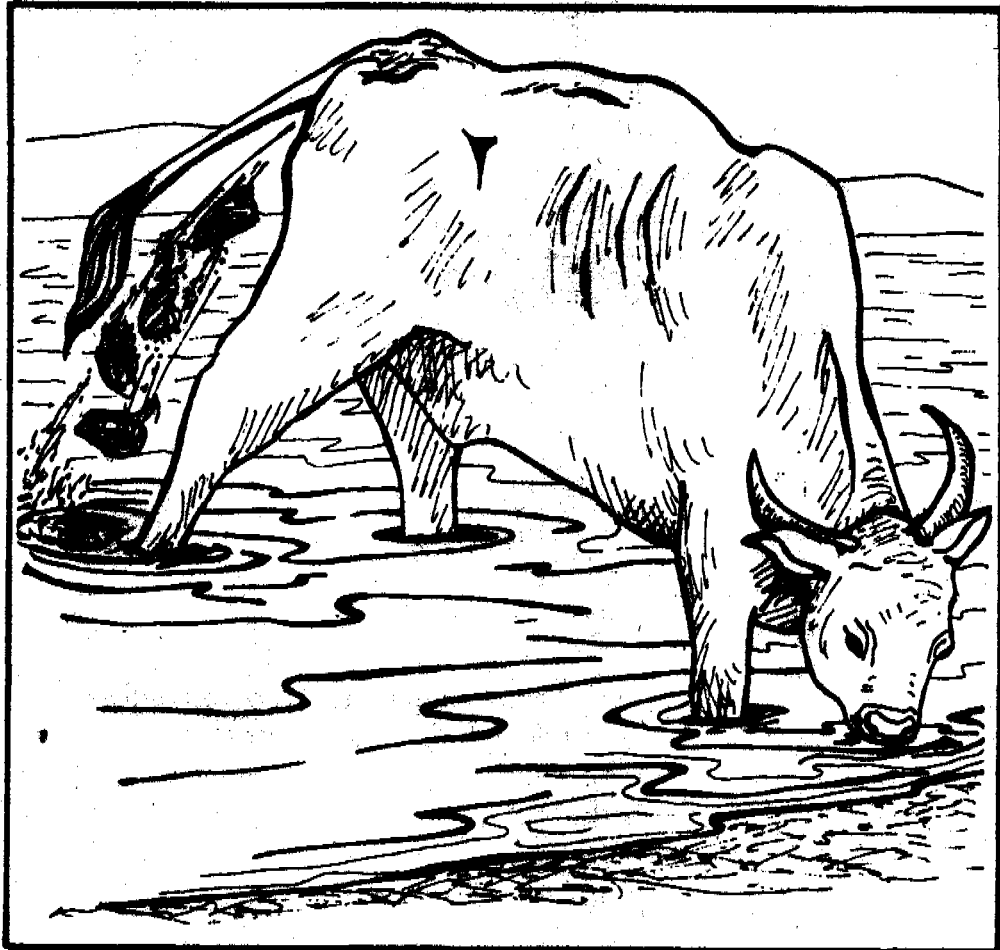
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3



4



GERM EN ANG'O?

Modho pi nam

Pigni bende ber mar modho

Pigni ok ber mar modho nikech osehida kod owuoch jamni kod losruok dhano

En ang'o manyalo timi kaimodho pigni?

Inyalo yudo:

1. Bilhazia (layo remo, pielo remo)
2. Diep
3. Ng'ok
4. Njokni



Bende ing'eyo gima kelo diep?

Mik Okech bende ne ok ong'eyo gima kelo diep. Waneno kae ka otuomo pi enam mondo omodhi. Pigno nenore maler omiyo omodhe ok oyie ni gimoro nyalo beda marach epigno mak mana ka onyalo neno. Kata kamano nitiere gik moko matindo ahinya maok wanyal neno, omiyo ber kawawinjo weche ma joma olony wachonwa.

Bende ing'eyo gima 'germ' en ?

Germ en kudni matin maok wanyal neno gi wang'wa. To kata ok wanyal nenogi, giyudore kamoro amora. Kuom kute maok ne gi wang', moko nitie makonyowa. Kute moko kaka Penicillin inyalo los godo yath mathiedho dhano, kata manego kute mag germs.

Ere kaka chak poto? Kata en ang'o matimore ka ibago kong'o?

Nitie kute matindo miluongo ni bacteria ei chiemo duto. Kutegi emamiyo chiemo wichore. To chak wanyalo hero mondo opoti, kata kong'o bende ibago nyaka chiegi, kuom mano bacteria manie chak kata kong'o biro tiyo tijego. Kata obet niok wanyal neno bacteria gi giwang'wa, mak mana gi darubin, bacteria konyowa kuom poto chak.



Rango pi gi darubini

Germ en ang'o? Ere kaka inyalo neno germs?

Ka laktar orango pi ma Mik. Okech omodhono gi darubin obiro neno kute matindo tindo mang'eny magoyo abal epigni. Kute gi nyalo bedo makonyo dhano kata maricho kuom dhano. Kute marichogi iluongo ni 'germs' to kendo ginyalo ketho ringrewa kagi yude chiemo to moko bende kelo tuoche edel.



Pi-nam duto chal kamae mak mana ka ochwake

Yore moko mag loso pi mondo obed maler?

1. Chungo kata thiwo pi kapod ok omodhi
2. Weyo pi mondo ochungi kuom sache moko, ae bang'e lthiwo maler manigi malo. (Mae itimo gi agulini adek.)
3. Keto e yadh pi mapogo pi maler kod chuodho yore. Bange chuodho gi Igolo oko.
4. Yawa moko bende ole jik.
5. Pi kiweyo e chupa kata juala maler ae iketo echieng' kuom odlechieng' mangima, chieng' biro nego kute.

To bende yoregi miyo pi bedo maler chuth?

Yore gi duto beyo to kata kamano ok ginegi kute duto makele tuoche.

Ere gima omiyo chuako pi kende eyo maber chuth?

Liet nego kute manie pi. Mondo ing'e ni kute duto otho, chuak pi miyeny. We pi oyieny kuom dakika auchiel (6)



Pi maler—Pamp mar luedo

Ere kendo kaka wanyalo yudo pi maler?

1. Kuom pi migoyo gi pamp
2. Koa e sokni kata kisima mogeng' maber
3. Pi koth mochiki etado.

Ochuno ni nyaka ichuak pigei kata keto echleng'

Pigei ler chutho

Ere gima omiyo iparo ni pige moa e bwo lowo gi ler chutho?

1. Nikech ok nyai chidgi kod losruok dhano kata owuoch jamni ka en piny eilowo.
2. Mak mana yo maonyalo chido go en mana ka oger cho machlegni, maok okadho mita 30. Losruok dhano nyalo mol machopi epi. To ka oger cho mabor mokadho mita 30 to pi thiwore koluwo kuoyo.



ERE KAKA GERMS LANDORE?

Luetewa lando 'germs'

'Germs' ni kamoro amora, molooyo to elosruok mar jamni kata mar dhano. Kute gi nyalo donjo eidendwa koluwo kamoro amora moyawore machalo kaka dhok, wang, it, duongni, kata kama gimoro ong'ado.

Ere kaka kutegi chopo eluetewa?



Godiechieng' watiyo tije mang'eny mamiyo wamulo gik maek ler.

En gik mage manyalo chido luetewa?

1. Nyiedho kata mulo jamni
2. Kwanyo owuoyo
3. Yuayo losruok nyathi, samoro dipo ka losruok omienore e luetewa.
4. Bang' losruok bande dipo ka losruok omienore e luetewa
5. Kwanyo chlemo moluar piny kama ochido. Kaka kwanyo maembe moluar piny e owuoch jamni.
6. Mosruok kod joma luetegi otingo kute makelo tuo.

Loso chiemo gi luedo mochido bende kelo tuo mar diep

Mik Okech ok daw luoko luetene sache ma odwaro loso chiemo to nikech ok gineere mochido. To kata kamano kute kata germs ok wanyal neno gi wang'wa nono.

Lwang'ni bende ting'o germs



Ere kaka lwang'ni lando germs?

Lwang'ni kuongo lagore kuonde mochido, ae bang'e to gi fuyo ka gi dhi kar tede. Ka po gipiyo echiemo to giweyo germs momoko etienegi mochido. (Chalo gi ng'at modonjo eot ka tiendene otimo chuodho, omieno chuodho eot). Aye bang'e wachamo chiemo man gi germs.

Ang'o ma omiyo chiemo manumu rach molooyo ma ose tedi

Mik. Okech ng'ado nyanya ma idwaro cham manumu. Germs manende ni eluete kande biro donjo enyanya. Germs gi ok nyal tho nikech nyanya ni ok otede. Germs gi biro donjo ei jode omiyo gi biro yudo tuo diep.

Kethruok mar chiemo kata pi moka eyo marach

Kata obedo ni Mik. Okech omo pi moa epamp mar luedo pod ok one ber to nikech joo de pod diep mako.



Ere kaka lwangni tingo germs?

Lwang'ni ohero lagore kendo nyuolo tong kuonde mochido. Maloyo to kuonde ma losruok kata owuoyo nitle. Bende lwang'ni ohero lagore e ring'o kata alote mokethore, adhola man kuom dhano kata jamni bang'e to gi piyo echiemo.

Ere kaka germs donjo eringrewa koluwo dhowa?

Luetewa rwako germs eringrewa. Watiyo gi luetewa kawachiemo omiyo yo mayot ma kutegi nyalo donjogo edendwa en chiemo kata pi mawa modho. Mae chalo gi idho nyamburko, ekaka bende chiemo kata pi ting'o kute.

Kaing'iyó pichani bende inyalo neno gima omiyo Joode pod diewo?

1. John mawuode matin nende tugo oko echilo. Riyo ohinge kendo odonjo eot mondo omodhi. Luetene ochido to kata kamano okawo okombe, to sache ma otuomo pi luete ne oling'ore eipi. Germs duto moa eluete ne odonjo eipi. Koro Joodni duto biro diewo to nitech luet John maechido.
2. Diek gi gwen owe donjo eiot. Chiemo duto ok oum, kendo sande bende okere edier ot. Diek nang'o sande gi dhoggi magise chamo godó gik mochido moting'o germs.
3. Gwen idho ndowo ma pi nitie. Kaka ok oum pigni losruok gwen lwar ei pi.
4. Onge gima ogeng'ni lwang'ni. Lwang'nigi osewuotho e losruok oko. Kamano bende gilagore echiemo magiyudo eodni. Germs duto giweyo echiemogo. Diep inyalo geng' koum pi to kod chiemo duto.



Luoko luedo maonge sabun ok gol germs duto

Kaka ginyalo logo eyo maber

1. logo gi sabun nyalo miyo gibed gi luedo maler molojo. Sabun emanyalo golo luya kata mo eluetewa. Ka onge sabun to pi golo mana buru kende. Germs bende pondo ekokewa kata e kind luetewa. Omiyo sabun emanyalo gologi.
2. Gi tuoyo luetegi gi taulo achiel. Ka achiel kuomgi nigi tuo mar del to nyalo mako joma odong'. Ber mondo ng'ato owe luetene two kendgi.
3. ok onego gi luok luetegi ei pi machalre. ~~Mae~~ bende miyo tuo mang'ato nigo mako jowadgi. Ber ka ng'ato ka ng'ato oolne pi maler sama ologo.



Chamo chiemo mochido nyalo kelo diep

Ere kaka chlemoni ochido?

1. Kik iwe chiemo obudhi kuom ndalo molyo achiel kapok ocham.
2. Chiemo nende olosi gi luedo mochido.
3. Chiemo ng'ich
4. Lwang'ni lagore echiemo kendo weye germs.
5. Gichiemo gi luedo maak oluoki maber.

Wanyalo timo ang'o mondo chiemo obed maler?

1. Cham chiemo duto e sache ma otedee no
2. Chiemo ma odong' mondo oum kendo okan maber.
3. Jamni mondo ogeng' kik donji eot
4. Luoko luedo maler gi sabun kapod ok ochak loso chiemo.



GERMS NYALO TIMOWA NADI?



Ngok kod diep biro nikech pi mochido kata chiemo marach

Migosi okech winjo ka otuo. Iye okwot kendo owinjo ka odwaro ng'ok.

John to ose chako ng'ok. Samoro ka tuo omako ng'ato to onyalo ng'ok kendo diwo kaachiel.

Raphael to ose diwo mang'eny. Okonyal geng'o diepni to iye bende pod okuot akuota. Koro owinjo ka ose chako ool.

Bende magi timore eodi.

Inyalo geng'o ma kuom timo ang'o?

Bende ing'eyo tuoche mamoko mamodho pi mochido kelo?

Kolera—del maliet, diep mochwere, nyosruok del, pi rumo edel gi ko tho.

Tuo Chuny—iyi rami, del maliet wang'i nenore ratong' kendo olo.

Typhoid—Wich bar gi del maliet, iyi kai, diep, paro malai.

Ndira—diep mochuere, pi rumo edel, kendo del bedo maliet.



Mi ng'at madlewo piyo mang'eny mondo kik pi rum edende



En ang'o ma onego itim kang'ato diewo kata ka pi rumo edende.

1. Miye pi mang'eny kaka nyalore, to molooyo bang' lonrok.
2. Ka pi ok nyal moko ei nyathi, to miye pigno mos mos gi kijiko.
3. Nyathi maja higini ariyo onego mi pi chupa mar Tree Top ariyo nyathi mokadho luigini ariyo chapa Tree Top 3 to ngama duong' chupa Tree Top ang'wen.

Mikayi Okech ong'eyo maber ahinya nimiyo Rafael chiemo to diewo medo mana ketho iye. Omiyo Rafael onge gima ochamo. Kaochopo odleching mar ariyo, dende medo nyosore kendo ool ahinya.

Bende Inyalo paro yore moko mamiyo pi nyalo rumo edel?

1. Ka piny liet, luya wuok to onge gi ma ngato nyalo madho.
2. Ka del nigli liet mamalo, luya wuok omiyo pi wuok edel kamano.

Ka del onyosore, ng'at matuo onego medhi mang'eny kaka nyalore. Ka on'ok to mondo omiye pi mos mos kata gi kijiko. Ma ego mayot ma min nyathi nyalo konyogode nyathine mondo kik pi rum edende kata mondo ogik diep.



Nyithindo nyalo tho ka gi diewo mi pi orumo edendgi.

Wanyalo ng'eyo nadi ni pi orumo edel?

1. Dhok two kendo barore.
2. Wang' nenore ma odonjo iye kendo otwo
3. Kaitemo yuak to pi wang'i ok wuogi.
4. Lach wuok matin manigi tik mang'we.
5. Del motwo makata ng'ato ong'wenyo to kawo sache kapok odak ewang'e.
6. Chuny wi nyithindo lutore.

Rafael lalo pi mang'eny nikech diep. Riyo hinge piyo kendo owinjo ka ool.

Ochalo kaka yien maonge pi, dende chako nyosore. Ka oweye mak omede pi to onyalo tho. Ma ose nego nyithindo mang'eny.

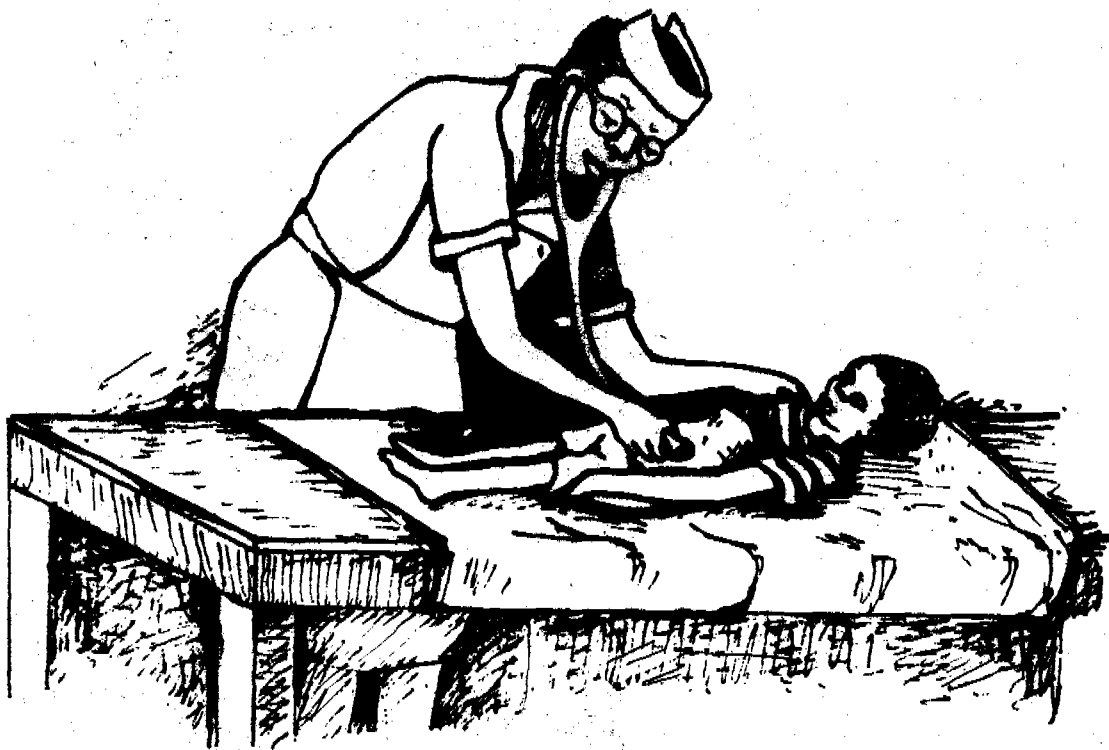


Ka ok ineno pogruok kuom nyathi bang' ndalo achiel to ltere kar thieth.

Rafael osebedo ka diwo kuom ndalo adok. Mikayi Okech koro oneno ka Rafael ok nyal kwo kaok otere kar thieth. Jathieth oneno ka Rafael rach ahinva kendo owacho ni Mik. Okech ne onego bed ni osekelo Raphael kar thieth chon.

Jathieth nyiso Mik. Okech ni nitie diep tieng' diriyo. Achiel ok lich ahinya kendo inyalo thiedhi ei dala kaimiyo nyathi pi mang'eny kod chiemo maber. Machielo en minyalo thiedhi mana gi yedhe matekregi ng'eny manyalo nego germs. Yedhegi inyalo manayudi kar thieth. Ka ineno ka diep ok dog chien to ing'eyo ni en manyalo neko.

Rafael ne chlegni tho.



Pige machal nadi maber kodgi

Bakti mar ORS, pi olembe kata mana soda inyalo miye, mondo olos dhoge. Pi apiya maler kaka chai, pi ma oketie mor kich kata sukari. Pi mchele bende ber. Kado mabende medo chiemo edende ber molojo.



Rafael omi yath maduoko pi edel (ORS), yadhni en yath ma olosi ma ingiewo kendo iruwo gi pi maler. Ka imodhe to odwoko pi kod chumbi mosebodo ka lal ka idiewo. Omiyo del bedo gi teko kendo, mana kaka yien moolie pi bang' oro.

Pigni inyalo loso kendi bende. Ikawo chumbi matin, sukari mopong'o luedo achiel, iruwo gi pi maliet e kikombe. Kata kamano pigni inyalo mana loso ka joma otelo ni thieth onyisi nikech ka olose marach to onyalo hinyi kar mondo okonyi.

Nyathi madiewo ka owe kech, rach molojo

Ngat matuo owinjore ochiem mondo dende obed gi teko mar kedo gi germs. Kata obedo ni chunyi ok gomb chiemo, di ber ka omigi chiemo matin matin sama ginyalo. Nyathi maok chiem maber, ka tuo mar diep omako to rach molojo kendo nyalo kata tho. Mik Okech koro ongeyo ni chiemo matin to mayom kendo olos maber biro konyo nyathi chango.



Bende onego imi nyathi chiemo kata ka odlewo bang' chamo chiemono?

Ber ahinya mondo item miyo nyathino chiemo. Kata ka obedo ni odlewo bang' chiemo, matin to nyaka dong'le mamede teko.

Chiemo mage maber gi ng'ama dlewo?

Chiemo mayom kaka mchele, nyuka, rabuon monyuasi, oganda monyuasi, mkati, rech, olembe kaka rabolo, machunga, maembe kod mananas. Chiemo motimo mo kata machwe tek mondo del oreg piyo.

Ber ka idhodho nyathi madiewo

Mik Okech nopuonji ni chiemo maber gi nyathi madiewo en chag thuno. To nikech chagni kere edel piyo, en gi teko mar gengo tuoche kendo kedo gi germs.

Nyithindo onego dhodhi sache duto magidwaroe, kata ka dhodhe no nenore ni mede diwo. Ka nyathi pod tin ekaka yot mondo otho nikech pi orumo edende, kata kech. Maatimore nikech min mare ok pidhe maber kinde ma odiewo.



Ang'o momiyo chak thuno ber?

1. Chak donjo kuom nyathi kapok oyudo germs.
2. En gi liet kendo odonjo e dand nyathi piyo.
3. En kod kit chiemo duto ma nyathi enogo bed godo e ngimane.

Mi nyathi chak thuno engima mare kaka nyalore, kendo ma nyalo bet maber ka nyathi odhodho thuno kuom ndalo ma ok tin ne higni ariyo.

Ka nyathi doth to onego odhodhi thuno koni gi koni saa ka saa ma odhothie, ma miyo chak bedo mang'eny ethuno duto kor achich kod acham.

KAKA INYALO GENGO GERMS KUOM JOODI

1. Kan pi modho el gino man gi raum.
2. Log luel kapod ok loto chlemo.
3. Pile logi epi maler gi tabun.
4. Pile tok chlemo mallet.
5. Luok kata poki chlemo duto michamo ka ok otedi.
6. Luok sande duto bang chlemo kendo kan gi eng'ango.
7. Dipo mari mondo obot maler.
8. Gang jamal kod iwang ni mondo kik donji el ol.
9. Kuny bur mar yugl kendo iwang yuglgo.
10. Log el cho kata kow kover ka lobi tasori obungu.

GENGO GERMS KUOM JOODI

Kan pi modho ei gi man gi raum

Inyalo neno kaka okan pi maber?

Pi modho miolono okan eyo maber, nikech nyithindo ok nyal ling'e luete gi kata ka gidwaro modho. Dag pigno nigi raum kendo kube bende nigi raum mamiyo gwen kata jamni ok nyal chido pigno.

Gi kano pi mane maber moloyo?

Kube ber nikech ngato ok nyal ling'oe luete to rachne en mana ni gole pi ka opong tek kendo luoke maber bende ok yot. Kano pi ei agulu yot to onego iket agwata ma bade bor mar tuomo pi, kendo nyithindo bende onyisi mondo kik lut luete gi epi.



Logi kapod ok Iloso chiemo

E pichani bende inyalo neno kaka Mik. Okech tinde logo maler gi sabun kapod ok omulo chiemo moro amora.

1. Mik. Oketch tinde logo maler gi sabun kapod ok omulo chiemo moro amora.
2. Dipo mare ler ahinya kendo koro Iwang'ni tin edalane. Bende okano chiemo ka oumo.
3. Ogeng'o ne jamni mondo kik donji eot, kendo ong'awo chiemo kaka owinjore nikech ong'eyo ni mano ekaka onyalo geng'o tuoche.
4. Omiyo joode chiemo mowinjore to nikech ong'eyo ni ma eyo maber ma onyalo gengo godo tuochemondo kik mak joode.



Luok lweti pile gi sabun

Bende inyalo neno kaka jood Okech logo maler sani?

1. Mik. Okech ong'eyo ni ok owinjore mondo jiduto ologi epi majite oselogue.
2. Nyare ma Grace olo pi maler ne nyathi ma.Benta mondo ologi.
3. Gi duto gi logo gi sabun.
4. Ok gi ywe lwetegi etaulo.



Ere kaka Mik. Okech ne nyalo chido luetene?

1. Samora nende oyueyo nyathi bang ka nyathi olosere.
2. Nyalo bet ni ochido luetene bang losruok.
3. Nyalo bet ni nende onyiedho.
4. Kata bang' yuecho kata golo thieth gwen.

Chiemo maber molooyo en chiemo Maliet.

Mik Okech ong'eyo ni ka chiemo owe piny ma ok oum sache moko to germs nyalo donjoe, ma owichre. Ka ok oume to hwang'ni bende nyalo keloe germs.



Chiemo mage kendo mawachamo ka ok otedi?

Achiel kuom yore ma nyithindo yudogo tuo mar diep en ma.

Nyithindo nyalo kuanyo gik molwar machalo kaka maembe, manyalo bet ni ochido kendo oting'o germs. Gibiro chamo olemoni kaok giluko kata mana poko.

Luok sande bang' chiemo

Two sande eng'ango

Bang' chiemo Grace luoko sande kod sabun mondo gi bed maler.

Ong'eyo ni sande molil kelo lwang'ni, to lwang'ni kelo 'Germs'. Sande iketo eng'ango mondo otwo. Chilo kata jamni ok nyal chopo manyalo ketoe germs.



En kit chiemo mage maloso chiemo mowinjore?

1. Chiemo mag gero del—rech, ringo, oganda tong kod chak.
2. Chiemo mag gengo tuoche—Olembe, kod alote.
3. Chiemo makeko liet—mkati, kuon, oganda rabuon, mchele, kod sukari muogo.

Ket dipo mari obed maler

Kuny bur mar wito yugi kendo wang' yugigo.

Grace ong'eyo ni chiemo motow kod owuech jamni kowe mokere, to kelo lwang'ni to lwang'ni kelo tuoche.



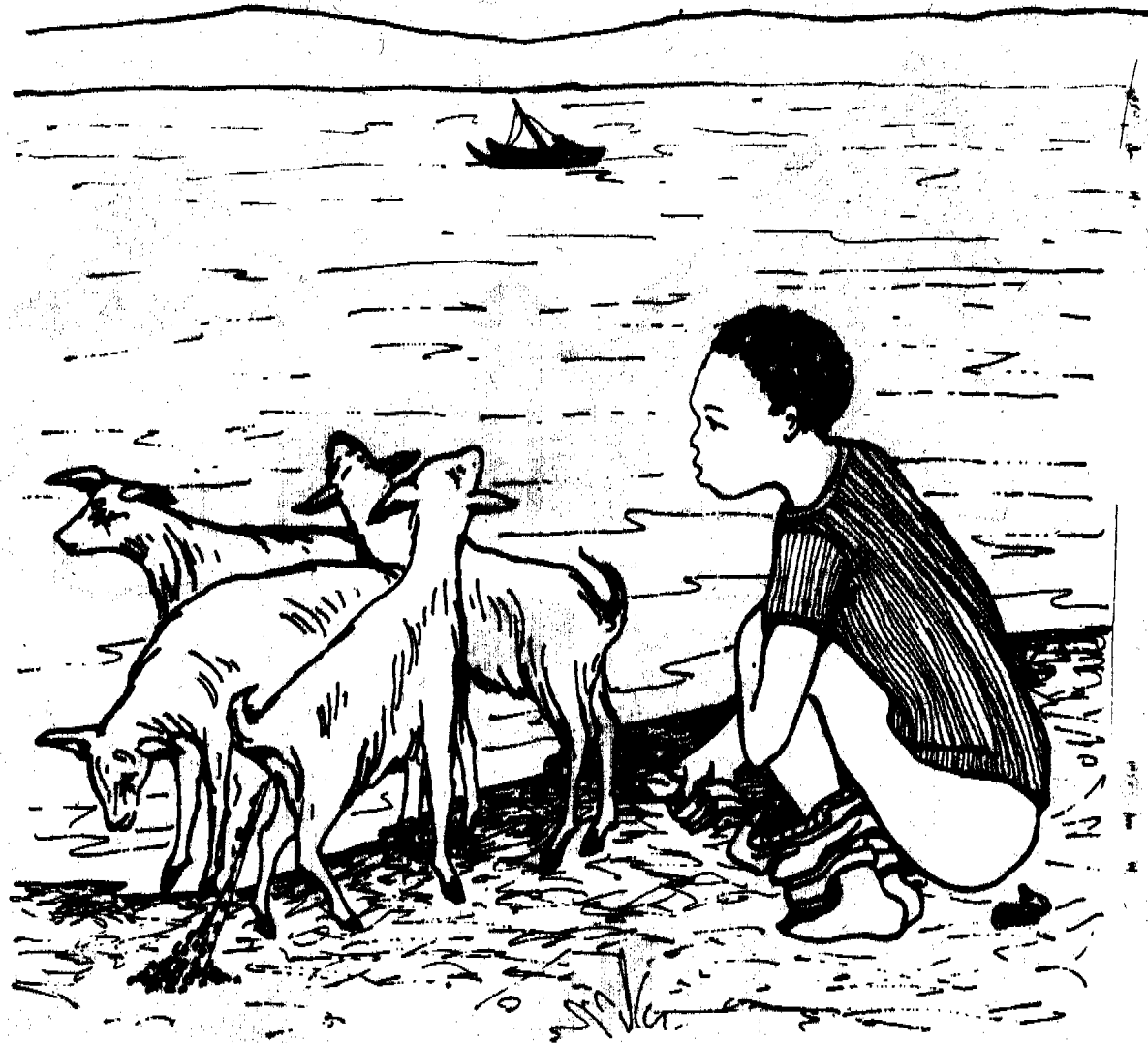
Joka Okech Okunyo bur ma iwito e yugi obath dala. Giyweyo dipo pile pile kendo giwito yugi ebur magi kunyono.

Jamni otwe mabor kod ot.

Jood Okech nigl cho maber kendo ler, magengo' lwang'ni.

MIGAWO MAR 5

TUO MAR LAYO REMO



En ango minyalo neno epichani?

Rawera ni okelo diek enam mondo omodhi. Kapod diek modho rawerani dwaro losore. Ok odhi mabor to olosore mana machiegni gi nam. Losruokne biro donjo ei pi bang' koth to nikech koth nyalo yuayo lowo moriwere gi losruok madonji ei pi. Nyithindo bende nyalo layo ei pi.

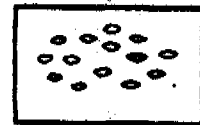
Ere kaka tuo layo remo landore?



Nyithindo bende nyalo layo ei pi



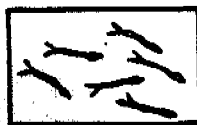
Ng'at manigi tuo layo remo nigi njokni eiye.
Njokni gi nyuolo tong' mawuok
gi lach kata losruok mare.



Raweregi nigi layo remo. Sache moko losruok gi kata lach otimo remo. Remo ni
oa kuom njokni manie igi. Njokni gi nyuolo tong' mawuok gi losruok kata lach. Ka
tong' gi ochopo eipi to lokore njokni matindo.

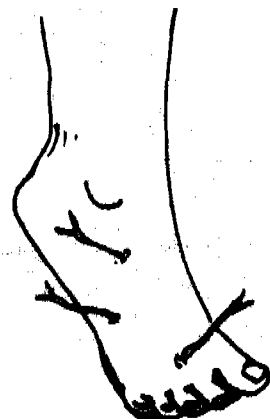


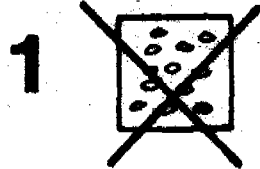
Tong' layo remo ka ochopo ei pi kapok okadho sache 16, gibiro dongo kendo lokore kute. Mondo kute gi odagi nyaka giyud kendo gidonji ei kamnie kapod kokadho sache 16, kaok kamano to kute gi tho.



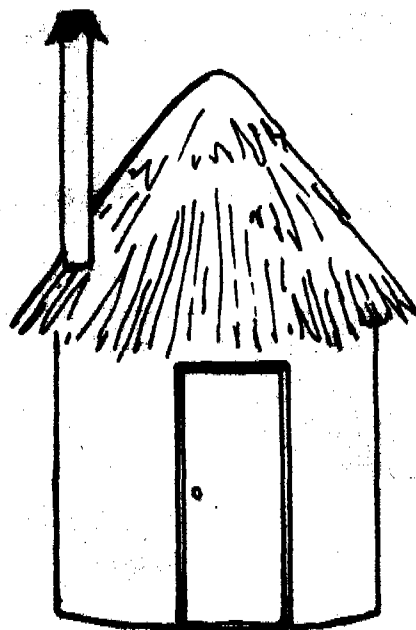
Kute man ei kamnie biro lokore njokni. Njokni gi wuok kuom kamnie kendo donjo eipi. Chuno ni nyaka gi donj kuom dhano kapod ok okadho sache 48 nono to gi tho.

**ERE KAKA WANYALO
CHUNGO LUORRUOKNI?**





NEGI TONG DUTO.



2



GENGRI KUOM KUTEGO.



Gengo tuo layo remo. No. 1

Ere kaka wanyalo tieko layo remo?

Yo mawanyalo tieko go layo remo en mana geng'o njokni mondo kik donji ei pi mae nyalore mana kajiduto oriwore mondo 1er obedi eg'weng'. Tiende ni ji duto mondo olosre eicho kata oik losruok elowo to bende kik ng'ato laa e nam.

Ere kaka jogweng' nyalo tieko layo remo?

1. Ngato ka ngato ka odhi losore e bungu to nyaka one ni oiko losruok ei lowo to kaber to ji duto mondo oger kendo oti gi choche.
2. Chirni nyaka bedi gi choche ma onego riti kendo telie gi jodong gweng'. Welo kik mondo oyienegi ochidi gweng' nikech mano nyalo kelo bilhazia.
3. Kuonde puonjuok mondo obed gi choche kendo nyithindo mondo opuonji tiyo gi chochego eyo maber. Jopuonj onyis nyithindo gi mondo losore e chochegi kapod ok gi dhi emiechgi, mae biro geng'o losruok eyo.



Kik Ipidh Iwang'ni: kaw kwer



Gi maber ma Mik. Okech opuonjo joode en ni nyaka gi ik losruokgi gi lowo. Ka ok gi imo to Iwang'ni biro lagore etosruokgi. Ngato ka ng'ato ka odhi losore ebungu to nyaka one ni okunyo bur ma oike losruok. Umo kata lko losruok gi lowo gengo tuoche kaka layo remo gi diep.



Luok lueti bang losruok

Sachê moko inyalo aa losori to iyudo ka onge ng'ato manyalo olo ni pi llogi. Gikanyo inyalo tiyo gi okobo motuchi kendo ong'aw malo machiegni gi ot. Okinyi ka okinyi keti pi ei ndowo but kama ong'awe okoboni. Gir tuomo pi bende iketi. Ol pi e okobo ni, kendo ilogi gi pi machuergo. Kik wiyi wil mak itiyô gi sabun.



Gengo tuo mar layo remo: No. 2

1. Kuonde mag luok mondo oger but pamp mag pi. To mondo oger kar chuo, kar mon kod kar nyithindo, mae inyalo ger eyo mayot. Inyalo lose gi lum kata it rabolo.
2. Chike gweng mondo obedie mapogo kuonde luok gi kama jamni nyalo modhoe kata kuonde tuomo pi modho.



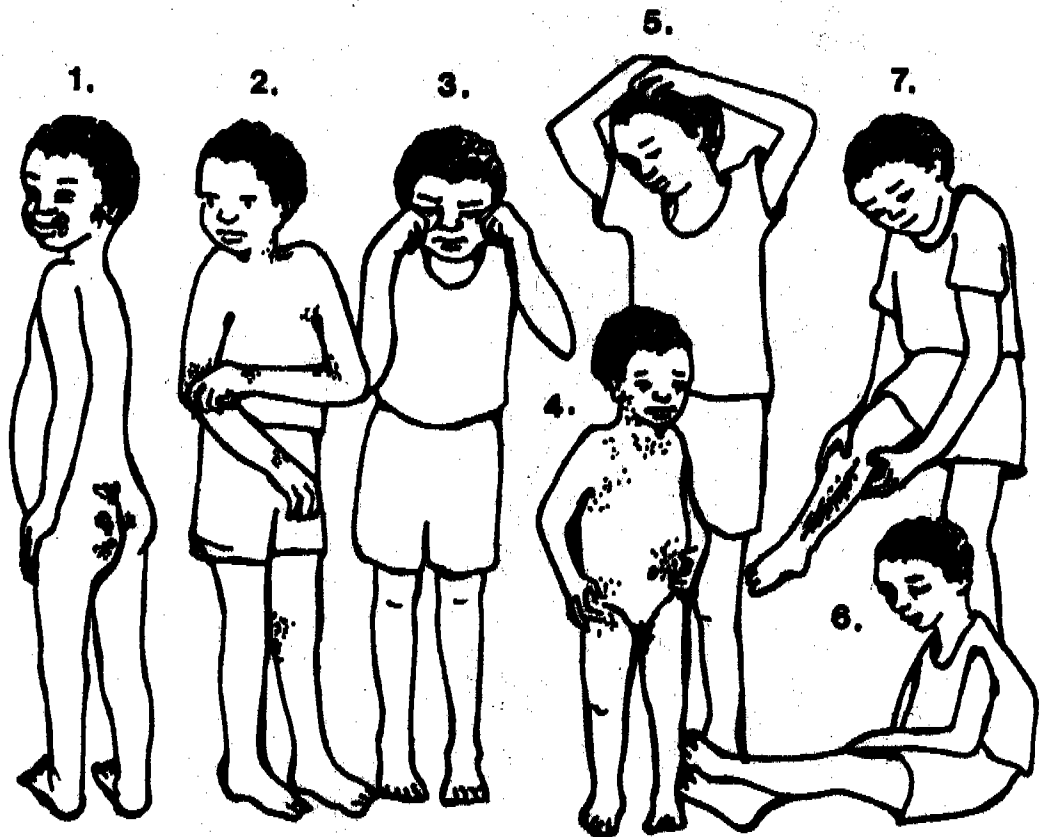
Tuoche moko mabende wuok epi

Tuoche miyudo ka ok waluokore moromo

Jl mang'eny yudo tuoche nikech ok gi luokre kaka owinjore, kata ok gi luokre gi sabun manyalo golo germs e dendgi.

Bende ing'eyoe tuoche moko mapod odong' mak wawacho?

Mondo wageng' tuohegi nyaka iluokri pile gi pi maler kod sabun. Luok wang' nyithindo kochido kendo ka gin gi athung'a. Ka ok kamano to lwang'ni nyalo lagore ewang'gi makel tuoche moko mamiyo olokore muofu. Nyuogo kod tuoche mag del inyalo geng' ka iluoko lewni kod gige um juma ka juma.



1. Gwony makuodo pi e chia wang' kuonde machlengni gi um, It to sianda.
2. Gwony matindo tindo, manenore makwar edel molooyo to kuonde fuoni.
3. Odondwe maremo kendo nyalo miyo ilokri muofu.
4. Kute matindo tindo madak edel kendo ilo to molooyo gotieno.
5. Nyuogo.
6. Njokni madak eich kendo tieko teko.
7. Kuonde mong'adore kata adhonde matindo lokore madongo kaok'orit maler.

Tuoche ma Wayudo kuom luokruok e pige mochido.

Ji mangeny ok winj maber bang' luokruok kata wuotho epi mochido. Pigno chido nikech losruok mar jamni gi dhano.

Tuoche mage kendo mawanyalo yudo ka waluokore epi mochido

1. Gwonyruok -del mayilo to kata kuonde ma oruodho onge.
2. It malit—It lit, remo kendo tutu wuokie.
3. Um modinore—kaka kain gi athung'a.
4. Tuo wang—wang maremo, lokore makwar kendo chuer pi.

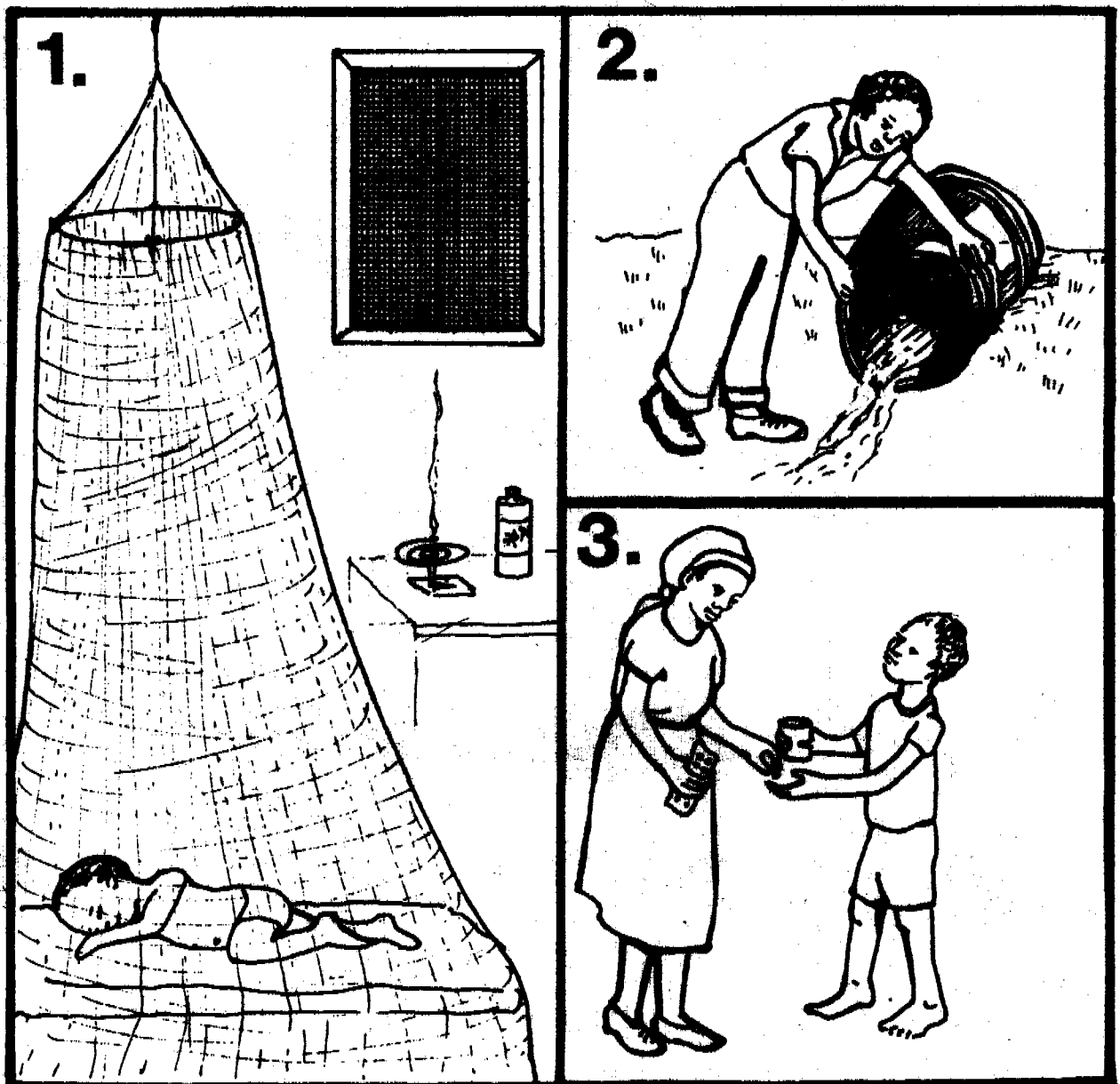


Gin tuoche mage mabende wanyalo yudo nikech wadak machiegni gi pi?

Tuoche mag malaria kod nindo nyalolwe ng'eny ahinya kuom jogo ma odak but pi. Ok yot mondo tuochegi orum, omiyo jl mang'eny ose ng'iyu kodgi.

Ere kaka wanyalo geng'o malaria

1. Wanyalo tiyo gi net mageng'o suna gotieno. Bende wanyalo keto sing'enge mar geng'o suna e dirisni. Kiro kata wang'o yadh suna bende nyalo duoko suna chien.
2. Kik iwe pige mogudore but odi kaka magi ekuonde ma suna nyuolie.
3. Wanyalo muonyo yedhe mageng'o malaria.



Ere kendo kaka tuoche landore?

Ere kendo kaka germs landore kuomji

1. Germs nyalo landore aa kuom ng'ato achiel nyaka ng'at machielo bang riwruok mar ringruok kaka tuo mar AIDS.
2. Ka wa yueyo, kama ji nitie germs wuok ei dhowa kata umwa molojo ekinde mag athunga.
3. Ka po ni ing'olo ringri to 'germs' nyalo donjo e rembi koluwo gino mochido mong'olino kaka tuo mar tetenas.

Ere kaka wanyalo geng'o germs mondo kik landre kuom ji



KA IGENORI GI JO GWENG'U TO MONDO IRITI KAR PI

Pamp mag pi nyalo dak aming'a ka oritgi eyo maber. Ma en tich jogweng' te.

To mondo ma otimre eyo maber dwarore mondo oyier joma otelone kar pi manyalo kawo tijno kaka margi.

Ng'ano ma onego yier e komitini?

1. Onego yier ji abich koa edala ka dala matiyo gi pigni.
2. Joma oyier gi onego bed joma jogweng' ogeno kendo omiyo luor. Kik gibed joma nyalo dar adara.
3. Onego gi bed chuo kod mon.
4. Onego yier gi higa ka higa mondo gimed tiyo maber.

To tij jogl en ang'o?

1. Nyaka gine ni aluora mar kar pi ler kendo onge pige mogudore.
2. Nyaka gilosi kuma pi mopukore nyalo luwo. Kaber to mondo ochikgi kuonde mopidhle alote ma ochilel maber.
3. Nyaka giger kuonde luok. Inyalo losgi kata gi lum. Kuonde luokgi onego bedi ma ji duto nyalo luokore.
4. Ka ber to onego gi dwar yo mar yudo pesa kuom jokanyo. Pesa ni nyalo konyo kuom loso pamp ka okethore. En tijgi winjore gi jogweng kar pesa ma ji onego gol kendo kaka dikan pesago eyo maber.
5. Nyaka gine ni pamp ni tiyo sache te. Omiyo nyaka bedie yo mar rango pamp gi higa ka higa. Rieko mar tijno inyalo puonjgi gi jo matiyo e Project. Ka gima onego losi e pamp tek maok gnyal loso to onego giluongi fundi manyalo tijno.

**NG'E MABER NI KA PAMP MAG
LUEDO OSE CHIWNI JOGWENG'
KORO EN TIJGI RITOGI KAKA
OWINJORE.**



Page 2

What do we use the lake for?

Page 4. PART 1

WHAT IS A GERM?

Drinking lake water.

Is this water safe to drink?

No, it is very dangerous because it has been contaminated by animal and human excreta.

Mrs Oketch did not know how diarrhoea was caused either. Here she is taking water from the lake to drink.

The water looks completely clear to her and so she drinks it. She does not believe that there is anything wrong unless she can see it. But there are some things so small that we cannot see them with our eyes. There are many things which are not what they appear to be and we have to believe what the experts say.

Page 5

Do you know what a germ is?

It is a tiny organism, so small that we cannot see it with our human eyes.

But although we can't see them, they are everywhere. Some of these microscopic organisms are helpful to people. Bacteria can be used in medicines to cure people, e.g. penicillin is a tiny fungus that can kill other germs.

How does milk turn sour?

How does beer ferment?

There are tiny bacteria in all food which live off the food. This is why the food disintegrates and turns rotten. In the case of milk, or beer, we want it to be sour, or to ferment, so we let the bacteria do their work, because these bacteria are good for us. Although we cannot see them the bacteria are there, working for us. You can only see them with a microscope.

However, all microscopic organisms are not as helpful. Many cause bad diseases and what we call infections are really tiny germs destroying our blood or skin.

Page 6

Microscopic examination of water.

What is a germ? How can you see germs?

When a doctor looks through a microscope at the same glass of water that Mrs Oketch was drinking, this is what he sees. The water is alive with tiny microscopic organisms that are swimming around and living in the water. These organisms can be useful to man or harmful. Harmful organisms are called germs and can damage our bodies by feeding off us or by bringing disease into our bodies.

Page 7

All lake water is like this unless you boil it.

Other methods of treating water.

1. By filtering it before drinking.
2. By letting it stand and then draining off the clear water, (three pot method). Bilharzia in the water will be killed if the water is left standing for 48 hours.
3. Treating it with aluminium sulphate coagulates the muddy particles which sink to the bottom and can be drained off.
4. Some people sterilize their water with Jik.
5. If you leave water in a clear glass or plastic container in the sun for the day, the water will become purified.

Do these methods purify the water perfectly?

All these methods are helpful and should not be discouraged, but none of them is completely safe as many germs still remain to cause disease.

Why is boiling water the only completely safe way to kill germs?

Because boiling temperatures kill germs. To be absolutely sure that they are all dead, you must boil your water for at least 6 minutes after it has started bubbling.

Page 8

Pure water—the handpump.

Where else can we get clean water from?

1. From handpumps.
2. From protected springs.
3. From rain water collected from roofs.

Do you have to purify this water?

No, it is perfectly clean.

Why do you think that this underground water is so clean?

1. Because it cannot be contaminated by human or animal faeces underground.
2. The only way it can get contaminated is if there is a latrine less than 30 metres away. Then the human waste in the water can seep into the well and pollute it. However, if it is more than 30 metres away the water will be filtered by the sand and be purified naturally.

Page 9. PART 2.

HOW ARE GERMS SPREAD?

Our hands spread germs

Germs are everywhere, especially in animal or human faeces. The way germs can get into our bodies is through any openings in our bodies—our mouth, our eyes, nose, ears, sex organs and cuts in our skin.

How do germs get on to our hands?

During the course of the day's work we have to do many things which make us touch things that are not clean.

What sort of things would make our hands dirty?

1. Milking cows or touching animals.
2. Collecting cattle dung with our hands.
3. When babies defecate we may get tiny particles on our hands whilst we are cleaning them up.
4. When we relieve ourselves, we may pick up tiny particles on our hands without knowing.
5. We may touch dirty food that has been lying on the ground and it collects germs. For example, a mango is picked up from the ground where it has been lying near animal faeces which have contaminated it.
6. Shaking hands with people who have contaminated hands.

Page 10

Preparing food with dirty hands causes diarrhoea.

Mrs Oketch never bothers to wash her hands before preparing food, because they don't seem to be so dirty. But germs are invisible.

Flies also carry germs.

How do flies carry germs?

Flies are attracted to dirty things to feed and lay their eggs. They especially go to animal and human faeces, any sort of decayed meat or vegetable, any sort of wound or sore on an animal or person, and to our food.

How do they spread germs?

Germs are so small we cannot see them. The fly

walks on the dirty matter, and then flies off to our kitchens. When it walks on our food it already has dirty feet, and it leaves these germs on our food, just like a person entering a house with dirty feet, leaves dirt behind. We then eat these germs with our food.

Page 11

Contamination of food and water when badly stored.

Even though she brings home clean water from the handpump Mrs Oketch is disappointed because her family still suffer badly from diarrhoea.

How do germs get into our bodies through our mouths?

Our hands carry germs into our bodies. The main reason we put our hands in our mouth is when we are eating. Therefore food and drink are the best way for germs to enter our body. It is like catching a bus. The germs get a ride into our bodies on a piece of food or a drink of water.

Page 12

Can you spot from the picture what is the cause of the family's sickness?

1. John has just been playing in the dirt outside. He is thirsty and comes in for a drink of water. His hands are filthy, but he takes the cup and puts his hand right inside the water to get his drink. All the germs on his hands float into the water and contaminate it. Now all the family will suffer from diarrhoea because of John's dirty hands.
2. The goats and chickens are allowed into the house and none of the food is covered and the plates are on the floor. The goats lick the plates. They have just been eating the garbage outside and their mouths are full of germs.
3. The chickens come in and sit on the bucket containing drinking water. It is not covered so their droppings fall into the water and pollute it.
4. Nothing is protected from the flies. They have just come from eating faeces they found lying around near the compound. Now they bring these germs and walk all over the family's food. Diarrhoea can be prevented simply by covering food and water.

Page 13

Washing hands without soap does not remove all the germs.

How could they improve this habit?

1. If they were to use soap they would have cleaner hands. Soap removes the sweat and grease from our hands. Without it the water just removes the dust. Many germs hide in our finger nails and this needs soap to remove them.
2. They are all using the same towel. If one of them has a skin infection, this disease will spread to everyone who uses the towel. It is better to use no towel and let your hands dry in the air.
3. They should not all use the same water as disease can travel in water and infect another person. The best way is for each person to have his own fresh water poured over his hands, so that he does not get infections from dirty water.

Page 14

Eating contaminated food may cause diarrhoea.

How has this food been contaminated?

1. The goats have been licking the plates.
2. The food was prepared with dirty hands.
3. The food does not seem hot and it may have

started to go rotten.

4. There are flies walking all over it and spreading germs.
5. They are eating with their hands which were not properly washed.

What can be done to prevent this contamination?

1. Do not leave food for more than a day before eating it.
2. All the left-over food should be stored in covered containers.
3. Domestic animals should not be allowed into the house.
4. Proper washing of hands with soap and water before handling food.

Page 15. PART 3

WHAT CAN GERMS DO TO US?

Page 16

Diarrhoea and vomiting are often caused by bad food or dirty water.

Mr Oketch is feeling very unwell. His stomach feels sensitive and swollen and he feels he wants to vomit. John has started to vomit. Sometimes in an acute attack, people will want to vomit and will have diarrhoea at the same time.

Raphael has bad diarrhoea. He cannot control his bowels and his stomach is swollen. He needs to relieve himself very often and starts to feel weak.

Does this ever happen in your family?

What can you do to avoid this happening?

Do you know any other killer diseases caused by drinking dirty water?

Cholera: fever, chronic diarrhoea, dehydration, weakness, death.

Hepatitis: pain in abdomen, fevers, yellow eyes and weakness

Typhoid: headaches and fever, abdominal pain, diarrhoea, confusion.

Dysentery: chronic diarrhoea, dehydration and fever.

Page 17

Always give plenty of liquids to a person with diarrhoea to prevent dehydration.

1. Continue to give drinks as often as they are wanted but especially after each bout of diarrhoea.
2. If the child cannot hold down the drinks, he should be fed the liquid slowly, a few sips at a time or with a spoon.
3. A small child needs one-and-a-half litres, (i.e. two Tree top juice bottles) a day. An older child needs two-and-a-quarter litres (three bottles), and an adult needs three litres (four bottles).

Mrs Oketch believes that if a child has diarrhoea, it will make him worse to give him food. So Raphael gets nothing to eat and he becomes tired and very weak.

Can you think of other times when the body becomes dehydrated?

1. When it is very hot and we sweat a lot, and have nothing to drink.
2. When we have a fever and the body becomes hot and sweats, so losing liquid.

A sick person who becomes dehydrated must be given as much liquid as he can drink to prevent him becoming worse. If he vomits up this liquid he should be given it in small amounts, even with a spoon every few minutes so that he does not vomit.

Page 18

Dehydration from diarrhoea can kill children.

What are the signs of dehydration?

1. Dry cracked lips.
2. Dry sunken eyes.
3. No tears when crying.
4. Very little urine with a strong smell.
5. The skin is dry and if it is pinched, does not fall back quickly into place.
6. In small babies, the fontanelle, or soft spot at the top of the head, sinks down.

Raphael is losing a lot of water because of his diarrhoea, and he gets very thirsty and dried out and feels very weak.

He is just like a plant that has no water, he begins to wilt. This is called dehydration and it is this condition that can kill children if they are left too long without liquid.

Page 19

If a child does not improve in the first day take him to the clinic.

Raphael has had diarrhoea for three days now. Finally in desperation, Mrs Oketch realizes Raphael will not get better unless she takes him to the clinic. The nurse is very worried when she sees how bad Raphael is and tells Mrs Oketch that she should have brought him long before.

She explains that there are two types of diarrhoea. One is mild and can be cured at home with continued liquids and good food. The other needs strong medicine to kill the germs and this can only be got from the clinic.

If the diarrhoea is not cured easily, it is the dangerous kind.

Raphael nearly died.

Page 20

What kind of drinks are best for them?

ORS in packets, fruit juices and even sodas can be given to encourage drinking. Any kind of liquid in the form of tea, sugar (honey) water, or rice water will help. Soups or stock which also nourish the child are even better.

Raphael is given Oral Rehydration Solution (ORS) which is a special liquid drink that can be bought in a packet and mixed with clean water. This drink replaces the salts and water lost by the body and makes the body strong again, just like a plant that is being watered after a drought.

This liquid is sometimes made at home with a pinch of salt, a palmful of sugar in a cup of boiled water. However this should only be done with careful training from the clinic staff. Sometimes it can do more harm to the child than good if it is badly made. If the local water is naturally salty, ORS may increase his dehydration if standard quantities of salt are used.

Page 21

Starving a child with diarrhoea makes them worse.

Mrs Oketch is sure that giving Raphael food while he has diarrhoea only upsets his stomach more. So poor Raphael gets nothing to eat and by the second day he is getting dangerously tired and weak.

Should you give the child food even if it gets diarrhoea straight after eating each time?

Yes. It is very important to keep trying to give the child food. Even if it seems that it all goes straight

through the child, a little bit will have remained to nourish it.

What kind of food is best for someone with diarrhoea?

Soft food such as rice, porridge, mashed potatoes, mashed beans, bread, fish, and also fruit such as ripe bananas, oranges, mangoes and pineapples. Oily or fatty foods are more difficult for the body to digest.

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Always continue to breast feed a baby who has diarrhoea.

Mrs Oketch was taught that the best food for a baby with diarrhoea is mother's milk. This is because it is easy to digest and often contains immunity from the mother to fight germs.

Babies should be fed as often as they demand it, even if it looks as if feeding results in more diarrhoea. The younger the baby the more easily they can die from dehydration or starvation resulting from bad practices by the mother when they get diarrhoea.

Why is breast feeding better than bottle feeding?

1. Breast milk gets into the child before it is contaminated.
2. Breast milk is warm and gets assimilated quickly.
3. Breast milk contains all kinds of food which the child needs for his/her life.

Keep breast feeding the child as long as possible. It would be best if the child continues breast feeding until he is two-years-old.

Feed the child from both breasts in turn each time he feeds. This keeps the milk flowing well.

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How to protect your family from germs.

1. Store your drinking water in a covered container.
2. Wash your hands before preparing food.
3. Always wash your hands in clean water with soap.
4. Always serve hot food.
5. Wash or peel all raw food.
6. Wash your plates after eating and store them on a drying rack.
7. Keep your compound clean.
8. Keep animals and flies out of the house.
9. Dig a pit and burn your rubbish.
10. Use a latrine or "Take a Jembe (hoe)" when you go in the bush.

Chapter 4, Page 24

How to protect your family from germs.

Store your drinking water in a covered container.

Can you see how well the water is being stored?

The water being poured out here for drinking has been well protected because it is not possible for children to put their hands into the water container when they get their drink, which would contaminate the water. Also, the traditional pot has a cover and the jerry can has a top screwed on, so that chickens and animals cannot contaminate the water.

What is the best kind of container to use?

The advantage of a jerrycan is that no one can get their hands in it but it is difficult to pour when full and also difficult to clean well.

The traditional pot is easier but must have a long handled ladle to draw water with, and children must be properly instructed not to put their hands in the water.

Page 25

Wash your hands before preparing food.

Can you see from the picture how Mrs Oketch has changed her cooking habits?

1. Now Mrs Oketch always washes her hands well with soap before touching food.
2. Her compound is so clean that there are very few flies around. She keeps the door closed so that no flies come into her kitchen. She prepares the food inside where there are no flies.
3. She keeps the animals out of the house, and stores the food hanging and covered so that it cannot be contaminated.
4. She gives her family a balanced diet because she knows this is the very best way to protect her family from sickness.

Page 26

Always wash your hands with soap.

Can you see how well the family is washing now?

1. Mrs Oketch knows that it is unhygienic for everyone to wash their hands in the same water.
2. Her daughter, Grace pours clean water for the baby to wash her hands in.
3. They all use soap.
4. They do not use a towel.

How could Mrs Oketch get her hands dirty?

1. She may have removed the child's faeces.
2. She may have made her hands dirty after visiting the toilet herself.
3. She may have milked the cows.
4. She may have cleaned the house, and swept up chicken droppings.

Page 27

The safest food is hot food.

Mrs Oketch knows that if food is left standing around for some hours, it can collect germs and go rotten. If it is not covered, flies will walk on it and bring germs. Which kinds of food do we eat uncooked?

One of the ways in which the children can get diarrhoea is this: children may pick up fruit from the ground, such as mangoes, and eat them without washing or peeling the skin. These may have been contaminated by animal or human faeces on which they have fallen.

Page 28

Wash plates immediately after eating.

Use a drying rack.

After the meal, Grace takes the plates and washes them immediately with soap so that they are really clean.

She knows that dirty plates attract flies and flies bring germs.

Now the plates are put on the table to dry, so that they are away from dirt and animals on the floor that may contaminate them with germs.

What should a balanced diet include?

1. Body building foods: fish, meat, beans, eggs and milk.
2. Protective foods: vegetables and fruit.
3. Energy giving foods: bread, ugali, beans, potatoes, rice, and sugar.

Page 29

Keep your compound clear.

Dig a pit and burn your rubbish.

Grace knows that rotten food and animal faeces lying around will attract flies, and flies bring disease.

So the Oketchs have dug a pit on the edge of their land. They sweep the compound every day and put all the dirt and garbage into it. The animals are kept penned well away from the house. The Oketchs have a good latrine which also keeps the place clean and helps reduce flies.

Chapter 5, Page 30

Bilharzia.

What is happening in this picture?

The boy has brought the goats down to the lake to drink. While they are drinking the boy needs to relieve himself. He doesn't go far from the lake. His faeces will easily get washed into the lake when it rains. After a heavy storm, rainwater can carry soil and particles of faeces a long way from where it was deposited.

Page 31

How does Bilharzia spread?

Sometimes children will urinate into the water.

An infected person with bilharzia has worms in his intestines. These worms lay eggs, which pass from his body in his urine or faeces.

These boys have bilharzia. They sometimes see blood in their faeces or their urine may be pink with blood. This blood comes from worms inside them. These worms lay eggs which come out in the faeces or urine. When the eggs get to the water they hatch into little worms.

Page 32

Bilharzia transmission.

If the eggs manage to get to water before three weeks they will live and then change into the larva stage. The larvae need to find a snail to live in within 16 hours or they will die.

Now the larvae in the snail will change into worms, which leave the snail and swim off. They must find a person within 48 hours or they will die.

How can we break the cycle?

Page 33

Destroy the eggs.

Keep away from the worms.

Page 34

How can we get rid of bilharzia?

The only way to get rid of bilharzia is to clear the water of bilharzia. This can only be done if the whole community decides to co-operate and control sanitation. In practice this means that all faeces must be disposed of in a latrine or well buried and no urination in the lake must be allowed.

How can the community achieve this?

1. Every person from each family should be sure to use a jembe (hoe) to cover their faeces when relieving themselves in the bush, or they should construct household latrines.
2. Schools should train children in correct sanitation and ensure that they have relieved themselves before walking home.
3. Local administration should allocate bathing areas which should be separate from animal watering places, and water collection places.

Page 35

Do not feed the flies: always take a jembe.

The most important habit that Mrs Oketch has taught her family is that they must never leave their faeces

exposed. If they do, they will be feeding the flies and so spreading disease to their whole community. When anyone goes in the bush to relieve himself he or she must take a jembe (hoe) and dig a good hole where they can bury their faeces. When they are finished they must cover it well. In this way they are helping everyone towards good health. Burying faeces not only helps reduce the spread of diarrhoea but also the spread of bilharzia.

Page 36

Always wash your hands after returning from a long call in the bush.

Grace knows how important it is for her hands to be washed after relieving herself, because she may spread disease if her hands are dirty. There is no one around to help her wash but her family have a clever way to wash hands without help.

Page 37

Prevention of Bilharzia: No. 2.

1. Wash rooms should be constructed near every handpump for men, women and children, so that use of the lake is minimized. Grass or banana leaf shelters are cheap and easy to build and maintain.
2. Local by-laws could be enacted by the administration to designate different areas for washing, collecting water, and watering animals.

Page 38, Chapter 6

WATER RELATED DISEASES

Diseases we get from not enough washing.

Many people get diseases because they do not wash regularly enough or do not use soap to wash away the germs from their body.

Do you know any other diseases that have not been mentioned already?

To prevent these diseases you must wash every day in clean water and use soap. It is very important to wash children's faces whenever they get dirty or if their noses run. If not, they will attract flies which will bring diseases which can cause eye infections which can lead to blindness. To prevent the spread of lice and skin diseases, all clothes and blankets should be washed every week.

1. Impetigo—wet sore spots on face, around the nose and ears and buttocks.
2. Eczema—An itchy red, scaly rash on the body usually near joints.
3. Trachoma—soreness of the eyes which leads to blindness.
4. Scabies—a tiny mite living on our bodies, itching especially at night.
5. Lice—a tiny insect living in our hair due to lack of washing.
6. Worms—worms living inside our bodies draining our strength.
7. Infections—cuts and wounds become badly infected if not kept clean.

Page 39

Diseases we get from bathing in dirty water.

Many people get problems from swimming or walking in dirty water. The water is made dirty by animal and human disease germs.

What other diseases can we get from bathing in dirty water?

1. Swimmers Itch—no spots but itching all over body.
2. Sore Ears—pain and puss coming out.

3. Blocked nose—colds and blocked sinus.

4. Eye infection (conjunctivitis)—sores, red, watering eyes.

Page 40

What diseases can we get because we live near water?

Malaria and sleeping sickness are common diseases for those living near water. It is almost impossible to get rid of these diseases and many people have come to accept them as part of their lives.

How can we cut down on malaria?

1. We can use mosquito nets and protect our houses at night with mosquito gauze on the windows. Spraying and burning mosquito coils also cuts down the amount of mosquitoes around.
2. Make sure there are no standing pools of water left near the house where mosquito larvae can hatch.
3. We can take weekly or daily pills to protect us from malaria.

Page 41

How else can we spread germs from one person to another?

1. Germs are passed from one person to another by sex, e.g. Aids.
2. We can breathe germs out over other people from our mouth or nose, e.g. colds and flu.
3. If we cut our skin, germs pass into the blood from the dirty object which cut us, e.g. tetanus.

How can we minimize transmission of germs from one to another?

Page 42

If you care about your community, look after your water.

Handpumps can last a long time if they are well maintained, and this is the work of the community itself.

For this to happen, the best way is to elect a group who knows that this is their responsibility.

Who should be in this Water Committee?

1. Five people should be elected from households or villages using the handpump.
2. They should be well respected, trustworthy and responsible people who are not likely to move away from the area.
3. They should be men as well as women.
4. They should be re-elected every year to ensure their continued efficiency.

What is their job?

1. They must make sure that the area around the pump is kept clean and free from standing water.
2. They must organize effective drainage of spilt water into a communal vegetable garden, possibly with fencing.
3. They must organize the building of grass wash houses for everyone so that the people are able to wash at the handpump in private.
4. If contributions are to be collected for maintenance and spare parts, the committee should decide the amount and organize the collection and safe keeping of this fund.
5. They are responsible for seeing that the handpump is kept in working order. This means an annual maintenance routine for which they will receive training from project staff. It also means alerting the appropriate funds (artisan) if repairs needed are beyond the scope of their training.

REMEMBER: ONCE THE HANDPUMP IS HANDED OVER TO THE COMMUNITY, IT IS THE RESPONSIBILITY OF THE COMMUNITY TO MAINTAIN IT.