



Kid's Club Program Manual



Child Aid ZAMFAM South Central



Introduction

The Zambia Family South-Central Activity (ZAMFAM South Central) is a five-year project being implemented by Development Aid from People to People in Zambia (DAPP) with the sub-partners Creative, KAFHI and NZP+ and with funding and technical support from the American People through USAID/Zambia.

The overall goal of the project is to improve the care and resilience of vulnerable children in Southern and Central Provinces by supporting, protecting and strengthening the capacity of children, families and communities. The goal will be reached by directly involving the children, youth, families, caregivers, community groups and government structures. Activities for children and adolescents living with, affected by and/or vulnerable to HIV, are aligned to the following 4 results:

- Resilience of households to care for children and adolescents increased.
- Child wellbeing status improved due to provision and accessing of quality care and support services.
- Capacity of government and community structures to care for and support children and adolescents increased.
- Strengthen shared learning.

Activities will be implemented in close cooperation with Government Line Ministries and Institutions, Civil Society Organizations, Faith Based Organization and community structures such as Community Welfare Assistant Committees, Village Action Groups, Support Groups for People living with HIV and Youth Clubs.

ZAMFAM South Central will demonstrate the power of Zambians to create change for themselves.

This guide has been designed for the Kids Clubs and the schools to carry out the 10 months Youth Club Program.

This booklet contains monthly headlines and content for each of the weekly meetings.

It has been designed to be easy to use for the Kids Clubs, the Kids Club Leaders, the schools to which the Kids Clubs are attached, and the teachers who are assisting the clubs.

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Kids Clubs – The year at a glance

MONTH 1 Starting up the Kids Club



Lessons & Actions
Welcome to the Kids Club
I am a Kids Club member
Myself in a child's body
Sports day at the school

MONTH 2 Our Country



Lessons & Actions
Zambia, our history
The many landscapes of Zambia
The people of Zambia
Building a map of Zambia

MONTH 3 Health for all at our school



Lessons & Actions
Keeping tidy from head to toe
The 10 Ground Rules of Hygiene
A healthy environment at school
The Children's Toilet Brigade

MONTH 4 Eating for good health



Lessons & Actions
The food pyramid
Eating from all the colors
The dangers of eating too much sugar
Making healthy snacks

MONTH 5 Growing our own food



Lessons & Actions
We all grow vegetables
Planning the garden
What to grow and how to do it
Making the gardens

MONTH 6 Our local environment



Lessons & Actions
Ecosystems at work
Why is the climate changing
What we can do
Our permanent tree nursery

MONTH 7 Boys and girls as equals



Lessons & Actions
The needs and rights of children
Growing up as a girl or as a boy
50 questions about girls and boys
Presenting our 50 questions and answers

MONTH 8 Doing good things like good people do



Lessons & Actions
Good and bad behavior
What it means to be a good friend
Am I of any help to my family?
Doing good at home

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The Kid's Club Program Manual

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Welcome to the Kid's Club Manual

Introduction to the Kid's Club members

The Kid's Club Manual is made for you, the boys and girls in primary schools, who join the clubs.

In the clubs, you will work together and share experiences, learn about important issues in life, discuss how to deal with challenges affecting you – the children, and take actions together for common improvements.

While working through the Program Manual, you will come to know about the importance of eating nutritious food and how to get hold of it; how to influence the course of your own life; why it makes sense to grow your own food, and how to get started; why our earth is getting warmer; plus many other issues. You will also experience how your knowledge can be useful when shared with your friends and families.

The Program Manual covers a program for 10 months. Each month has its own headline and plans for three lessons and one action.

Each Kid's Club will have 20 to 25 members. The clubs will meet for two hours every week after school hours.

A teacher from the school will be the leader of the local Kid's club, and each club will select a Kid's Club coordinator from among its members. The teacher and the Kid's Club coordinator will work closely together. If the teacher cannot attend a meeting, he will prepare the meeting together with the coordinator, and the coordinator will take charge.

Each club will form some smaller groups of 3 club members. We call them Trios. The Trios will stick together throughout the program, when you study, when you have homework to prepare or when the club is organizing actions.

Enjoy!

Introduction to the school and the teachers

This Kid's Club Program Manual is developed to provide the children in your school with a tool to train themselves in life skills and in using their knowledge for the betterment of the people around them, meaning their fellow pupils, their families and the local community.

The Program Manual describes the weekly activities in the clubs for one year. The Kid's Club will meet once a week to carry out the activities as described in the Program Manual.

The school will provide a suitable meeting place with a blackboard, and a teacher who will be the leader of the local Kid's Club.

The Kid's Club will select a coordinator among its members, who will work closely together with the teacher to prepare the lessons and carry out the meetings and actions. Each club and each attached teacher will receive a copy of the kid's Club Program Manual.

The building blocks of this Program Manual

The Program is planned for 10 months. Each month has its own headline, telling what the main focus of that particular month will be. In the Program Manual, there is a plan for all the activities for each of the ten months.

A newly established club can start right away with Month 1 in any month of the year.

In each month there are:

- ✓ Three lessons
- ✓ One Action

The lessons and the actions are described with:

- ✓ A title, telling you what the lesson is about.
- ✓ An introduction, presenting the content and why it is important.
- ✓ An instruction, giving some directions for how the club can work with the issue.
- ✓ More knowledge, explaining more about the issue at hand, where more information is needed.

Month 1

Starting up the Kid's Club

Week 1 – Welcome to the Kid's Club

Lesson: Understanding the program and deciding to enroll

Introduction

Welcome to the Kid's Club!

As a member, you are going to stick together with the rest of the Kid's Club members to learn, try out many things, discuss, find solutions on issues that concern you, and plan and participate in actions for the betterment in the school, and in the community.

Childhood is an exciting period of your life. In the Kid's Club, you will study the world around you and learn from what you see. You will train to use all your senses to experience, discuss, understand and acknowledge what the world holds for you.

You are growing up in a world that is changing very fast. Some changes bring possibilities and development to our lives, like transportation, communication and the use of computers. It is now much easier to visit people living far away; it is easier to stay in touch with friends and family; and we can use computers to do a lot of work.

Other changes are not good at all; they threaten our life. Global warming and climate change (you will learn about that later) is one of the biggest threats the world is facing right now. Others are caused by wars between people with different interests. You will learn more about this in the lessons.

In this program, you will also have lessons about what happens in your body when you change from being a child to becoming a teenager; and you will discuss how to avoid some of the serious diseases such as HIV and Aids, malaria and TB.

You will also organize actions together to improve the wellbeing of people around you, and share your knowledge with your family, and your friends at school and at home.

So, in the Kid's Club, you will work together to become knowledgeable, to learn many skills and tricks, and to take actions.

The Kid's Club will meet at least once a week after school hours.
Each month has 3 lessons and 1 action.

A teacher from your school will be the leader of your club and present the lessons, and help you to carry out the program.

You can look forward to this year in the Kid's Club, where you will come to know about many important things.

The Kids, (meaning YOU), are very important actors in deciding how the next generation in your country will grow up. You, together with others, can make a difference for the better!

Instruction

- 1) The teacher, who is also the leader of the Kid's Club, introduces the program for the whole year, and the manual.
- 2) You discuss the program and decide to enroll in the Kid's Club.
- 3) Each of you present yourself, and tell why you wish to become a Kid's Club member.
- 4) The Kid's Club chooses a coordinator who will work together with the teacher on leading the club.
- 5) The Kid's Club chooses a name for the club.
- 6) The Kid's Club decides the day and time for the weekly meeting.
- 7) You form the Trios.
- 8) The teacher presents the detailed program for the first month.
- 9) Before the end of this meeting, the teacher repeats the headline for the next meeting, and lists the preparations to be made. Agree in the Kid's Club on who will do what.



Month 1

Starting up the Kid's Club

Week 2 – I am a Kid's Club member

Lesson: Listen to stories about children who participate in improving things around them

Introduction

How do you see yourselves?

You are children in primary school. You are going to school every day. Are you making good use of your time in school? Are you learning something?

You are living with your parents or foster parents. What is your role in the family? Some of you are probably doing different tasks to help the family. What are you doing? What more could you do to make life better for everyone in the family?

What are you doing in your spare time? Do you have any spare time? How do you like to use your spare time? What would you like to do which you cannot really find the ways, and means to do?

Instruction

- 1) The teacher asks the questions from the introduction. Think about the answers that you would like to give.
- 2) Read aloud the three stories about children from different countries.
- 3) Discuss in the Trios, if children of your age can make a difference in their own lives, and the lives of others.
- 4) Share your ideas with the whole Kid's Club.
- 5) Answer the questions from the start of the lesson, and discuss your answers.
- 6) Before the meeting ends, the teacher, or the coordinator reads the headline for the next meeting and lists the preparations to be made. Agree in the Kid's Club on who will do what.

More Knowledge

Small people, big ideas

In southern Malawi where Charles, a former school dropout, lives, the high number of people living there and the small area of cultivatable land force many to face starvation. Like many others, his father had left the village to seek his fortune in the capital, thus leaving the children, the women and the elderly behind to cultivate the meager land.

One day, pushed to the limit by poverty, Charles, in his desperation, decided to do something about it. With his hoe, a panga and his water can he went outside the village where he had a

plot of land with a little maize garden near the river. With his hoe, he dug a canal out from a pool, and diverted the water from the river to his garden. From there he watered the garden with his can.

This had never been seen before - a young man working on his land in the summer time when others lazed around!

Many people were very skeptical and gossiping, and stories started about what was going on. Others were curious enough to go to the garden of Charles to see for themselves, and what they saw convinced them, that irrigation could be a solution to their hunger. Already in the first year, Charles was able to grow maize three times, producing a surplus to sell.

As a result, Charles and more farmers formed the Manthimba Irrigation Scheme. The association now has 500 members growing maize, beans, sugar cane, bananas and vegetables. With the help of World Vision Malawi, Charles and the other farmers have had help to expand the length of the canals to make a fishpond, using the canals to carry water to the ponds.

Child-to-Child sanitation clubs lead the way

In Beira City in central Mozambique, young people are transforming dank and dirty schools into healthy, inviting places for learning. Children as young as seven are the messengers, educating their peers, their families and their communities about the importance of safe water, good hygiene and private, separate sanitation facilities.

In the area, there are 54 schools, serving 34,000 pupils.

In 2000, a UNICEF study found that 80 per cent of all primary schools here had no toilets for boys or girls, and no hand-washing facilities.

Irene Louisa is one of the young students initially trained by UNICEF, and she enrolled herself in the Child-to-Child Sanitation Clubs, which sprang up in 15 primary schools with about 18,000 students.

She is very certain that she is making a difference. "Participating in hygiene promotional activities is fighting diarrhea", Irene says. "That is why everybody should drink chlorinated water and know how to use a latrine."

"Our clubs promote hygienic practices and healthy school environments especially for children. We have pushed for central refuse collection spots so that we no longer have to share our play spaces with garbage. Through theatre, song, dance and games, our Child-to-Child Sanitation Clubs are warning of the dangers of unhygienic conditions", she says.

Children from India

Kushi and Jashwant came from Bihar in India. Kushi is a girl. She is 8 years old. Jashwant is a boy of 6. They had lived with their parents in a small village until one year ago. Kushi had done class 1 in the local school. Their father was a farmer. He did not have much land, and when it had not rained properly for 3 years, he gave up being a farmer. The family gathered as many things as they could carry, and went by train to the capital to find a better way to earn money. The children were very excited about travelling by train. When they reached New Delhi in the evening after 3 days of travelling, they were very tired. They did not have much money and they were not sure where to go. So they decided to sleep at the station and take turns to look after the luggage.

In the morning, the father went to find out how they could come to a place called Chakkapur, where he knew some other people from their village were living.

Then they went by a brand new metro train right from the station to Chakkapur.

In Chakkapur, they found many other people from Bihar, and also some from their own village. One family called Dayal had stayed there for a long time, and Mr. Dayal was a kind of

village leader. He shoved the family where they could rent a hut. It was not very big and it was built of cardboard boxes. Thousands of families lived in the same manner. The mother turned her head because she cried when she saw how dirty it was all around them. Then she pulled herself together and called the children. She told them to be brave and help her to clean up inside the hut. The father went with Mr. Dayal, who helped him to get a job as a construction worker. Although the salary was not very high, at least they could have food twice a day.

One day the mother fell sick. She was lying in bed all day for two days. Then some neighbors came and took her along to see a doctor. The doctor told her she needed some medicine. It would cost 100 Rupees.

The father was at work, and they knew he did not have 100 Rupees. What to do?

Then Jashwant got an idea. He went out and came back with a small puppy they used to play with. It did not belong to anybody. Together with Kushi, he managed to wash the dog and dry it. They also found a comb to comb its fur. The dog looked really cute when it was clean. Kushi found a piece of red silk string to tie around the neck of the dog.

Then they carried the dog along to the local market, and asked people if they would buy a dog.

After waiting for some hours, they were lucky. A woman with two children passed by and both the children started begging her to buy the dog. At last, she gave in and gave Kushi 75 Rupees for the dog. The children ran home as fast as they could, and asked the neighbors to help them with the last money to buy the medicine.

Children in difficulties

“Why do you look so unhappy today, Mary? At first, Mary did not answer. But Maggie said, “You look very sad”. Then Mary started to cry. Between her sobs she said: “My aunt has stopped giving me a lunch packet. She gives all the food to her own children”. “Why do you stay with your aunt?” “Both of my parents died one year ago. Then my aunt said that I could live with her. But now I do not like to stay with her. She sends me to get water early in the morning for her own children to bath. That is why I am always late to come to school. Some times without food, like today. When I am at home, I feel alone. Sometimes she tells me to go out of her home. Then I go to our neighbor’s house. That is where I can get something to eat. When she finds me, she beats me”.

Maggie said, “Let’s go and talk with our teacher”. Mary is one of Maggie’s best friends. After telling the whole story to the teacher, she promised to visit Mary’s aunt so that they could discuss, and solve the problem together.



Month 1

Starting up the Kid's Club

Week 3 – Myself in a child's body

Lesson: Why it is important to stay healthy - and what you can do to get a stronger body

Introduction

Your health depends very much on three very important issues:

- Your body needs exercise to stay healthy. When you move around, you help all the parts of your body to work well. When you move fast, your heart beats faster. This makes your blood run faster. Your blood provides all parts of the body with oxygen and nutrients. When you move, you also train all your muscles to become strong and flexible.
- Your body needs food. It needs food to grow bigger, food for the brain to work well, and food to repair tissues and cells.
- Your body needs to avoid harmful bacteria and other organisms that cause diseases. One important way to avoid these is to keep yourself and your surroundings clean.

Today you will concentrate on the first of these needs, exercises. Later on in the program, you will learn how to eat healthy and how to avoid diseases.

Although most of you are walking to school, and doing many things where you use your body, children today stay at school for many hours – sitting most of the time. Some of you will continue to study, or get jobs where you do not need to move much. Therefore, it is good to get into the habit of doing exercises from an early age. Apart from that, it is fun and a good way to be together with friends.

Instruction

- 1) The teacher reads the introduction.
- 2) Discuss the idea, that making sport improves your health and list the types of sport each of you like to do.
- 3) Read the “More knowledge” together. Repeat the explanations until you have understood the meaning.
- 4) Test how many of the 14 benefits mentioned at the end of the text you can remember.
- 5) Divide into smaller groups and do the Fitness Test together.

- 6) Decide which sports you want to do. Maybe you can join a sports club at the school, if you are not already a member, or maybe you decide to do something together with friends from the Kid's Club. You can choose to do many different types, or you can go for one type of sport. Anything is good, and it is important you choose something you enjoy doing.
- 7) Before the meeting ends, the teacher, or the coordinator reads the headline for the next meeting and lists the preparations to be made. Agree in the Kid's Club on who will do what.

More knowledge

Exercise and physical fitness

Physical fitness is to the human body what fine-tuning is to an engine. It enables us to perform to our potential. Fitness is the ability to perform daily tasks with energy. It is the ability to withstand stress, to carry on in circumstances where an unfit person could not continue, and it is a major basis for good health and well-being. Physical fitness involves the performance of the heart, lungs and muscles. And, what we do with our bodies also affects what we can do with our minds.

The basic components of physical fitness

1. Cardio respiratory endurance is the ability to deliver oxygen and nutrients to tissues, and to remove waste, over a period of time.
2. Muscular strength is the ability of a muscle to exert force for a brief period of time.
3. Muscular endurance is the ability of a muscle, or a group of muscles, to sustain repeated Contractions, or to continue to apply force against a fixed object.
4. Flexibility is the ability to move joints and use muscles through their full range of motion. The sit-and-reach test is a good measure of flexibility of the lower back, and the backs of the upper legs.
5. The composition of the body is an indicator of fitness. It refers to the makeup of the body in terms of lean mass (muscle, bone, vital tissue and organs) and fat mass. An optimal ratio of fat to lean mass is an indication of fitness. The right types of exercises will help you to decrease body fat and increase, or maintain muscle mass.

What exercise does to the body

When you exercise or compete in sports, you notice several things about your body. You breathe heavier and faster, your heart beats faster, your muscles hurt and you sweat. As you use your muscles, they begin to make demands on the rest of the body. In difficult exercise, just about every system in your body either focuses its efforts on helping the muscles do their work, or shuts down. For example, your heart beats faster during heavy exercise, so that it can pump more blood to the muscles, and your stomach shuts down, so that it does not waste energy that the muscles can use.

Fitness training

There are five categories of fitness training:

1. Aerobic fitness

Aerobic exercise causes you to breathe faster and more deeply, which maximizes the amount of oxygen in your blood. The better your aerobic fitness, the more efficiently your heart, lungs and blood vessels transport oxygen throughout your body – and the easier it is to complete routine physical tasks, and rise to unexpected challenges.

Aerobic exercise includes any physical activity that uses large muscle groups and increases your heart rate. Examples of aerobic exercise are walking, running, biking, swimming and dancing.

2. Muscular fitness

Strength training increases bone strength and muscular fitness. You can use hand-held weights or homemade weights – such as plastic soft drink bottles filled with water or sand. You can use your own body weight, too – doing push-ups.

3. Stretching

Most aerobic and strength training activities cause muscles to contract and flex, and it is important to stretch those muscles, too. Stretching improves the range of motion of your joints and promotes better posture. Regular stretching can also relieve stress. It is best to stretch after doing exercise, when the muscles are warm and receptive to stretching. Stretching also promotes flexibility.

4. Core stability

The muscles in your lower back – known as your core muscles – help protect your back and connect upper and lower body movements. Core strength is a key element of a well-rounded fitness training program.

Core exercises help train your muscles to brace the spine, and enable you to use your upper and lower body muscles more effectively. Any exercise that uses the trunk of your body without support, including abdominal crunches, counts as a core exercise.

5. Balance training

Training can help you maintain and improve balance. This is important, since balance ability minimizes with age. For example, standing on one leg for increasing periods of time improves the overall stability.

Examples of balance training



Walk on a line



Stand on one leg



Walk on a rail

In short, exercise can benefit your health by:

- Strengthening your heart and the flow of blood in your body
- Improving your breathing, and help your body use oxygen better
- Increasing energy levels so you can do more activities without becoming tired, or short of breath
- Increasing endurance

- Lowering blood pressure
- Improving muscles and strength
- Improving balance and joint flexibility
- Strengthening bones
- Helping to reduce body fat and help you reach a healthy weight
- Helping to reduce stress, tension, anxiety, and depression
- Boosting self-image and self-esteem
- Improving sleep
- Making you feel more relaxed and rested
- Making you look fit and feel healthy

A Fitness Test:

Do the following 5 exercises in smaller groups, and help each other to take notes. If you do not have a watch, 1 minute is gone when you have counted to 60 in a steady rhythm.

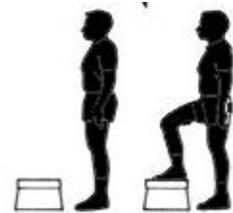
- | | |
|---------------------|---|
| 1. Walk or run 1 km | How long did you take? |
| 2. Make push-ups | How many could you make in 3 minutes? |
| 3. Make step-ups | How many times can you make one step up, and one step down of a flight of stairs, in 3 minutes? |
| 4. Reach your toes | Sit down on the ground and reach for your toes – how far can you reach? |
| 5. Make sit-ups | How many can you make in 3 minutes? |
| 6. Stand on one leg | How long can you stand on your right leg?
How long can you stand on your left leg? |



Push-ups



Sit-ups



Step-ups

Keep your results.

Decide on a sport to do regularly.

It can be anything from walking, running, playing football or doing gymnastics.

Test your fitness every week and follow your improvements.

Month 1

Starting up the Kid's Club

Week 4 – Sports day at the school

Action: We organize and hold a sports day for all the classes at the school

Introduction

You have now been through the first month of the Kid's Club program, and it is time for an action to share what you have learned.

You have read about the importance of doing exercises to stay physically strong, and you have tried to make a fitness test.

In this meeting, you will discuss and agree on what shall happen during the sports day at your school.

Instruction

- 1) Discuss how to get a good start for the day, and what you want to share with your fellow students, including how to do it. Maybe you choose to make posters to explain why sport is good for your body. Maybe you want to organize that each student makes a fitness test.
- 2) According to the number of classes and the age of the students, you decide on the types of sports and games you want to compete in during the day. It could be a football tournament between classes of the same age, different games for girls and boys, athletic competitions, relay runs etc.
- 3) When you have decided on the activities, you have to present your proposal to the school headmaster, and agree on the date for the sports day.
- 4) Then you need to organize around all the preparations. For this, start by listing everything that needs to be prepared on a long list, and write besides each point the names of the students who will take care of it. Maybe you need to involve a whole class of older students in the preparations, or some students from each class, or the school's sports clubs.



More knowledge

Some points you could consider to include

- * Prepare a poster with the invitation to the sports day and the hourly program
- * Carry out an action to raise funds for the sport tournament
- * Make an action to prepare the sports field
- * Make a theater play to start the day
- * Ask the choir to prepare songs about health
- * Prepare a multiple choice quiz with 25 questions about health and sport
- * End the day with a dance competition

Different walks for relay race:



Gorilla Walk



Elephant Walk



Crab Walk



Kangaroo Walk



Month 2

Our Country

Week 1 – Zambia, our history

Lesson: Listen to old people telling the story of their lives

Introduction

The history of a country is made up of the history of all the people living there, and all the different stories of their lives. Not all these stories can be written in the history books, so there you will read about the main events that have taken place, and the year it happens.

In this lesson, you will help each other to list the main big events of the last 70 years. Then you will visit elderly people in your village or your community, and listen to the stories of their lives. Even in a small village, people will have different stories to tell. They will have had different experiences, and it will be different events that have caused turning points in their lives.

Instruction

- 1) Write a vertical line on the blackboard and divide it into 7 parts. Write 1956 at the bottom of the line and 2016 –or the year you are now in, at the top of the line. Then place all the events you know about, in between. The teacher can help, and maybe tell you a little more about what has happened in Zambia during this period.
- 2) In the Trios, write down 10 questions you would like to ask the elderly people. It can be anything from how they experienced independence, to when they were travelling in a train or a bus for the first time.
- 3) Each Trio visits a person of the older generation. Find the oldest people, as they will have experiences from most years. It can be an old person from one of your families, an old teacher, or just someone you happen to know.
- 4) Start by introducing yourself and explain what you are doing. Ask the person to tell you about his or her life, from as long back as he or she can remember. Take notes of the story.

If you do not get answers to the questions you have prepared, ask your questions and write the answers.

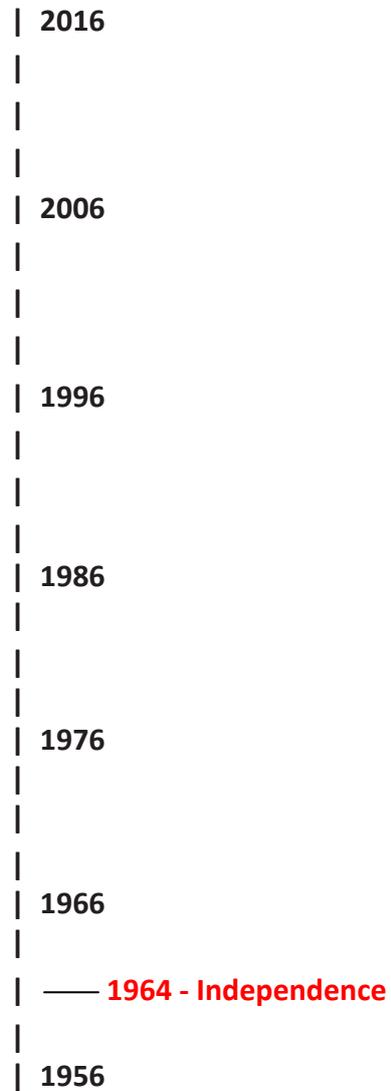
Say “Thank You” and “good buy”. Maybe you have collected a bouquet of flowers or made a nice drawing to give as a thank you for the story.

- 5) Back in the club, share your stories and put some more marks of the events on your history time line.

- 6) Before the meeting ends, the teacher, or the coordinator reads the headline for the next meeting, and lists the preparations to be made. Agree in the Kid's Club on who will do what.

More Knowledge

Example of a history timeline:



Month 2

Our country

Week 2 – The many landscapes of Zambia

Lesson: Zambia's mountains, rivers, lakes, roads, mines and game parks

Introduction

Zambia is a big and very beautiful country. It has high plateaus, hills and mountains, with two big rivers cutting through its landscape. And it has one of the most famous waterfalls in the world.

Three types of climates are represented in Zambia: Tropical savannah, semi-arid climate, and subtropical climate.

Zambia is a rich country, in the way that there are huge areas of good agricultural land, and mines with copper, cobalt, gold, silver, gemstones, coal and other minerals.

But where in the country are these to be found?

In this lesson, you will help each other to place it all on the map of Zambia.

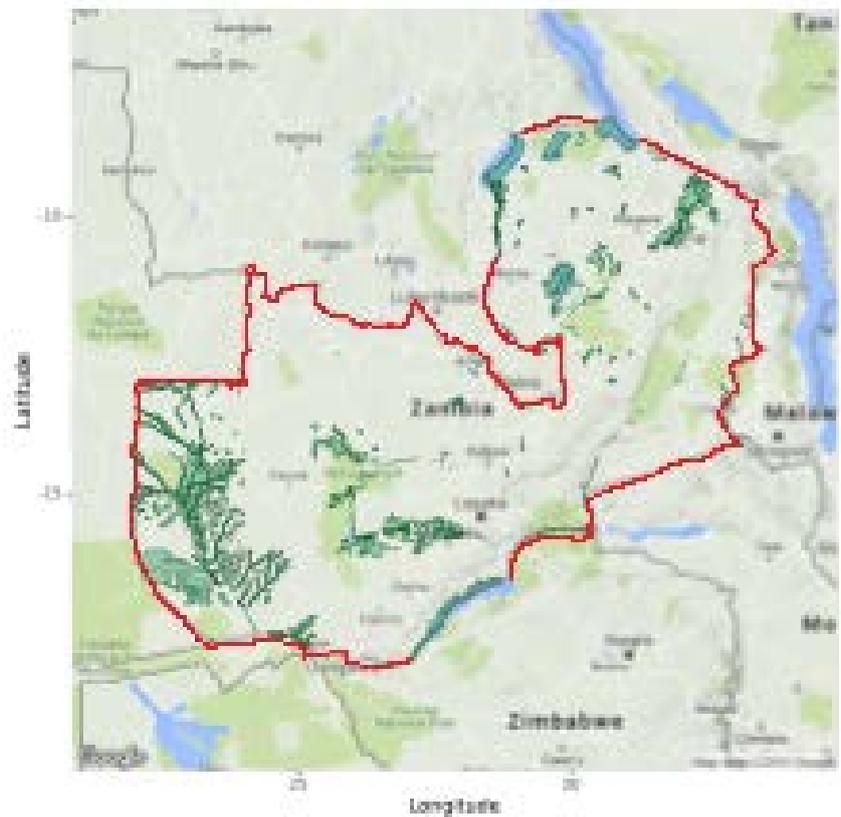
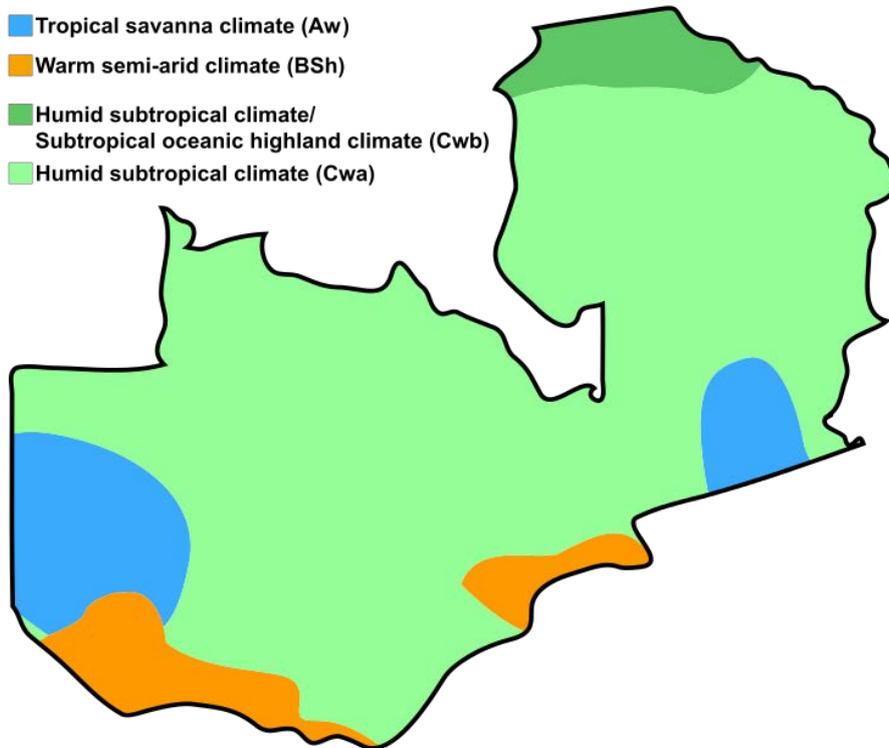
Instruction

- 1) The teacher presents the introduction, and shows a drawing of the outline of a big map of Zambia on the black board or on a big piece of paper.
- 2) Together, place all the names of the places, the mountains and the rivers you know about. Start by marking the place of your village on the map.
- 3) Then get help from a schoolbook, to get the map filled out with the names of all the important places.
- 4) Look at the enclosed maps and describe the climate zones for each other. What types of plants do you find? How is the temperature? To which climate zone does your village belong?
- 5) What are the names of the neighboring countries?
- 6) Before the meeting ends, the teacher or the coordinator reads the headline for the next meeting and lists the preparations to be made. Agree in the Kid's Club on who will do what.

More Knowledge

Get help from schoolbooks and the maps to make the drawing of the big map of Zambia.

Zambia map of Köppen climate classification



Month 2

Our Country

Week 3 – The people of Zambia

Lessons: What are people in Zambia doing for a living?

Introduction

When we want to find out what people in Zambia are doing for a living, we can use two different methods.

One is to look around and see what people are actually doing.

This will give you a picture of what people are doing for a living in your community.

But, not all communities are the same. Rural areas, towns, and mining areas will show quite different result.

To find out what people are doing for a living in the whole country, we need to look at statistics made by the government and international organizations.

In this lesson we will do both.

Instruction

- 1) The teacher presents the introduction.
- 2) Work in your trios to list all the jobs people in your village are working with. Include both men and women. If possible, count how many are working in each job, like maybe 30 farmers, 1 teacher etc. and note if they are men or women.
- 3) Write the Trio's results of the counting on the blackboard. Maybe your lists are not entirely correct, as you might have forgotten some people, or the village is so big, that you simply do not know what all the people are doing. But, you will have an idea.
- 4) The teacher presents the "More knowledge" using the blackboard to write the key figures. Then follow the instruction in the "More Knowledge".
- 5) Make an exhibition of all the drawings you have made. Ask each other to tell what type of work the people on the drawings are doing.
- 6) Before the meeting ends, the teacher or the coordinator reads the headline for the next meeting and lists the preparations to be made. Agree in the Kid's Club on who will do what.

More Knowledge

When we look at statistics from the Government of Zambia and the International Labor Organization, we can read the following numbers:

Zambia has 15, 519,000 people.

Of these, 6,906,000 people are counted as the country's labor force.

This figure tells us the number of people above 15 years, who are producing goods and services, either by themselves, or for a company where they are employed. (Women working at home, taking care of a family, but not producing agricultural products, or stitching or something like that, are not counted in the country's labor force).

We can also read the three main types of work these people are doing:

85 % work in agriculture

6 % work in industry

9 % work in services

This means, that for every 100 people counted in the labor force in Zambia, 85 are working in agriculture, 6 are working in industry, and 9 are working in services = total 100.

Discuss what type of work you think will be included in the three main types.

Write the three lines on the blackboard, and place all the jobs you know about, within the 3 groups:

Agriculture

Farmer

Gardener

Industry

Miner

Factory worker

Services

Teacher

Nurse

Continue the lists until you cannot remember any more types of jobs.

We can also read, that 46 % are women, meaning that out of every 100 people counted in the labor force, 46 are women.

Now you have an idea of what people are doing.

The next task is to make drawings of all the people. If you are 20 kids in the club, each of you shall make drawings of 5 people.

Agree on how to draw the people, so they have almost the same height, e.g. 20 cm, and distribute the three types of work between you. Remember to make almost half of them women.

When you are finished, you will have drawings of 100 people, where 85 are farmers, 6 are industry workers and 9 are service workers. Make the drawings in such a way that you can see what the person is doing, e.g. a nurse has a white dress and a cap, a farmer has farmer's cloths and different farming tools, and so on.

When you are done, place all the drawings besides each other on the wall.

Now you have a picture of what people in Zambia are doing for a living.

Month 2

Our country

Week 4 – Building a map of Zambia

Action: Build a big outdoor map of Zambia, using stones, soil, water and plants

Introduction

In this month, you have had three lessons on Zambia. On the history, the many landscapes, and what people are doing for a living.

In this lesson, you will mostly use your knowledge about “the many landscapes”. The idea is to build a map of Zambia somewhere in the school where there is some outdoor space. The map should be a lasting one, so that all the classes can use it when they are learning about the landscapes of Zambia.

When you build the map, you have to use your knowledge on where the mountains should be placed, where the rivers run, where the towns are located, and so on.

But, you are allowed to use all your imagination, when it comes to how to build the mountains, or how to keep water running in the rivers.

Instruction

- 1) Start the lesson by reading the introduction.
- 2) Get ready to start. Maybe someone has already drawn the outline of the map with a stick in the mud. It should be about 5 m long and 5 m wide. You could divide the map in 4 equally sized parts, and work in 4 groups, or something like that.
- 3) Each group builds its part of the map with all that there should be there. You could start by placing stones along the borderlines. Then use the maps you have already made on paper to remember where all the features are.
- 4) After an hour, stop and look at the map together. How does it look? Is anything missing? Should the woodlands be more visible? How to make them?
- 5) Agree on how to get finished.
- 6) End the day by agreeing how to present the map to the other classes in the school.

Month 3

Health for all at our school

Week 1 – Keeping tidy from head to toe

Lesson: How to take care of your body from morning to evening

Introduction

Keeping yourself clean will help to keep harmful bacteria away from you. Keeping your skin free of wounds will also help you to avoid harmful bacteria entering your body.

But what does it mean to keep yourself clean? How to do it?

In this lesson, you will learn about just that.

You will look at your body from top to toe, and you will decide on your routines to keep yourself clean from morning until evening.

Remember, that it is not a disgrace to have any problems due to issues of hygiene. It can be difficult to get enough water and soap to follow all the rules. You need, however, to know why the rules are there, and what can happen if you do not follow them. When you know the symptoms, you are able to do something about it, or ask for help.

Follow the instruction and the more knowledge, and you will come to know.

Instruction

- 1) The teacher introduces the lesson.
- 2) Share your habits about cleanliness. Maybe you already know all about it. If this is the case, are you also doing it?
- 3) Read the “More knowledge” together. Sit together in the Trios. After each point, share your habits and discuss if you need to do more. If any of you have any of the problems the text talks about, ask the teacher for help.
- 4) Now you have finished the paper. It is time for each of you to decide on your daily and weekly routines, and write in your notebook what day and what time of the day you will do them.
- 5) End the lesson with a discussion on how you can help each other to stay healthy with better hygiene. If you do not have a pair of scissors at home, you could agree with your teacher that she brings one every Monday, so all of you can get your nails cut. If some of you are missing toothbrushes, go together with your teacher to a shop that are selling them, or a dentist,

and ask to get some free of cost. Or come up with other ideas of what to do.

- 6) Finally, the teacher or the coordinator reads the headline for the next meeting, and lists the preparations to be made. Agree in the Kid's Club on who will do what.

More Knowledge

Let us take a look at your body from top to toe.

You hair: You need to wash your hair once or twice every week, and you need to comb it. If you just let your hair grow and never wash or comb it, it is a very good place for lice to live. The lice will suck blood from your head, and the small sores they make will itch. Even when you do wash your hair and comb it, lice might still move in. If you act fast, they are easier to get rid of.

How to get rid of lice:

Lice are so big that you can see them. You can also spot their eggs hanging as tiny drops glued to the single hairs.

Step 1: Check if you have lice.

Step 2: Wash your hair with soap every day for 10 minutes.

Step 3: To get rid of the eggs, soak your hair in warm vinegar water (half vinegar/half water) for half an hour.

After each wash, comb your hair thoroughly every day for two weeks with a fine-tooth comb. If the lice have not disappeared, you need to go to a pharmacy and ask what to do.

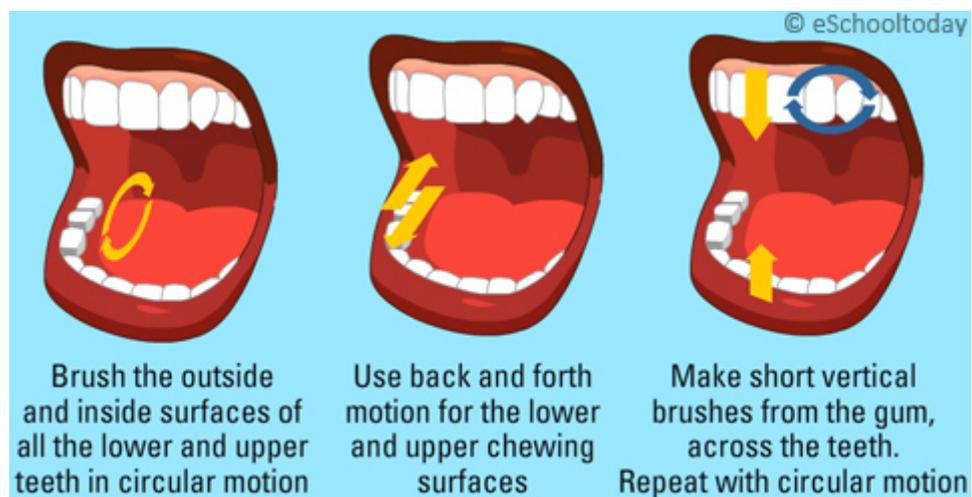
Your teeth: You need to brush your teeth every morning and every evening.

Your mouth is a busy place. Bacteria – tiny colonies of living organisms are constantly on the move on your teeth, gums, lips and tongue.

Having bacteria in your mouth is a normal thing. While some of the bacteria can be harmful, most are not and some are even helpful.

Certain types of bacteria, however, can attach themselves to hard surfaces like the enamel that covers your teeth. If they are not removed, they multiply and grow in number until a colony forms. More bacteria of different types attach themselves to the colony already growing on the tooth enamel. Proteins that are present in your saliva (spit) also mix in, and the bacteria colony becomes a whitish film on the tooth. This film is called plaque, and this is what causes cavities. When cavities are made, they are easily made bigger, your teeth hurt

Practise to brush your teeth by looking at the picture



and sometimes they are totally destroyed.

Children have their first set of teeth, called milk teeth, when they are about 6 months old. These are pushed out and replaced by the permanent teeth during childhood. When this has happened, only four new teeth will grow, the molars, which will appear in the back of the mouth around the age of adulthood. These are also called wisdom teeth.

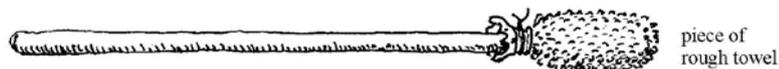
For most of you, this means that you already have the teeth that have to last for the rest of your life. So it is a good idea to take good care of them. When you brush your teeth, you clean them. If you do not have a toothbrush, it can help to use a branch to clean the teeth, or rub them with salt and baking soda.

A TOOTHBRUSH IS NOT NECESSARY

You can use the twig of a tree, like this:

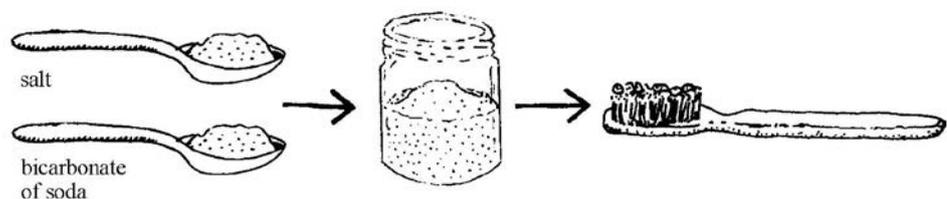


Or tie a piece of rough towel around the end of a stick or wrap it around your finger, and use it as a toothbrush.



TOOTHPASTE IS NOT NECESSARY

Just water is enough, if you rub well. Rubbing the teeth and gums with something soft but a little rough is what cleans them. Some people rub their teeth with powdered charcoal or with salt. Or you can make a tooth powder by mixing salt and bicarbonate of soda (baking soda) in equal amounts. To make it stick, wet the brush before putting it in the powder.



**When you have a tooth with a cavity, do not wait until it hurts.
Have it filled by a dental worker right away.**

Your face: Wash your face every morning when you wake up, and every evening before you go to bed. Use clean water. You only need to use soap, if you are very dirty.

Your hands: Wash your hands often! You will be surprised if you start noticing all the things you use your hands for, and all the times during a day you might put them into something that make dirt, or bad bacteria stick to them. From your hands, bacteria easily travels into your mouth; or from your nails, they come into a sore when you scratch.

- Wash your hands when you get up in the morning, every time you have been to the toilet and before cooking or eating.
- It is very important to use SOAP to wash your hands, because soap kills germs. Many people wash their hands with just water, but few use soap.
- You can also use ash to scrub your hands, if you do not have soap.
- Wash your hands with running water.
- Clean your nails every day.



Practice to wash your hands systematically by following how it is shown in this picture

Look at the last page to see how diseases can spread. Discuss how this can be avoided.

Your feet: Take good care of your feet. If the skin becomes dry, you easily get open sores or cracks, and these give harmful bacteria access to your body.

Wash your feet every day. If the skin is cracking, rub it with a pumice stone or a piece of a brick to get the hard layer away. Then rub with Vaseline, or use another kind of oil.

Keep an eye on your toenails, and cut them before they have grown too long.

In areas where hookworm is common, do not go barefoot. Hookworm infections causes anemia (lack of blood cells). These worms enter your body through the soles of your feet.



Your whole body: Take a bath at least twice a week. If you used to bathing in a pond, make sure that the water is safe from mosquitoes that cause malaria, snails that causes bilharzias or other creatures that can spread diseases. Ask your teacher to tell you about local health threats from water sources.

Frequent bathing helps prevent skin infections, dandruff, pimples, itching, and rashes.

Keep an eye on sores and rashes. Your skin is your protection against harmful germs. If there is a hole in your skin, the germs can enter your body.

Sores and rashes have to be washed thoroughly with soap and boiled, cooled water, and dried in the open air. If you get an infection, treat the sore with iodine. If it does not close, ask for help. Your parents, your teacher, or the nurse at the clinic can help you.

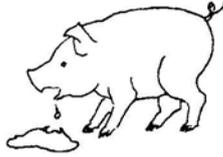
Your clothes: If you wear the same clothes for many days, dirt and bacteria will cling to them, and this can harm your skin. Notice when your clothes need to be washed, and wash them. If you do not know how to do it, ask someone to teach you.

How diseases can spread

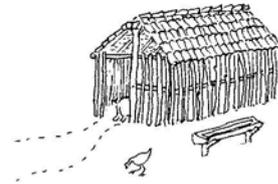
A man with diarrhea or worms has a bowel movement behind his house.



A pig eats his stool, dirtying its nose and feet.



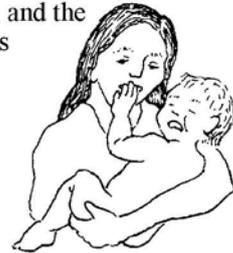
Then the pig goes into the house.



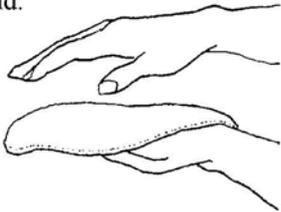
In the house a child is playing on the floor. In this way, a bit of the man's stool gets on the child, too.



Later the child starts to cry, and the mother takes him in her arms.



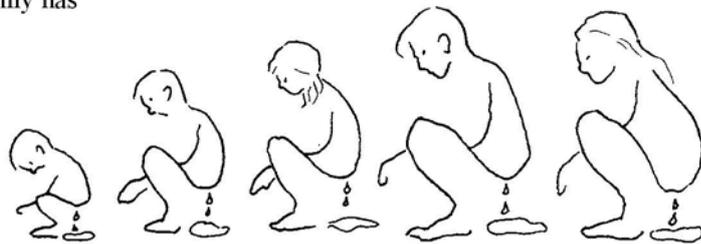
Then the mother prepares food, forgetting to wash her hands after handling the child.



The family eats the food.



And soon, the whole family has diarrhea or worms.



Month 3

Health for all at school

Week 2 – The 10 Ground Rules of Hygiene

Lesson: Learn and follow the “10 Ground Rules of Hygiene” at school, and bring them to your families

Introduction

Take a look at “The 10 Ground Rules of Hygiene”.

What do you say? Are they good? Are they enough?

Are they possible to implement?

Are you implementing any of them now?

Are there any of them you think are impossible to implement?

It is the Kid’s Club’s tasks to understand each rule, and to find ways of how they all, or at least most of them, can be implemented at home and at school.

What will it take to explain the rules to your friends and your families, and convince them to use new systems or materials, and new ways to do things?

Talk about how to do it at home. Talk about how to do it at the school.

Argue on each of the 10 rules.

Here comes an example of arguments you could use for rule No 6: Keep Control of Garbage. “Having a good garbage system at our school is important. First of all, we want our school to look nice, and not have old and dirty stuff lying around. But even more important, to have a good garbage system is HEALTHY!” “Why is this?”

“It is because when you have garbage lying out in the open, rats, mice, and other animals will come and eat it. Tiny worms, parasites, and bacteria that you cannot see, will also come and eat the garbage, and live in it. These animals and organisms will multiply in the garbage, and they carry with them diseases that make us sick, such as diarrhea.”

Exactly the same reasons count for your home.

Instruction

- 1) Work with the “10 Ground Rules of Hygiene” by reading the “More knowledge” and give reasons for each rule.
- 2) Learn the “10 Ground Rules of Hygiene” by heart.
- 3) Discuss what it means that a latrine is clean. Make a list of what to do to clean a latrine.

4) Make some “healthy hygiene slogans” that you can use when you present the rules to the other classes at the school, and at home.

Here are four examples of what is meant by a slogan: NO to stagnant water! YES to clean water! Wash hands to stay free of diarrhea! Life is too important to get sick!

5) Discuss how you will share the “10 Ground Rules of Hygiene” with the other classes at school.

6) Work in the Trios. Decide on actions to take to improve hygiene at home, and agree how to help each other to do it.

7) Before you end the meeting, the teacher or the coordinator presents the topic for the next meeting and lists the preparations. Agree on who will do what.

More knowledge

The 10 Ground Rules of Hygiene

1. Hand washing prevents the spread of diseases
2. Wash and clean more often when caring for sick people
3. A clean latrine for every family
4. No dirty or stagnant water
5. Keep food clean and covered to avoid insects and rodents
6. Keep control of garbage
7. Clean means CLEAN
8. Know your water, know how to clean it, and know why
9. Keep animals and people separated
10. Avoid contamination of stools (this means feces)

Rules for washing hands

You have already learned these last week. Now we just repeat them.

- Wash your hands often!
- It is very important to use SOAP to wash your hands, because soap kills germs. Many people wash their hands with just water, but few use soap.
- Ash can also be used to scrub your hands, if you do not have soap.
- Wash your hands with running water.



Practice to wash your hands systematically by following how it is shown in this picture

A good rubbish system

1. A garbage pit for trash you cannot use

Choose the place where you will have your garbage pit. The area must be as far away from the house as possible, and to the leeward side, meaning that the wind will usually blow the smell from the garbage pit away from your house.

The area should be at least 10 meters away from your house, from your water supply, and from the places where you cook and eat.

Now you are ready to dig the pit for trash like old paper, plastics, cans and other materials that cannot be used for compost, or be sold for re-use.

Dig a hole, 1 meter long, 1 meter wide and 2 meters deep. It is a good idea to organize the work as a joint action with your family, to have many hands helping to dig and remove the soil from the pit. Keep a pile of the soil beside the pit.

Once or twice a week, you make fire in the pit to burn as much of the garbage as possible. Each time you burn the garbage, you cover the remains with a thin layer of soil. Finally, when the garbage pit is filled up, you cover it with soil for the last time, so that it is level with the rest of the land and not visible. After that, you dig a new pit near the old one.

2 . Other kinds of garbage

Food scraps from plants – maize, porridge, rice, beans, and boiled vegetables: These food scraps are very good for chicken or pig feed. If you do not have animals, you could give the leftovers to a nearby farmer in return for some eggs or chickens.

Vegetable and fruit cut-offs: These go into your compost heap for the garden.

When you separate the garbage like this, you reduce the space you need for garbage, and you produce very good compost as well.

3. Fence the garbage area

Make a fence around the garbage area using local materials, such as branches or grass. In this way, the garbage area looks nice, people will easily know where the pit is located, and you will keep out dogs and other animals.



A healthy village

Month 3

Health for all at school

Week 3 – A healthy environment at school

Lesson: We decide to have clean and nice smelling toilets at all times

Introduction

Last week you learned the “10 Ground Rules of Hygiene”, and how important it is with cleanliness at home and at school. In the lesson the week before, you discussed how bacteria spread and can cause diseases such as diarrhea. By now you know, that one thing that is especially important for good health is good hygiene in connection with latrines, and good hand washing systems. In this lesson, you are going to prepare for the action next week with the headline “The children’s toilet brigade”.

Instruction

- 1) The teacher introduces the lesson.
- 2) Read the story in the ‘More knowledge’ on how a Kid’s Club took action to get clean toilets at school. Discuss how you can do the same.
- 3) Take a walk together to look at the school’s toilets. Are they nice and clean? Can the doors be locked? Is there water to rinse the toilet after use? Is there water and soap for washing hands?
- 4) Back in the classroom, you discuss what it takes to keep the toilets clean. Write on the blackboard what you need, like tools and soap, and agree with the teacher, and the headmaster to get the material ready for your next club meeting.

More knowledge

How a Kid’s Club succeeded to improve hygiene at their school

“At our school, we have decided that we want to have clean latrines. We do not have money to employ a person, and we also think that we should learn to do it ourselves. We have some money for cleaning materials, so when we do it ourselves, we will always have clean latrines, and that is what we want.

First, we discussed how to get it organized. We asked each other the questions: “Can everybody clean a latrine?” “What about the smaller ones?”

We decided: “Yes, everyone can clean a latrine!”

We agreed with our headmaster, that the school would ensure that the cleaning materials are available.

Then we found an old blackboard that was partly broken. We took it to the headmaster and agreed that we could cut it nicely, and use it for making the roster for latrine cleaning. The headmaster gave us some paint for the blackboard. Then we took off with the old blackboard. We went to a carpenter who lives nearby. He said he could repair it, and how much money he wanted. We told him that we did not have money, and he said that he would not do anything without pay. We sat down and we almost gave up. The carpenter asked why it was so important to get that old blackboard repaired. Then we started talking. We told him the whole story. About how we are busy engaging the whole school in cleaning the toilets. The carpenter started to smile and said: "Now I understand why it is important." He picked up the blackboard and started to cut it. Before we knew it the blackboard was nice again, and the carpenter gave it to us with a big smile and said: "It is for free, and good luck to your school!"

Back at the school, we wrote down all the weeks for the next 3 months, and then we decided which class should do the cleaning in each week.

We also wrote:

"Our latrines shall be cleaned 3 times a day."

"Use water, soap, ashes and a little bit of JIK (the disinfectant) to make it smell nice."

It is now up to each class to stick together, to get organized and to secure that the latrines are always clean. When a class has finished their week, they hand over to the next class. This is how we do it at our school.

In the end, it is we from the Kid's Club that is the ones to hold the latrine banner high! Of course, each class is responsible for the latrines in their week. But we always have a small group "on duty". They take care that there are enough cleaning materials for the week, when a new class takes over. They check that the daily standard is ok, and if not, they talk with some of the students and teachers from the class who has the cleaning that week, or with all of them. We get help from our club teacher or the headmaster, if something is wrong or needs to be repaired.

Of course, a good standard is not created or kept by itself. It works because we are sticking together in the Kid's Club to make it work."



Month 3

Health for all at school

Week 4 – The Children’s Toilet Brigade

Action: We establish “The Children’s Toilet Brigade”

Introduction

This is the club meeting where you establish The Children’s Toilet Brigade and get everything going. Today you will do a lot of practical actions. Follow the instruction and add more points.



Instruction

- 1) The teacher shows how to clean a toilet, demonstrating how to use the brush and the soap.
- 2) Everyone in the club tries to do it.
- 3) Then you decide on the different systems that need to be in place, and establish them:
 - Hooks to close the doors.
 - A box of ash at each toilet.
 - Soap and water outside.
 - Drainage from the washing place to keep it dry and clean.
 - A place to keep the cleaning brush and the cleaning soap.
- 4) When all this is in order, you go back to the classroom and make a poster with the rooster showing which class will be in charge of cleaning for the next 10 weeks.
- 5) Make a poster for each class on how to clean the toilets.
- 6) Agree with all the classes in the school that a Trio from the Kid’s Club can come and present the plan to them, and demonstrate how to clean a toilet.
- 7) Discuss how to make the presentations in the classes. Maybe make a small play on how nice it is when the toilets are clean, or how bad it is when they are not.
- 8) Finally, you make your own plan on who of you will be in charge of making sure that the cleaning material is in place and for checking that the cleaning is done properly every week.



Month 4

Eating for good health

Week 1 – The food pyramid

Lesson: Know what to eat to grow up healthy

Introduction

Eating well is important for a healthy and active life.

We know that we need to eat, in order to have strength to work. However, we do not always know what to eat to get the right amounts of energy and nutrients. If we do not eat all the nutrients, we need, and if we do not eat the correct amount of each of them, we often become sick and even malnourished. So let us find out how to eat correctly, even if we only have limited resources.

Diets and eating habits vary from place to place. Families in different areas eat different types of foods, cook in different ways, and the type and amount of food available can differ considerably.

But, it goes for everyone, no matter where you are living, that the human body requires a healthy, balanced diet, which provides the correct amount of food for energy and growth. The diet must consist of a variety of different foods from different food groups, so that it contains all the many macronutrients and micronutrients, a person needs. This is especially important for children and youth who are still growing, like you, and for pregnant women.

In this lesson, you will learn more about what to eat to stay healthy. You will be presented with the food pyramid and its different food groups, how to get the nutrients you need, how to know what enough healthy food means, and how to cook healthy snacks, by using the locally available products.

Let us get started by introducing the food pyramid.

Instruction

- 1) The teacher presents the different food groups by making a drawing of the food pyramid on the blackboard, and explains what the body needs.
- 2) In the Trios, list the different kinds of foods you eat in your family on a normal day.
- 3) Back together, a couple of the Trios place their foods in the food pyramid. In this way, you will get a good picture of the amount, and the variety of food that the families, in general, eat during a day.

- 4) The Club discusses what is missing, what the problems are, and what the consequences are.
- 5) The Club comes up with ideas on how you can find foods from all the food groups among the local foods. If you do not get enough fruits and vegetables, maybe you can add some wild plants, or plan to grow your own vegetables.

More knowledge

Nutrients	Main use in the body
Carbohydrates Starches and sugars Dietary fiber	Carbohydrates provide the energy needed to keep the body breathing and alive, to move and keep warm, and to growth and repair of tissues. Some starch and sugar changes to body fat when eaten. Fibers makes feces soft and bulky and absorb harmful chemicals. In this way, they help to keep the gut healthy. Fibers also slow down digestion and absorption of nutrients in meals, so we get the most out of the food, and they help to prevent obesity.
Fats	Fats provide a concentrated source of energy, and the fatty acids needed for growth and health. Fats help the absorption of some vitamins such as vitamin A.
Proteins	Proteins build cells, body fluids, antibodies and other parts of the immune system. Sometimes proteins are used for energy.

Besides all the nutrients that you body needs, you need to drink a minimum of 2 liters of WATER every day. All the functions of your body needs water.

The body also needs micronutrients such as Iron, Iodine, Zinc, Vitamin A, the Vitamin B-groups, foliate and Vitamin C. You get the micronutrients from eating a variety of foods.

You will learn more about the 3 food groups and about micronutrients during the coming months.

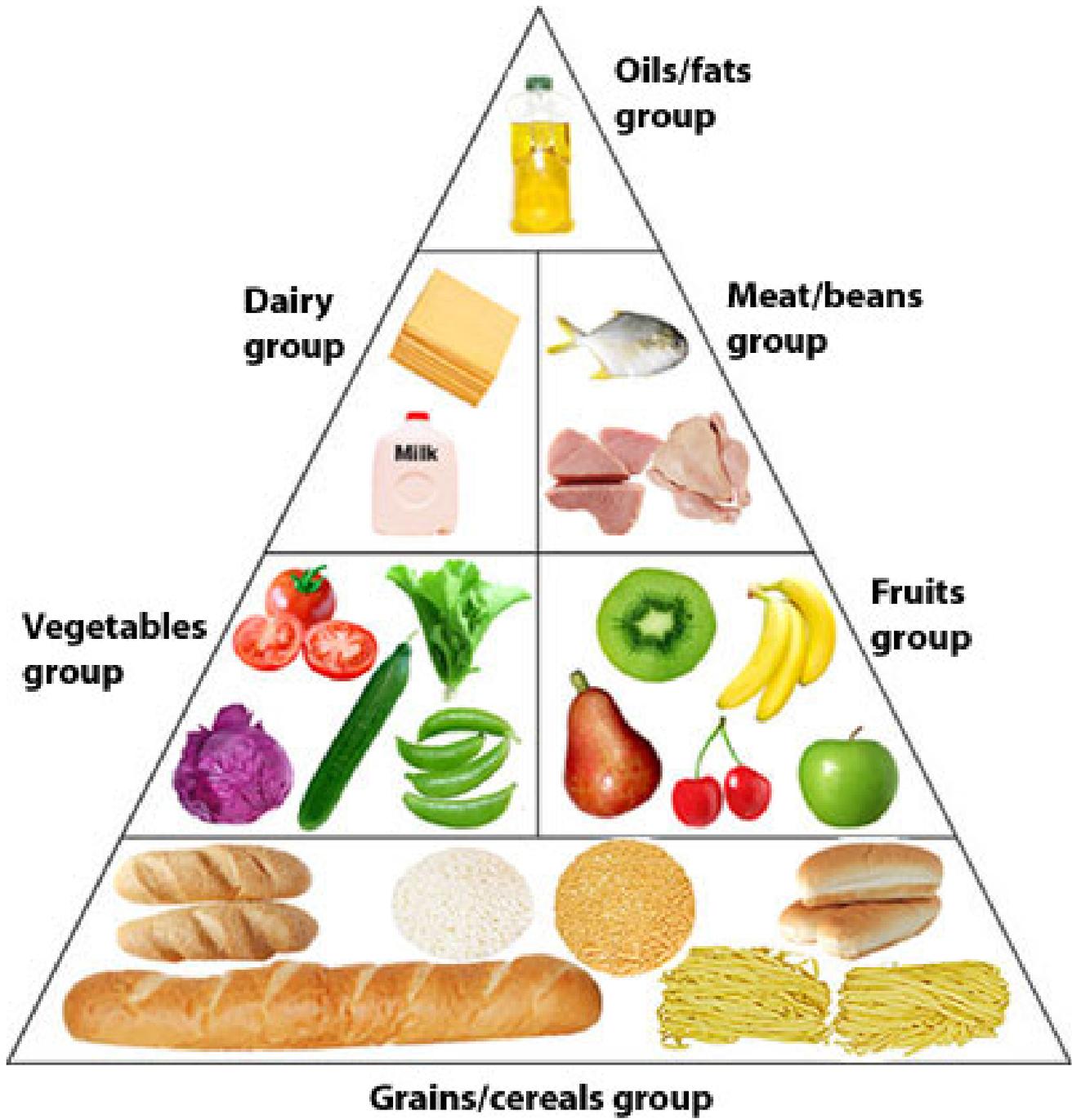
When you look at the food pyramid, you can see that it is made in such a way that there are much more of the type of food in the bottom line of the pyramid. This group shows the carbohydrates, and this is the food group from which you need to eat most.

Then comes a layer of vegetables and fruits. You need less of these, but it is from fruits and vegetables you get most of the micronutrients you need.

Thereafter comes a layer of dairy products, and meat and fish. This is what provides you with proteins.

And finally, the fat, of which you do not need much, but you need some.

The food pyramid



Month 4

Eating for good health

Week 2 – Eating from all the colors

The micronutrients, what they are and which you need

Introduction

Did you know, that adding color to your plate might add years to your life? The natural pigments that make fruits and vegetables so colorful can also help protect your body from common diseases and illnesses.

Think color!

The bright red of ripe tomatoes, strawberries, cherries, and cranberries are good for disease prevention. The brilliant orange of carrots, the vibrant green of kiwifruit and kale, and the dramatic purple of grapes, helps in vitamin A production.

They all have a purpose in your body.

- * Red -helps your body to produce vitamin A
- * Blue/Purple -helps to improve memory and reduces the risk of diseases
- * Green -helps to improve vision and reduces the risk of diseases
- * White -keeps the heart healthy and reduces the risk of diseases
- * Orange/Yellow -gives you Vitamin A and C to improve your immune system



Instruction

- 1) The teacher presents the topic for the lesson.
- 2) Read the 'More Knowledge' together.
- 3) In your Trios, have a brainstorming session, and come up with a list of locally available fruits and vegetables belonging to each of the colors: red, blue/purple, green, white, and orange /yellow. Share your lists in forum.

The teacher writes the lists on the black board.

- 4) In the Trios, repeat the nutrients we get from each of the different colors.
- 5) Back together, list the names of the vitamins and minerals mentioned in the text, and help each other to remember what they are good for.
- 6) Discuss how to be able to eat from all the colors. From which color are you missing vegetables or fruits? Where can you find it? Do you know the edible wild plants? If not, who can teach you?
- 7) Before you end the meeting, the teacher or the coordinator presents the title of the next lesson. Is there anything that needs to be prepared?

More knowledge

Eat foods from all the colors of the rainbow

Red

Red fruits and vegetables, such as raspberries, tomatoes, guavas, watermelons, red cabbages, kidney beans, cherries, strawberries and beetroots are good for disease prevention. A medium raw tomato helps your body make vitamin A. Remember there is no daily limit of how much you may eat.

Orange and Yellow

Most orange and yellow fruits and vegetables are rich in helping your body convert some nutrients to vitamin A. This vitamin not only improves night vision, but also helps to keep your eyes, skin, teeth, and bones healthy.

Green

Green vegetables are good for your eyes, bones and teeth, and their vitamin K content helps your blood to clot properly, and stop excessive bleeding. A supply of 2 cups of raw spinach daily is all the vitamin K you will need in a day. Other vitamins, particularly vitamins C and E, may lower your risk of chronic diseases. They protect you from loss of vision due to eye diseases.

Blue and Purple

Blue and purple fruits and vegetables contain natural plant pigments that may reduce the risk of getting heart diseases. They also contain elements that may destroy cancer cells. In blueberries, these have shown to fight cancer cells in the lungs, stomach, and breasts.

White

White fruits and vegetables, including apples, pears, bananas, cauliflowers, and cucumbers, are high in dietary fibers and helps to protect you from high cholesterol. They may also lower your risk of getting a stroke.

What is eating according to the rainbow?

Fruits and vegetables are important to your health, because they are rich in nutrients. This is why we learn, that eating five servings of fruits and vegetables a day is very healthy. The health benefits are to be found in the variety of different colors, we eat.

Each different color fruit and vegetable contains unique health components. The phrase "eating a rainbow" of fruits and

vegetables, is a simple way of remembering to get as high a color variety in your diet, as possible, and in this way maximize your intake of nutrients. The colors of fruits and vegetables are also a small clue as to which vitamins and nutrients they have.

Eat from the rainbow and your health is on track!

Even more...

Potassium, which is found in beans, dark leafy greens, potatoes, squash, yogurt, fish, avocados, mushrooms, and bananas, is a nutrient many people do not get enough of. It does great things for your heart and lowers blood pressure.

Another good food component that many people do not get enough of is fiber, which is found in fruits, vegetables and whole grains.

The need for fruits and vegetables in your diet is growing dramatically with the increase of the spread of new diseases, such as type 2 diabetes, heart diseases, high cholesterol and high blood pressure, caused by excessive consumption of fatty meats, processed sugars and refined flours.

Month 4

Eating for good health

Week 3 – The dangers of eating too much sugar

Lesson: What happens to your body if you eat too much sugar?

Introduction

You have probably been told not to eat too much sugar. But most children like sugar. So why should you not eat it?

The white and brown sugar is extracted from plants that contain much sugar, like sugar roots or sugar cane. These types of sugar contain a whole bunch of calories, but NO essential nutrients. For this reason, they are called “empty” calories. There are no proteins, essential fats, vitamins or minerals in sugar... just pure energy. When people eat up to 10-20% of their calories as sugar (or more), this can become a major problem. Because, as sugar does not contain any nutrients, the person simply becomes undernourished. Sugar is also very bad for your teeth, because it provides food for the bad bacteria in your mouth.

What do you know about sugar?

What is sugar?

Why does your body need sugar?

Is sugar dangerous?

Sugar is a carbohydrate, and carbohydrates are our main source of energy. Therefore, sugar becomes an important part of your diet. Sugar is found in most plants and milk. Sugar cane, of all plants, is the plant with the largest concentration of sugar in it. Plants store sugar as energy reserves, the same way us human beings store fat as energy reserves. You get quite a large amount of sugar/ carbohydrates, when you are eating maize, wheat and fruits, and some, when you drink milk.

The sugars you get from the different foods you eat, are good for you and are a part of a balanced diet.

However, it is not the same with white and brown sugar. The white and brown sugar you know is extracted from beetroot or sugar cane, and refined.

When sugar is extracted and refined, it loses some of its properties and becomes highly concentrated. It is difficult for your body to process white and brown sugar in its refined form.

Instruction

- 1) The teacher introduces the lesson.
- 2) You read the ‘More knowledge’ about sugar together.
- 3) Discuss what happens to your body if you eat too much sugar.
- 4) If possible, the teacher has collected old magazines, newspapers, or advertisements before the meeting starts. Each Trio cuts out pictures, or makes drawings to make a poster with pictures of foods that can be dangerous to your diet.
- 5) Discuss the diseases that come when you consume too much sugar.
- 6) In your next meeting, you are going to produce healthy snacks. Make a list of what you will need to bring along, to do this, like pots and the different ingredients, and agree on who will bring what.

More knowledge

Natural sugar in foods contains fibers that help your body to know when it has had enough to eat. Without fibers, it is difficult for the body to control when it has had enough, and as a result, you keep eating because you still feel hungry. Your body becomes overfilled with sugar.

Excessive consumption of sugar can be harmful for your health.

Processed foods like soft drinks and sweets can be dangerous to your health if consumed often and in large quantities, because the content of sugar is extremely high. For example, a liter of Coca Cola contains a sugar amount equal to 40 sugar cubes. Right now, you are probably not exposed to excessive consumption of refined sugar, but you might be later in your life, as you grow up and move to other areas. It is important to be aware of the dangers refined sugar might cause to your health when consumed in excess. Excessive consumption of sugar can cause many health problems, like overweight and heart diseases, just to mention a few. Therefore, a balanced, nutritious diet is important.

Your body’s organs and tissues need proper nutrition to work effectively, and this should be provided in correct amounts. Without good nutrition, your body is more prone to diseases, infections, fatigue, and poor performance.

With a poor diet, you run the risk of having growth and developmental problems.

Bad eating habits can give you problems for the rest of your life.

The dangers of eating refined sugar

Surplus sugar that your body does not immediately require for energy is easily converted to a type of fat that can be stored around your waist, and in your hips and thighs. Sugary beverages such as soft drinks, and sweets, are the worst offenders, because their liquid calories do not tell you when you have had enough, and often it makes you crave more, like an addiction. Studies have shown a clear connection between sugar, and obesity and diabetes. Both are diseases that can cause death.

Sugar, sweets, and soft drinks are especially bad for small children. It will make the children troublesome; they will cry more easily, fight or argue with each other, become aggressive, impatient, demanding, and even have hysterical fits. You might think that the children are the problem, but in fact, the problem is that they have had too much sugary food, and this is the reason they become irritated, moody, or hysterical. This is because their bodies are asking for more sugar all the time.

Sugar also spoils the teeth, especially of young children.



The amount of refined sugar in some common processed foods

The way sugar affects hormones and the brain is a recipe for fat gain disaster. It can get people addicted so that they lose control over their consumption. Not surprisingly, people who consume the most sugar are by far the most likely to become overweight or obese. This applies to all age groups. Many studies have examined the link between sugar consumption and obesity, and found a strong statistical association.

1. Sugar can give you cancer

Cancer is one of the leading causes of death worldwide. It is characterized by uncontrolled growth and multiplication of cells. Insulin is one of the key hormones in regulating this sort of growth. For this reason, many scientists believe that having constantly elevated insulin levels (a consequence of sugar consumption) can contribute to cancer.



2. Obesity

Obesity is a condition where a person has accumulated so much body fat that it might have a negative effect on the person's health. If a person's bodyweight is at least 20% higher than it should be,

he or she is considered obese.

Obesity is not just a cosmetic concern. It increases your risk of diseases and health problems, such as heart disease, diabetes and high blood pressure.

UPDATED 17 MARCH 2015

40 percent of SA women are overweight

South Africa has the highest overweight and obesity rate in sub Saharan Africa and ranks among the highest regions in the world in percentages for overweight and obese women.

(SAPA - south african press association)

3. Insulin resistance can progress to Type 2 diabetes

When our cells become resistant to the effects of insulin, the beta cells in our pancreas make more of it. This is crucial, because chronically elevated blood sugars can cause severe harm. Eventually, as insulin resistance becomes worse, the pancreas cannot keep up with the demand of producing enough insulin to keep blood sugar levels down.

Type 2 diabetes is primarily due to obesity, and not enough exercise in people who are genetically predisposed. It makes up about 90% of cases of diabetes mellitus. Diagnosis of diabetes is made by a by blood test. Rates of type 2 diabetes have increased markedly since 1960 in parallel with obesity. As of 2013, there were approximately 368 million people diagnosed with the disease compared to around 30 million in 1985.

Type 2 diabetes is associated with a ten-year-shorter life expectancy.

Diabetes on the rise in Africa	2000	Expected in 2030
South Africa	814,000	1,286,000
Swaziland	13,000	21,000
Togo	64,000	184,000
Uganda	98,000	328,000
United Republic of Tanzania	201,000	605,000
Zambia	70,000	186,000
Zimbabwe	108,000	265,000

The chart shows how diabetes is expected to develop if nothing is done to change lifestyle.

Month 4

Eating for good health

Week 4 – Making healthy snacks

Action: Producing healthy snacks

Introduction

You have read about the food pyramid and the importance of eating from all the food groups, and how much to eat from each group to get a balanced diet. You have read about vitamins and minerals. And you have read about why eating too much sugar can make you addicted to sugar, and that this is very harmful for your health.

Still most of us like to eat sweet things and most of what we get as snacks is made with a lot of sugar. So what to eat if you get hungry between meals or you need refreshment?

When you are hungry, you lack energy and easily become tired. You cannot concentrate and learn well at school. Many of you have to walk long distances to school, and to spend a long time away from home.

To ensure proper growth and development, and be able to concentrate at school, it is a good idea to bring an energy- and nutrient-rich snack to eat when you get hungry.

It is easy to make snacks that provide energy. They can be eaten raw or cooked and can fill the gap between the main meals. They can be made from boiled, or roasted roots and tubers (cassava, yams, plantains, potatoes); boiled or roasted green maize; roasted groundnuts or oilseeds such as melon or pumpkin; bread spread with groundnut paste; fried fish, meat or sausages; eggs; dairy products such as milk, curd or cheese; insects such as locusts or termites; and fruits such as bananas, oranges, mangoes, or sugar cane. Such foods provide both energy and nutrients.

Instruction

- 1) Read the introduction together.
- 2) Look at the recipes and distribute them between your Trios.
- 3) Each Trio makes a snack, following the recipe.
- 4) Taste each other's snacks.
- 5) Consider if you should start to make snacks for all the children in your family who are going to school.

More knowledge

Recipes for healthy snacks

Moinmoin (steamed bean flour cakes)

Ingredients:

Bean flour
Water
Cassava flour (if necessary)
Pepper, ground
Onion, ground
Salt (optional)
Banana leaves
Dried fish or boiled eggs (optional)

How to do:

1. Mix bean flour with water to form a paste. (A little cassava flour can be used for binding the mixture.)
2. Add pepper, onion and salt (and other ingredients, if desired) to paste.

Sweet potato pastry

Ingredients:

Sweet potato (preferably yellow-fleshed), grated
Sugar
Some wheat flour
Pineapple juice or coconut milk (optional)

How to do:

1. Mix ingredients together.
2. Bake as you would other biscuits.

Peanut sweets

Ingredients:

1 cup sugar
1 cup water
1 cup shelled and roasted peanuts
Vegetable oil

How to do:

1. Dissolve sugar in a pan of water.
2. Heat the pan and stir until a syrup forms. When syrup is golden brown, add the peanuts and mix well.
3. Pour the firm mixture on to a large oiled dish, spreading it into a 1-1½-cm-thick layer.
4. Let the mixture set, but before it gets hard, cut it into small squares.

Fried plantain

Ingredient:

2 ripe but firm plantain, peeled and sliced
1 cup cooking oil, preferably red palm oil
Salt
Ginger
Turmeric (optional)

How to do:

1. Deep-fry plantain. Drain excess oil.
2. Season.

Peanut biscuits

Ingredients:

12 tablespoons crushed raw peanuts
4 tablespoons sugar
1 egg
6 tablespoons maize flour
Water
1 tablespoon vegetable oil

How to do:

1. Mix the ingredients together.
2. Shape mixture into flat cakes.
3. Cook cakes slowly on a greased hot plate or frying pan.

Sweet potato pastry

Ingredient:

Sweet potato (preferably yellow-fleshed), grated
Sugar
Some wheat flour
Pineapple juice or coconut milk (optional)

How to do:

1. Mix ingredients together.
2. Bake as you would other biscuits

Cassava cake

Ingredients:

200 g raw cassava, grated
1 egg
½ cup milk
75 g butter
225 g sugar
50 g wheat flour
2 teaspoons baking powder
Salt

How to do:

1. Mix cassava with egg and milk.
2. Beat butter and sugar until creamy.
3. Mix butter and sugar mixture with the cassava, egg and milk mixture.
4. In a separate bowl, mix together flour, baking powder and a pinch of salt. Add flour mixture to egg mixture. Mix well.
5. Pour into cake pan and bake for 40 minutes.

Banana scones

Ingredients:

2 bananas
½ cup milk
30 g butter
2 cups self-raising flour
Salt

How to do:

1. Mash bananas.
2. Add milk and mix.
3. In a separate bowl, cut butter into flour and salt.
4. Add banana and milk mixture to flour and butter mixture. Mix well.
5. Roll out dough. Use glass or jar to cut into round pieces.
6. Bake in hot oven (230°C or 450°F) for about 15 minutes.

All the recipes contain a moderate amount of sugar, or sugar from fruits. They are made from fruits, nuts and vegetables mixed and treated in a delicious way. All the snacks also contain fibers.

You could use the opportunity to tell your family about vitamins and minerals, and why they are very necessary for all people. You could also develop your own 'Trade Mark' by the way you pack and present the snacks. Maybe you can even sell them on the local market.

Here are some pictures for inspiration:



Month 5

Growing our own food

Week 1 – We all grow vegetables

Lesson: Why is it important to grow your own food?

Introduction

Health has a lot to do with what you put in your stomach.

All the nutritious foods your body needs can be grown locally in the gardens. So growing your own nutritious food is a smart thing to do for you and your family.

Gardening is partly an answer to keeping your family healthy.

Producing healthy foods is good for many important reasons. Generally, the most important factor in maintaining good health throughout your life is to eat healthy foods. So, to optimize your health, you must pay attention to this statement.

When having your own garden, you can decide what to grow, and decide to use healthy farming methods. Freshly produced greens, which are not contaminated by chemical fertilizer or pesticides, are good for you. They will build up your body with all it needs, and will greatly improve your chances to live a long and healthy life.

What you grow in your garden can give you enough food to eat, and ensure food security for your family.

What you produce at home is far healthier than the food you can buy. It is the right thing to do.

Economically, when the garden is up and running, you can expect to get better quality food, and more food variety, for half the price you pay in local stores and markets. That is worldwide general knowledge.

The more experience you get with gardening, the more you gain. You will get a better quality produce, and it will become cheaper to produce.

For the local community, gardening will have a great impact. The more gardens there are, the cheaper food products will be available for the community and for sale, and therefore more people will be able to afford to buy other necessary items.

Instruction

- 1) The teacher introduces the course and explains, by using the “More knowledge”, why growing food locally can have a big impact on the health of the families. Work in the Trios to list all the benefits of growing enough food locally for everyone to get enough to eat.
- 2) The Kid’s Club discusses how it can participate in promoting local vegetable production by making or extending a school garden, and by establishing backyard gardens at home.
- 3) The Kid’s Club decides to find space for growing vegetables at the school and at home, before it meets again next week. A committee is selected to agree with the headmaster on the plan for the school garden.

More knowledge

Can the farmers grow enough food for everybody in the world to have enough to eat?

There are many discussions on this subject. Especially because food production has become something, that many big farmers do, only for the sake of earning money. So, instead of thinking about how everyone could get work and food from farming, the industrial farmers only think about how they can earn the most money. That is often by having very big farms; using machines instead of people to do the work; using genetically modified seeds that produce big vegetables, or big plants, which do not have a rich nutritional content like the locally produced food; and by spreading fertilizers and pesticides that poison the crops, the land, the water, and destroys the soil over a period of time. With use of these methods it might look like they produce a lot, but in reality the small farmers, who care for their land and crops, can grow much more and better quality food.

If we look at all the improvements that can be added to local farming, most places in the world can definitely grow enough food to keep hunger away, and keep all the families healthy.

Local actions for food security

The following is a list of things that can be done to produce enough food and stop hunger:

Sustainable farming

- Improving the soil

Healthy farming requires healthy soil that is full of nutrients. Soil is destroyed and depleted, if the land is used without making sure that as much organic material as has been harvested, is returned to the soil every year.

This organic material can come from compost, vermin culture, green manure, animal manure, human urine, effective microorganisms, organic tea compost, mulching (covering soil with plant material), and by crop rotation that includes growing nitrogen fixing plants such as beans, or Lucerne, in a field every 3 to 4 years. It also helps to test the soil, to find out if it needs any additional minerals.

- Do not harm the soil

It is important that the farming methods do not harm the soil. When soil is plowed, the soil structure is disturbed, and the soil is left without plant cover, exposed to sun and wind. By

using conservation farming, the soil is disturbed as little as possible. Instead of plowing, the farmer digs potholes. He sows his maize or other plants in the potholes, in soil mixed with compost. If the land is big, the farmer uses ripping, meaning making a line in the soil in which the corn is sown. The soil is always covered with mulch (dead plants or straw) to avoid erosion by sun, wind or rain. Rotation between different crops means, that a new type of crop is planted every year. In this way, the same nutrients are not used year after year, and the spread of diseases from one year to the next is avoided.

The mulching keeps the soil moist and helps more rainwater to stay in the field. Besides, the farmer makes sure that no rainwater is running away from his field, by making contours and digging graves to trap the water.

Protecting the crops in a gentle manner

The crops should be protected without use of very strong pesticides, herbicides and fungicides.

These are poisonous, and often kill other insects and animals in addition to the ones it was intended for.

Instead, the farmer uses shade nets, natural insecticides (chili pepper, garlic, tephrosia, and neem); pays close attention to the gardening calendars; and uses manual weeding instead of spraying.

Food Security - Processing of food crops

Processing local crops can improve their usefulness. Oil can be produced locally from coconuts, peanuts, sunflower seeds, etc. A solar drier, can preserve food that might otherwise go to waste.

A bamboo or clay cooler can be used to store perishable foods for a while, by use of cooling through evaporation of water. A storage house with passive cooling can maintain grains better, just by using the wind for cooling. Making preserves out of seasonal fruits can widen their use. Drying, salting, smoking, and fermenting, are other traditional ways of preserving food, using simple technologies.



Food preparation

Solar cookers can be used to prepare food without the use of firewood. A firewood saving stove can reduce the need of firewood by half. A magic box (a hay box), can finish cooking food that has already been heated to boiling point. Steaming instead of frying and boiling food will preserve more of its vitamins.

Protecting stored food

It is estimated that 10-40% of all harvested food is lost in one way or another. Smart storing structures and use of bio-pesticide plants such as tephrosia, and other methods to protect food from rats and insects, can reduce this loss of food. Ventilation and packaging of foods in the right way can help to reduce loss, also during transportation. Control of humidity can prevent fungus, mold and diseases that may destroy stored food.

Other Local Actions to stop hunger

The local community and local leaders can work together to improve food security in many ways:

Teach the farmers about healthy and productive soils - use of compost, conservation farming, crop rotation etc. and how to take good care of crops by using irrigation, water conservation, vetiver grass, natural pesticides, shade nets, etc.,

Ensure that the village has clean water, and good sanitation like water purification systems and latrines.

Teach the farmers how to get the most out of their crops - harvest, preservation of food, fermenting, malting and selling at a good price.

Promote that farmers grow enough food and nutritious foods for local use, such as moringa trees, soy beans, amaranth, and others.

Work together to improve tree cover, by producing and protecting trees, planting fast growing trees like bamboo and gum trees, limiting bush fires and using firewood saving stoves.

For each of these methods there needs to be demonstrations, explanations, exhibitions and speeches, by local leaders and authorities.

Promote food production in your community

Food production can be promoted in many ways. Most schools have some outdoor areas where food can be produced. This may also serve as a training ground for the students, and the community in sustainable farming. Projects, churches, and health posts in the area can promote gardens for the growing of healthy vegetables and fruits.

Most families can find a small piece of land for a backyard garden. Commercial enterprises often have outdoor areas where some food could be produced. People who live in cities may also produce food in the gardens around their homes, and encourage others to do so as well.



A lot of food can be produced in a small garden



Growing pumpkins on the roof



If you have no soil, you can plant in boxes

Month 5

Growing our own food

Week 2 – Planning the garden

Lesson: How to solve the most common problems of growing vegetables

Introduction

A well-designed and maintained school garden, or backyard garden can play a very important role in improving food security for children in the school, and for a family. It can also become a good example for the community to copy.

Gardening is a fun and interesting way to learn about nature. A school garden has many benefits – but not just for you as the students who learn and work in the garden, and for those that enjoy the food produced. When you learn new gardening techniques, you can pass them on to your parents and other people.

The school garden will be created, managed, tended, and harvested by you. So, you can really see that you are creating something new and useful.

But first, you have to get started.

Here is a list of important things to consider when starting a garden:

- * Choosing the site
- * Preparing the site
- * What to plant in the garden
- * How to maintain the garden
- * Deciding who shall eat the food

Instruction

- 1) The teacher presents the lesson and you read the “More knowledge” together.
- 2) In Trios, discuss all the points mentioned in the text, and decide how to solve them in the school garden and in the backyard gardens.
- 3) Discuss what to grow and how to get seeds and seedlings. Go for vegetables that are easily available, and that you know can grow well in your local area. These could be beans, sweet potatoes, rape, onions, and tomatoes.
- 4) Decide who shall eat the food.

More knowledge

Some common problems and how they can be solved:

1. To have enough water

To secure enough water is one of the determining factors on where to place a vegetable garden.

Water can come from a local river or canal, it can come from a well, it can come from rain, and it can come from reservoirs of stored rainwater.

If you can only get water from rain, it is a good idea to harvest rain for later use. This can be done by making sure that rainwater runs down into an existing well, or by digging ditches across the garden so that water is running into the ditch when it rains, and from there seeping into the soil instead of running away. Rainwater can also be harvested from solid roofs, from where the water runs, via a pipe, into a big tank built of concrete. By use of different types of drip systems, you can save water by directing it exactly to where it is needed.

A simple drip irrigation system

2. To have good soil

The best vegetable soil is loam soil. Loam soil is a mix of sand, silt or clay, and organic matter.

Loam soil is loose and looks rich. Loam soil normally absorbs water and stores moisture well. Sandy and clay soil can be made into good vegetable soil, by mixing a lot of compost into the top soil. Compost can be added by covering the field with the straw from last year, or compost can be produced by piling layers of organic matter from the field, straw, cow dung, waste from the kitchen, ash and soil on top of each other until the pile is 1.5 m high. Then water the pile and cover with leaves, or straw. Keep the pile moist and turn everything around once a month for 3 months. Then the compost is ready. It has become dark and good smelling, it has become humus. You can also let cows or other animals such as goats, ducks or chicken walk in the field, and dump their excrements before the vegetables are sown.



Then water the pile and cover with leaves, or straw. Keep the pile moist and turn everything around once a month for 3 months. Then the compost is ready. It has become dark and good smelling, it has become humus. You can also let cows or other animals such as goats, ducks or chicken walk in the field, and dump their excrements before the vegetables are sown.

3. To have good methods for controlling diseases and pests in the plants

Insect pests are responsible for about 20-30 % of crop destruction. But there are many safe, natural, and simple methods of protecting plants.

Aromatic (strong smelling) plants

Leaves from any strong smelling plant, such as ginger, lantana, tomato, garlic or pepper can be used, and will keep most insects away. It can also be made in liquid form with a mix from the different plants. Dry the plant material and grind it into a powder. Mix the powder with boiling water and allow it to cool. Experiment with how much powder it will take per liter of water to work. Spray it on the plants when you see insects. Spray more often in the wet season, because rain washes the substance off the plants.

Ash

Soft-bodied insects such as aphids, caterpillars, roundworms, grasshoppers, termites, stalk borers, cutworm and others, as well as mildew and fungal diseases can be killed by

dehydration when dusted with ash. Ash can also be placed thickly around the plants, but it should not touch the stem of the plant.

Collecting

Insects can be collected from the plants. When you pick them up, drop them in a bag so they do not just return to the plants.

4. To protect the garden from stray animals

In order to keep animals away from your vegetable garden, you will need to make a fence around it.

Initially, you can make a fence by placing dried, sticky branches around the garden. At the same time, it is a good idea to build a living fence, but it will take some time to grow.

A fence with live fencing posts:

Moringa, Gliricida or other local trees, can be used for live fencing posts. They will need protection to grow to a height where the animals cannot eat them. Between the trees, you place a mesh made of bamboo strips, tree branches, palm leaves or grass. Wire can also be used.

Living fences:

Agave, with its big pointy leaves, makes a tightly sealed fence. It is easy to grow from sprouts. It dies after 10-15 years. Normally new shoots will come up. Otherwise replanting is needed. Jatropha is often used for living fences. It grows very fast, is easy to develop from cuttings, and animals do not like the smell of it. After 2 years, it is possible to collect the seeds, and use their oil as lamp oil (not for eating, as they are poisonous).

Espinhosa is a plant often used for living fences because of its long thorns. It is easy to propagate from cuttings. It grows well in sandy soil.

Look out for local fast growing trees and bushes usually used as fences.



*Look forward to having fresh
vegetables on the table*

Month 5

Growing our own food

Week 3 – What to grow and how to do it

Lesson: Planning for getting started with garden farming

Introduction

There has never been a more interesting time for vegetable gardening. It makes sense on so many levels. It saves money, because it is cheaper to produce your own food than to buy it; it improves your health, because homegrown food is fresh, and free of chemicals and preservation substances; and it improves the environment, by storing CO₂ in plants, and by saving fuel on the transport of food.

Using sustainable methods when growing food is becoming very important, because the conventional method that has been used for the last 50 years, has given many bad results. Using chemical fertilizer instead of compost and organic matter has depleted the soil, so that it has become dry and dead in many places. Using pesticides has resulted in poison spreading to rivers and lakes, and entering our drinking water.

Making a vegetable garden is an opportunity for you to learn to grow interesting vegetables, fresher than money can buy. It is the key to being more adventurous with food. If you grow it, you will eat it – and in this way develop a good habit. Being good at growing vegetables is also a skill that can be of benefit to you for the rest of your life.

There are, however, many things to learn before you will become good at it.

Today you will take the final decisions about your gardens, and prepare to get started.

Instruction

- 1) The teacher introduces the lesson.
- 2) Read the “More knowledge” together. Take notes.
- 3) The Kid’s Club makes the final decision on where to place the school garden and the backyard gardens, and how to get water to the locations.
- 4) Decide what to grow in the school garden and in the backyard gardens.

- 5) Take note of the information and draw a plan for each of the gardens. Maybe the Trios decide to work together on establishing the backyard gardens at home.
- 6) Decide when to start establishing the gardens. If possible, invite a person with experience in gardening to help you.
- 7) Make a list of things you will need to bring. Look for seeds and plants to plant at school, or at home. If you already have gardens at home, maybe you can share seeds and plants with each other. For some plants or trees you can collect seeds from wild plants.

More knowledge

How to plan a vegetable garden

A) Lay out the plan for the garden with the right measurements

The first step in making a vegetable garden is to draw up a plan of the garden. This plan is a "map" of your future garden. It should include the following information:

- Size and dimensions of the garden
- The orientation of the garden, considering the sun, sloping of the land, trees, water source and other environmental conditions
- The design of the beds, and what to plant in each of them.
- Start with 5 different types of plants
- Make space for a nursery
- Make Space for a compost pile
- Raised beds are ideal for making a garden more controllable, and involves less bending, improves drainage on heavy soils and divides your garden into manageable portions. Make this a no-go area for children and pets.
- Make the beds wide enough, but no wider than you can reach comfortably into the middle without treading on the soil. Add compost manure – mix 2 parts of soil with 3 parts of compost manure.

B) Preparing the ground for the vegetable garden

- Analyze the site you will use for the garden, and take measurements. (Use a measuring tape or use large steps – one step is about 1 meter).
- Think of a way to protect your garden, surrounding it with a fence. The cheapest way to surround the garden is to use a living fence of jatropha, mulberry or some thorny plants. A fence is very important for a vegetable garden, because it can prevent damage caused by pests and roaming livestock. When you have decided what kind of fence you will use, arrange to plant it. Place dead sticky branches around it, to allow it to grow upwards.

- Clean the area outside the fence, in a strip about 3 meters wide, all the way around, to avoid weed seeds from landing in the garden.
- Planting an extra barrier of plants such as chandelier (Euphorbia trigona) along the outside of the fence to keep the animals away, might be a good idea. This plant has a sticky and toxic sap that repels most animals.
- Prepare compost to use in the garden, or get hold of some manure, if possible.

C) Make the garden

- Start by cleaning the land, which is now surrounded by a fence. Remove stones, shrubs, grasses and waste. Level the ground if necessary.
- Turn the soil and make it loose with a hoe, to a depth of at least 10 cm. This is hard work, so it is a good idea to help each other in the school garden, and in the families or in the Trios.
- Measure and mark the areas you will use for the beds, and the paths between them. Follow the plan you have already made. Use a rope or a wire to make straight lines.
- Add a layer of compost to the beds.
- Shovel earth from each side of the beds, so the beds will become a little higher, and at the same time, the soil will mix with the compost. This method creates a fertile soil that will produce healthy plants.
- Now you are ready to plant!

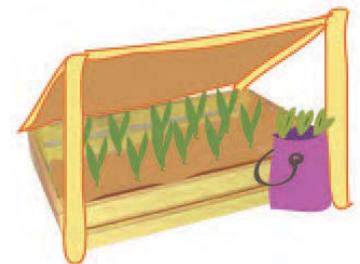


D) Plant your vegetables, fruits and local plants

Start by growing 5 common vegetables. Beans, sweet potatoes, rape, onions and tomatoes are a good choice for at start. Beans improve the soil by adding nitrogen. Sweet potatoes have lots of vitamins. Rape can be harvested again and again. Onions can be dried and kept for a long time. Tomatoes are a delicious vegetable. All of them will bring you health.

Onions, rape and tomatoes have to be sown in a nursery and transplanted.

Beans can be sown directly, and sweet potatoes can be planted directly from vines.



When sowing or planting you should consider the following:

- The sowing or planting methods are as varied as the type of plants. For example, small seeds such as carrots are spread on the soil, whereas larger seeds such as beans and corn are sown one by one. Most seeds must be sown in soil at a depth twice the size of the seed. The space between plants should be sufficient for the plants to have space when they are grown up.
- When you decide which plants you should grow besides each other, take into consideration the variety of the depth of their roots. It is preferable to have varying levels of roots, so that each plant can use the nutrients at different soil depths.

- Some plants prefer lots of sunlight, while others grow better with more shade. Plan your garden so that each plant has favorable growth conditions.
- Put a sign at each end of the rows, with the names of the plant, and the date it is sown or planted, in order to monitor its progress. Pictures will help you to recognize the different species and remember what you have sown.

E) Maintain the school garden together – at home, the whole family can be involved

- In weeding the garden
- In making sure that each plant is treated according to the instructions on the seed packets.
- In taking care that the plants are always getting enough water. Sometimes, you would need to give water twice a day.



E) Good to know about companion plants

What are companion plants? Companion plants are called this, because they help each other to grow better. For example, when the roots of two plants have different lengths, they do not need to compete for the same nutrients; or a companion plant may attract beneficial insects, and repel harmful insects, and in this way support its neighboring plants. Harmful insects and pests also spread easier, if all the plants in a field are of the same type.



Hereby a description of how some companion plants supports each other:

NAME	HELP THE FOLLOWING PLANTS	ARE HELPED BY THE FOLLOWING PLANTS	DO NOT PLANT NEAR THEM
<i>Onions, garlic, leeks</i>	Tomatoes, chilies, potatoes, mustard, cabbages	Carrots	Beans, peas, parsley
<i>Beans</i>	Spinach, lettuce, rosemary, dill, carrots, beets, cucumbers	Eggplants	Tomatoes, chilies, onions, garlic
<i>Tomatoes</i>	Peppers, asparagus	Onions, celery, carrots	Maize, peas, dill, potatoes, cabbages

Month 5

Growing our own food

Week 4 - Making the gardens

Actions: Making vegetable gardens at school and at home

Introduction

In this action, you are going to start working on establishing the vegetable garden at the school, and later at home. If you already have a school garden, or a home garden, you can choose to upgrade what you have or to expand the garden with more vegetables. Today, the Kid's Club will spend four hours working in the school garden together. Maybe it is not possible for you to finish the whole action in 4 hours, so in that case you will have to agree on when to finish the garden.

When the garden is established with seeds or plants, it needs to be maintained. In the beginning, by watering to keep the soil moist and later you will also need to weed and look out for insect pests.

Maybe you succeeded to get a person with experience in growing vegetables to come and help you get started. Then you follow her advice. Otherwise, follow the instruction hereunder.

Some of the tasks are good to do all together, and some you can divide among the Trios, and do at the same time.



Instruction

- 1) Mark the corners of the garden with sticks.
- 2) Build a fence around the garden, using dead sticky branches.
- 3) Clean the garden from stones, grass or other things lying around.
- 4) Keep all the organic material for compost and mulching.
- 5) Clean the area outside the fence, in a strip about three meters wide, all the way around, to avoid weed seeds from landing in the garden.
- 6) Mark the beds with strings. Mark the space for the compost heap and the space for the nursery.
- 7) Start to build a compost heap with layers of soil, cow dung, ash, dead plants or other organic material.

- 8) Turn the soil in the beds and make it loose with a hoe, to a depth of at least 10 cm.
- 9) Cover the beds with mulch. If you already have compost, you can mix it in the beds by shoveling soil from both sides, and heaping it in the middle. Mix well.
- 10) Follow your plan for the layout of the garden, and sow and plant with the correct depth and distances between the plants.
- 11) Prepare soil for the nursery and build a shade of sticks, and a roof of straw.
- 12) Sow the plants that need to be grown in a nursery. You can sow in raised beds, then it will be easy to move the plants on a shovel.
- 13) Before you end the action, make a duty roster for watering and for taking care of the garden.

More knowledge

Making of Beds

There are two common ways of making vegetable beds: the raised beds and the traditional rows. In general, it is a good idea to define the garden beds with a width of 1.2 m, and as long as you want them to be, with a 60 cm path between them. You can sow two or three different rows in each bed, according to how much space the plants you are sowing needs.

Planting

When you have finished digging, smooth the surface of the bed with a rake, then water thoroughly to prepare the soil for planting. Avoid stepping on freshly tilled soil. That will compact the soil and undo all your hard work.

Month 6

Our local environment

Week 1 – Ecosystems at work

Lesson: How everything in nature lives and works together

Introduction

An ecosystem includes all of the living things (plants, animals and organisms) in a given area, interacting with each other, and with their non-living environments (weather, earth, sun, soil, climate, and atmosphere).

In an ecosystem, each organism has its own niche or role to play.

Consider a small puddle at the back of your home. In it, you may find all sorts of living things, from microorganisms to insects and plants. These will depend on non-living things like water, sunlight, turbulence in the puddle, temperature, atmospheric pressure and even nutrients in the water, for life.

Modern science has become much more aware of this corporation and interdependence of everything in nature, and respect for natures systems are growing. For many years it was believed, that Man would be able to improve agricultural yields by using artificial, or chemical fertilizer. This succeeded for a number of years. But today it has become clear, that cultivating food on big fields by use of this type of fertilizer has killed the soil. Where chemical fertilizer has been the main source of nutrients for plants, the soil has become barren, and the life in the soil has died. The surface has become hard, and rain runs away. This means, that every year the farmer needs to add more fertilizer and use more water for irrigation.

Modern scientists have learned to respect the complicity of nature. Now they are recommending growing food by adding compost, biochar, minerals and microorganisms to the soil, which together brings life back. Soil full of organic matter give life to micronutrients, which in turn breaks down the plant residues to minerals that plants can absorb. Worms come back. Worms and roots of many different types of plants create corridors for water to stay in the field instead of running away. The ecosystem of the field is at work.

Instruction

- 1) The teacher presents the introduction and uses the “More knowledge’ to give more examples on how ecosystems work. He draws the pictures on the blackboard.

- 2) In Trios, come up with examples of ecosystems and make a drawing of your example.
- 3) If possible, visit a farmer who uses sustainable farming methods, and learn from him, or her, how this benefits the soil and the production of food.

More Knowledge

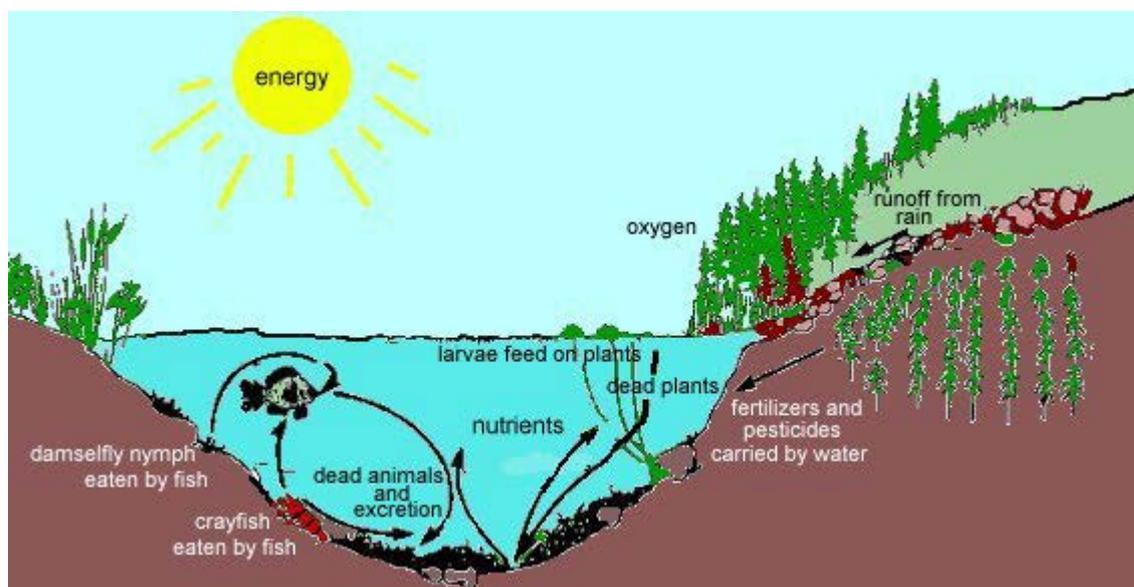
Ecosystems vary in size. They can be as small as a puddle or as large as the Earth itself. Any group of living and nonliving organisms interacting with each other can be considered an ecosystem.

Within each ecosystem, there are habitats, which may vary in size. A habitat is the place where a population lives. A population is a group of living organisms of the same kind, living in the same place at the same time.

All the populations interact and form a community. The community of living organisms interacts with the non-living world around it to form the ecosystem. The habitat must supply the needs of the organisms, such as food, water, temperature, oxygen and minerals. Life substances are recycled in the ecosystem. If the population's needs are not met, it will move to a better habitat or die out.

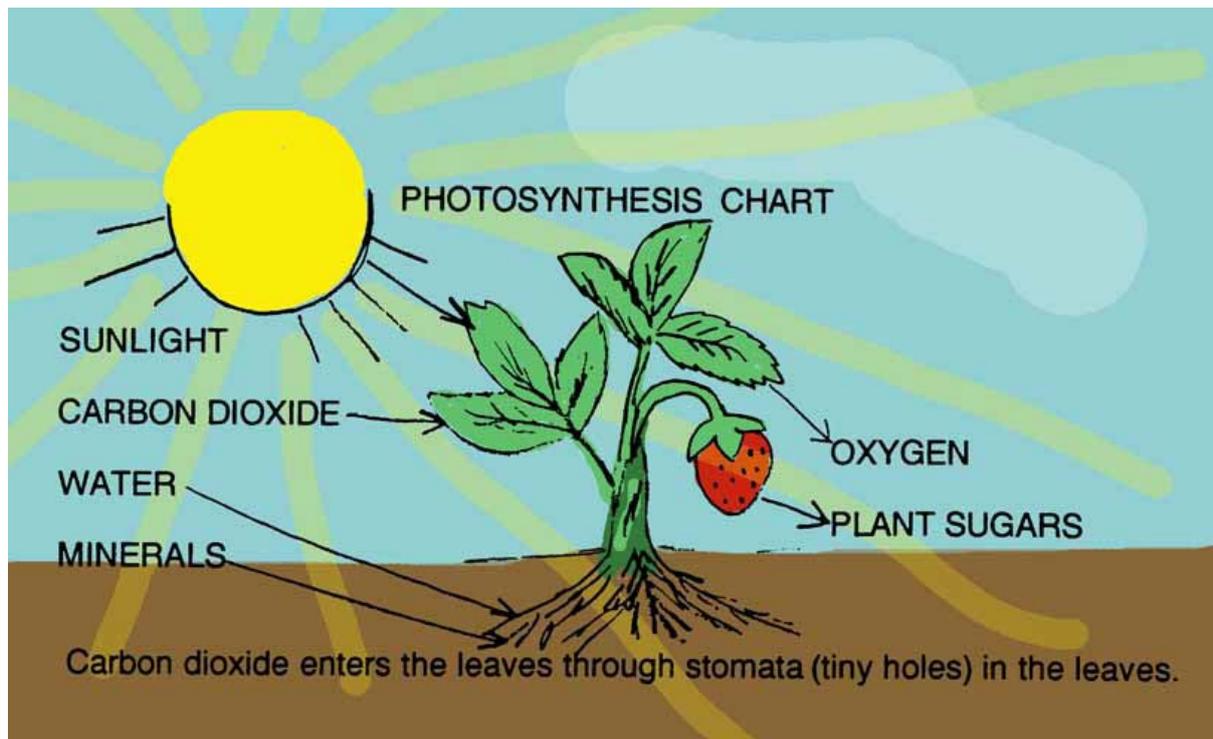
Biomes are ecosystems, where several habitats interact.

The Earth itself is one large biome. Smaller biomes include **deserts, tundras, grasslands and rainforests.**



The energy cycle

The process of photosynthesis, by which green plants use energy from sunlight to convert water and carbon dioxide into oxygen, and organic matter, is the basis for all life. Plant sugar and oxygen are created in the green parts of a plant, and every animal on earth depends on it. Here is an illustration that shows how it happens:



Plants absorb a common gas called carbon dioxide, pull water up through the roots and use sunlight to make sugar. Plants use the sugar to grow. Plants give off oxygen as a by-product. The green parts of the plants produce sugar and oxygen. This takes place in the process of photosynthesis:

Carbon dioxide + water + sunlight = sugar + oxygen

Photosynthesis, by which green plants use sunlight energy to convert water and carbon dioxide into oxygen, and organic matter, is the basis for all life.

Sugars, which are the first products of photosynthesis, are changed into starch, protein, oil, cellulose, lignin and thousands of other chemical compounds.

Before plants appeared on Earth, the Earth's atmosphere was high in carbon dioxide and contained no oxygen. Photosynthesis is the source of the oxygen, which we breathe. The present atmosphere contains about 0.039% carbon dioxide and 21% oxygen – thanks to photosynthesis.

The exchange of carbon dioxide (produced by animals and plants) and oxygen (produced by plants) is a process of conservation. The waste of one species becomes the food for another. An average hectare of maize produces enough oxygen per hectare, per day in midsummer, to meet the respiratory needs of about 325 people. This means that one million hectares of corn produce enough oxygen for the annual respiratory needs of 10 million residents in about 11 summer days.



Plants, as well as a number of microorganisms, are the only living organisms that can make their own food (this is one of the main ways of deciding if something is a plant). Plants are food for all other living organisms. All parts of the plant can be eaten: leaves, seeds, fruits, roots, nuts and flowers.

The energy flow through living organisms starts with sunlight and photosynthesis, and then it travels through the food chain as in the following example:

1) Primary producers – they are the green plants, and certain types of bacteria and algae that produce usable energy for the rest of the living organisms on earth. They use energy from the sun to make sucrose, glucose and other compounds that different life forms can eat and “burn” for energy. In each one of those sugar molecules, a little bit of the sun’s energy is stored in a form called chemical energy.

2) Herbivores – they are the plant eaters. They have the ability to digest the plants they eat and release the energy stored in the plant cells for their own use. Sometimes scientists call this level of the food chain the primary consumers.

3) Carnivores – are the meat eaters. Predators and scavengers are in this group. Sometimes this level in the food chain is referred to as the secondary consumers. They eat the animals that eat the plants, and sometimes they eat each other. Most of these animals cannot eat plants at all. They would starve to death if it were not for the herbivores digesting the plants first.

4) Decomposers – are the organisms that eat up dead organic matter from plants and animals. They are mostly bacteria and fungus, but also include maggots, dung beetles, earthworms and the like. They are just like carnivores and herbivores, because they also have to get their energy from the cells of animals or plants.

5) Omnivores – are creatures that can live from plants as well as animals. Humans are considered to be omnivores, although discussions are going on to clarify whether humans originally were herbivores.

As energy moves up the food chain, there is less and less of it for the next step in the food chain to eat. Most of the plant energy that is consumed by an herbivore is used by the herbivore to keep itself alive; eating, breathing, walking, running and staying warm, and much energy is lost as heat to the surroundings. Only a little is left for the carnivore, or decomposer that eats the herbivore. That is the main reason why there are not very many big predators compared to herbivores. There is simply not enough energy for them.

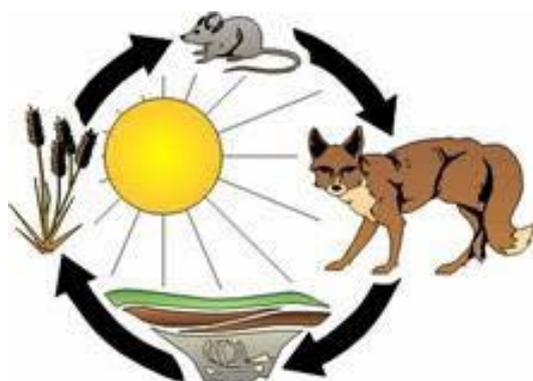


Illustration of a food chain where the energy flows:

- from sun to primary producers (plant)
- to primary consumers (mouse)
- to secondary consumers (fox)
- to decomposers (bacteria, etc.)

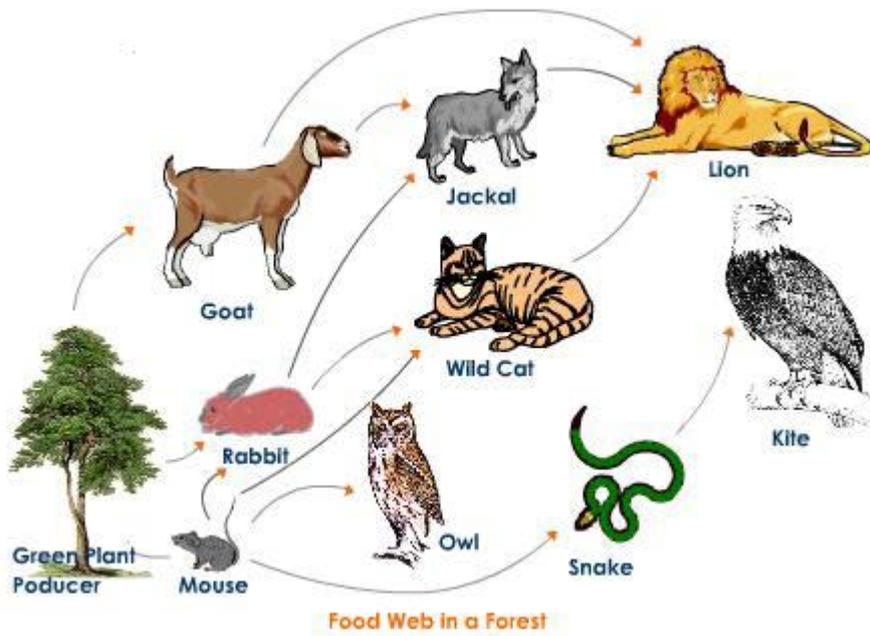


Illustration of a food web, where the energy goes from green plants to herbivores (big and small) to carnivores.

Cattle consume 16 times more grain than they produce as meat.

Think about this!

Month 6

Our local environment

Week 2 – Why is the climate changing?

Lesson: The influence of man on earth's climate

Introduction

Climate change is a change in global or regional climate patterns. When talked about today, most people refer to a change that has taken place from the mid 1950 onwards, expected to be caused by increased levels of atmospheric carbon dioxide produced by the burning of fossil fuels such as coal and oil.

Climate is usually defined as the "average weather" in a place. It includes patterns of temperature, precipitation (rain or snow), humidity, wind and seasons. Climate patterns play a fundamental role in shaping natural ecosystems, and the human economies and cultures that depend on them.

But the climate today is not what it used to be. Our climate is rapidly changing with disruptive impacts, and that change is progressing faster than any seen in the last 2,000 years.

According to the report from USA, "Preparing for a changing climate" expressing Washington State's Integrated Climate Response Strategy 2012, rising levels of carbon dioxide and other heat-trapping gases in the atmosphere have warmed the Earth and are causing wide-ranging impacts, including melting snow and ice; rising sea levels; more extreme heat events, fires and drought; and more extreme storms, rainfall and floods. Scientists project that these trends will continue and in some cases accelerate, posing significant risks to human health, our forests, agriculture, freshwater supplies, coastlines, and other natural resources that are vital to our economy, environment, and our quality of life.

Instruction

- 1) The teacher presents the lesson and the "More knowledge".
- 2) Write new expressions on a list on the blackboard while you read.
- 3) Help each other to explain the words. Go back to the text, if you need help.
- 4) Discuss how Zambia has experience Global Warming and Climate Change.

More Knowledge

Global Warming is happening.

Burning of fossil fuels in the form of coal and oil has only taken place during the last 150 years. When coal and oil burns, CO₂ is released into the atmosphere. This forms a shield that is stopping rays from the sun to travel back to the universe. In 1970 scientist gave the first warnings that CO₂ in the atmosphere was increasing, and that this was causing temperatures on earth to rise at a much faster rate than at any other time.

Global Warming and climate change has happened many times before in the history of the Earth. 13,000 years ago, ice covered much of Europe and North America, and the world was 5 degrees colder than today.

Since then, however, the temperatures have been relatively stable, giving plants, animals and human societies a mostly predictable and hospitable planet to live on.

Past changes in temperatures have been caused by small changes in the amount of sunlight that reaches the lands and the oceans as the orbit of Earth around the Sun fluctuates slightly over long periods of time. Likewise, the living Earth with its plants and animals influences the temperatures, as plants remove CO₂ from the atmosphere, and forest fires, microbes and animals return CO₂ to the atmosphere, mostly with the effect of stabilizing temperatures to a level favorable for life.

Many scientists have tried to predict how temperatures will change over the next 100 years, and the UN has set up an Intergovernmental Panel on Climate Change (IPCC). The IPCC predicted in 2007, that temperatures would have risen between 2 and 6 degrees by 2100. The IPCC, however, did not want to include in their predictions the events and effects, they were not very sure about. Thus, they did not take into consideration the effect of the melting of the North Pole ice until after 2080, while the ice will most likely all have melted by the summer of 2030. Neither did they include the full effect of deforestation as it happens around the world, because of logging and expansion of farming, nor the fact that the oceans, which absorb and store some of the CO₂ from fossil fuel burning, are less and less able to do so as the level of CO₂ in the sea water increases. Thus, if we add up all this, it is likely that the highest prediction of how much the earth will warm, – plus 6 degrees in 2100 – will come true. This is also confirmed by recent measurements that point to the fact that temperatures and CO₂ levels are increasing faster than in even the most extreme predictions made by the IPCC.

Climate changes caused by Global Warming

The climate of a country is determined not only by average temperatures but by changes in temperature between the seasons, by the amount of rain in different seasons and by winds. The climate determines which plants can grow, and which animals can live in an area, and is thus of greater importance to people and communities than the temperature.

If the average temperature of the Earth warms by 2 degrees Celsius by 2040, some areas might get much warmer, while the oceans, which cover 70% of the Earth, may warm only 1 degree. Inland areas of Africa will become 3-4 degrees warmer. When temperatures rise, the land will become much dryer, because the heat evaporates water from the soil and leaves the soil hard baked. A large increase in rainfall is needed for the soil to remain as moist as before. There will be more rain, because more water will evaporate over the oceans. But most of

Africa, Asia, Australia and Latin America will get a drier and less hospitable climate. More of the rain falling in a warmer world will come in violent storms that result in more flooding and destruction of crops, because higher temperatures will produce stronger winds. Especially South and Southeast Asia, Western South America and Eastern Africa will see many floods. The higher temperatures will melt glaciers on mountains, and in polar areas that have been frozen for thousands or millions of years, leading to rising sea levels that will eventually flood low-lying coastal areas.

A cold summer or winter does not contradict Global Warming

It is important to realize that Global Warming must be measured on a global scale and over decades. It is not possible to take the temperatures of a single year in a certain country and say anything about climate change based on this.

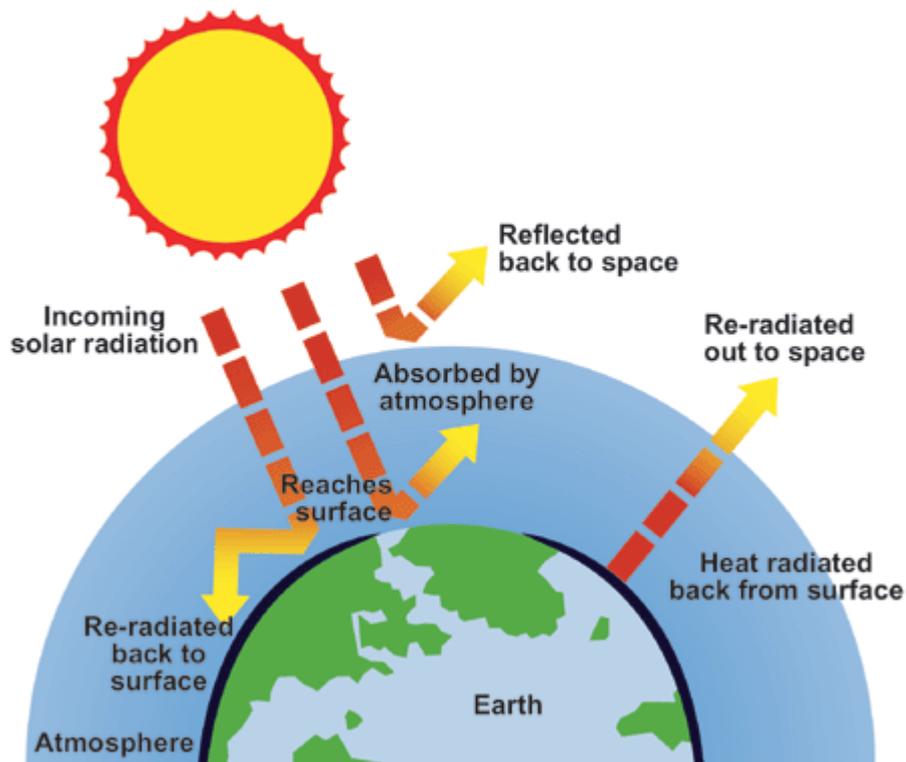
The climate is measured over many years, since there will always be variations between individual years.

One needs to look at the average temperatures during the whole year, and from all over the world. With such measurements, taken from more than 1,500 weather stations, there is no longer any doubt. The first decade of the 2000s has been the warmest decade since registration of global temperatures started 150 years ago. Five of the years of this decade are among the warmest ever recorded.

Hereunder you can see a chart illustrating the forces at work.

In the next lesson, we will discuss what we humans can do to improve the situation, and what you can do locally.

Global warming and the greenhouse effect



Month 6

Our local environment

Week 3 – What we can do to improve our environment

Lessons: Fighting Global Warming by stopping wildfires and planting trees

Introduction

In the last lesson, you studied why Global Warming and Climate Change is happening. In this lesson, you will look at what can be done locally to reduce emission of CO₂ into the atmosphere. Of course, it is the responsibility of governments and international organizations to make the laws that guide how a country shall cut down on CO₂ emission by reducing use of fossil fuels such as oil, and coal in industries and for generating electricity, and this is where the biggest difference can be made. But all people need to know that Global Warming is happening, and to do whatever they can to protect their local areas as well as possible.

Why protect our natural areas?

There are many reasons why we should protect the nature around us. One reason is that we do not have the right to destroy nature just because we have the power to do so. We humans are just one of the 10-15 million different species on Earth, and other organisms have the same right to exist as we do. Why should we care if some or all these other species disappear forever? One very obvious reason is that we humans need nature - in fact, we totally depend on it. There are numerous historical examples of past civilizations that disappeared because they did not manage their natural resources well, such as the Mayans, the people of Easter Island, or the Viking settlers on Greenland.

The plants and trees are the basis for nearly all other forms of life, and it is therefore essential to preserve a healthy and diverse vegetation.

The greater the number of species living on earth, the more stable the global environment is. This means that natural systems are better able to survive the global environmental changes that occur regularly. And we need these natural systems in order to purify the earth's water and air. As natural environments are degraded, the water purification cycle is destroyed and topsoil that has been built up over centuries is eroded and washed out to sea. Climate change makes the maintenance and restoration of a healthy environment even more urgent.

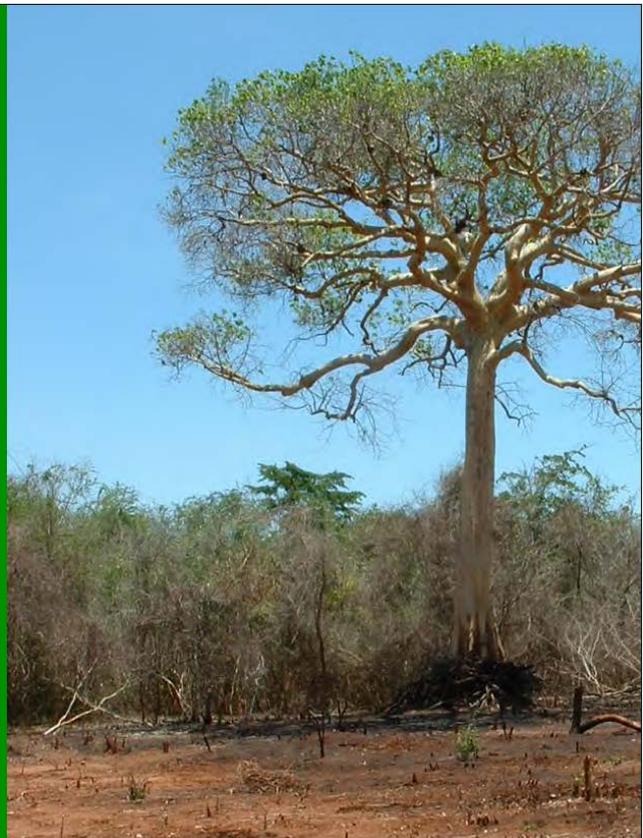
Instruction

- 1) The teacher introduces the lesson and you go through the “More knowledge” together, looking at the pictures.
- 2) For each picture, discuss your local experiences of damages caused or benefits gained.
- 3) Discuss how to share knowledge on how to protect our environment with your family and friends. To know more, will make it possible for farmers to protect their land against erosion, and encourage families to establish wood lots for getting firewood.

More knowledge

In the pictures below you can see what farmers and communities in Zambia are already doing to improve the environments ability to protect itself, and us, against the effects of Global Warming and Climate Change.

Deforestation accounts for 20% of global warming. It is therefore necessary to show farmers alternatives to slash and burn farming. And promote tree from which they can generate income.



Planting trees for firewood in Africa

1 tree stores over 15 years: 1.8 tons CO₂
1 tree in Africa per year: 0.1 tons CO₂
50 trees can supply a family with firewood



Thousands of farmers in Zambia have been mobilised to plant and let new Msangu trees grow up in their fields.

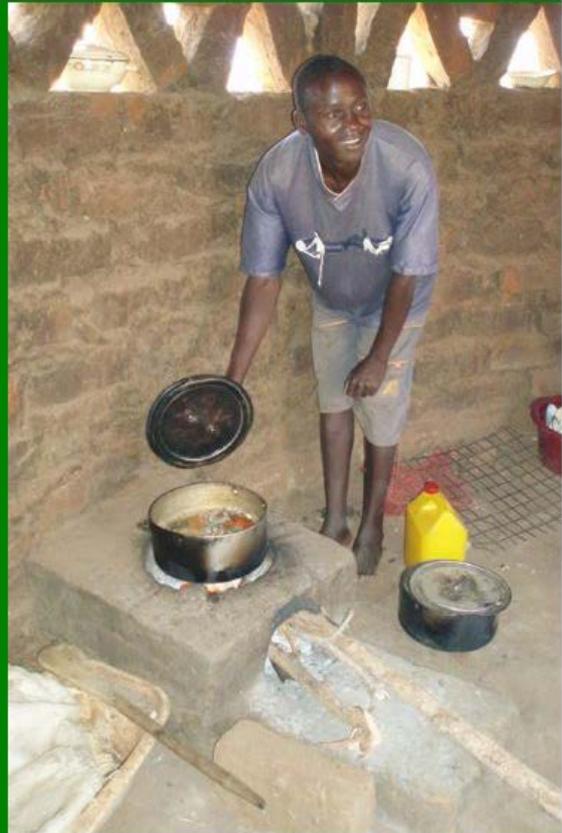
They enrich the soils, and yields are better under the trees.



Zambians at DAPP projects have built thousands of these stoves that save more than 1/3 of the firewood.

1 stove saves over 1 ton firewood/year

1 stove reduces emissions with about 2 tons CO₂/year



This Rocket Stove in Children's Town, Zambia, saves over 50% firewood



Avoid bushfires. Farmers Clubs and other HPP projects mobilise people only to use controlled fires. 3-4 T CO₂ will then be stored annually in trees, roots and soils.



Farmers are also sensitised to use permanent fields instead of slash and burn farming. This reduces labour, preserves biodiversity and reduces emissions of CO₂. Preventing burning of forested land saves 100-200 T CO₂/ha



Contours of vetiver grass reduce loss of nutrients and more water penetrates into the soil. But they also store carbon since they continue to grow for up to 50 years.



Root system of 2-year old vetiver grass in China. It is estimated that 1 km of vetiver row (8,000 plants) stores 2 tons CO₂/year more than what would occur otherwise.



Conservation Farming, here in Zimbabwe, not only preserves nutrients and water. 1 hectare annually stores 1/4 to 1/2 t CO₂.



Community preserved areas, here in Zambia, similarly store 3-4 T CO₂/ha annually by preventing fires and felling.



Month 6

Our local environment

Week 4 – Our permanent tree nursery

Action: Collecting seeds and seedlings and establish tree nurseries at school and at home



Introduction

This month has been about Global Warming and what can be done locally to protect against some of the consequences of climate change.

Planting trees is something that will be very helpful and can engage the whole community. It is not expensive, as seeds and seedlings of wild trees and of cultivated trees can be collected free of cost. It takes some work to raise the seedlings in the nursery, look after them with water and shade, to plant them when they are big enough, and look after them until they are old enough to take care of themselves.

But it is worth it. Just think of all the benefits you get from trees:

Shade

Fuel

Fruits

Protection against wind

Improvement of the soil's capacity to receive rainwater

Timber

- If you become a skilled tree gardener, you might have a way to earn an income from selling tree seedlings.

Instruction

- 1) The teacher introduces the lesson.
- 2) Go through the "More knowledge". Take notes.

- 3) In the Trios, discuss why it is important to plant many more trees and the benefit from doing it.
- 4) Agree with the school on a place to make the nursery.
- 5) Decide on an action to collect seeds and seedlings. Learn the names of the local trees and what they are good for. Decide which trees to plant.
- 6) Follow the instruction in the “More knowledge” when you prepare the nursery and sow and plant the trees.
- 7) Make a plan for how to take care of the nursery.
- 8) When the trees are ready to plant, decide where to plant them.

More knowledge

Production of Trees - Introduction

New trees can be produced using the following methods:

1. In a tree nursery in polythene pots, or old soft drink cans.
2. In a nursery using seedbeds.
3. By planting seeds where you want the trees to grow.
4. By planting wild seedlings found under mature trees in nature.
5. With plant cuttings.

Growing seedlings

Site selection

A nursery should be located near a water source, on flat land. It should also have a wind break, some shade trees, and not be waterlogged.

Fencing

The nursery must be fenced in order to protect the tree seedlings from animals and chickens. Use grass and poles, thorny bushes as a start, maybe plant live trees to serve as a fence at the start of the rainy season.

Nursery beds

The beds should be one meter wide and should be separated by walkways 60 cm wide. A bed 1 m x 5 m can accommodate from 500 to 1000 seedlings. So 10 m x 10 m will be sufficient for at least 10,000 seedlings.

Type of soil to use

The polythene pots or the seedbeds can be filled with a good layer of topsoil. The best soil is found under big trees (acacias) or near dams/rivers. If the soil contains much clay (it can be easily formed into a ball when wet), you should mix the soil with sand. If the soil is not very fertile, then you should mix it with manure. Never mix more than one part of manure to ten parts of soil because the manure can burn the tree seedlings.

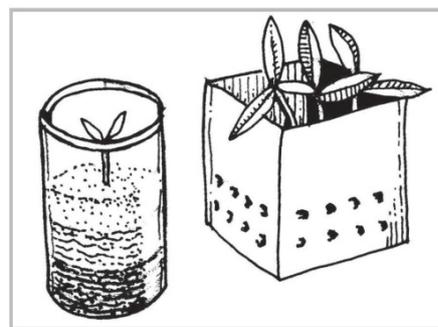
How to fill the pots

The bottom layer must be pressed hard; the middle layer should be slightly pressed and the top layer quite loose. The soil is pressed hard at the bottom in order for the soil not to fall out during transplantation.

If you have no polythene pots, you can use any available container, such as cans (tins) or milk cartons. Remember to make several small holes in the base so that excess water can run out.

Sowing the seeds

Seeds can be sown directly into pots or seedbeds. If you are using pots, it is best to sow at least three seeds per pot. Seeds sown in seedbeds can later be transplanted to pots, or even directly to the field (bare root planting). Cover the seeds with a layer of soil that is twice as thick as the seed itself. This means that the bigger the seeds are, the more soil will be needed for covering.



Production of seedlings in cans (tins), juice or milk cartons

Shading (protection from the sun)

The seedbed or pots should be covered with a thin layer of grass after sowing to protect against the sun, and heavy rainstorms. A thick layer of grass is bad for germination (the stage where seeds start growing into tiny plants). When the seedlings have germinated, you should build a shade at a height of 60 cm above the seedlings to protect them from the sun, and strong rains.

Seed collection

Many seeds can be collected locally from existing trees. It is best to collect seeds from good and healthy trees. Seeds from any ripe fruit can be washed and then sown fresh, or dried in the shade.

Seed treatment

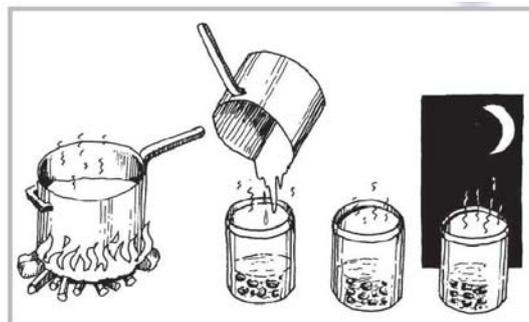
It is important that the seeds are treated correctly before sowing, or they may take a long time to germinate or germinate poorly. There are basically two different treatments:

Cold-water treatment:

Leave the seeds in cold water overnight before sowing. This applies to most fruit tree seeds and some other soft seeds.

Hot water treatment:

Heat some water close to boiling (the volume of the water must be twice the volume of the seeds). Put the seeds in the hot water and leave them to soak overnight.



Hot water seed treatment

Watering

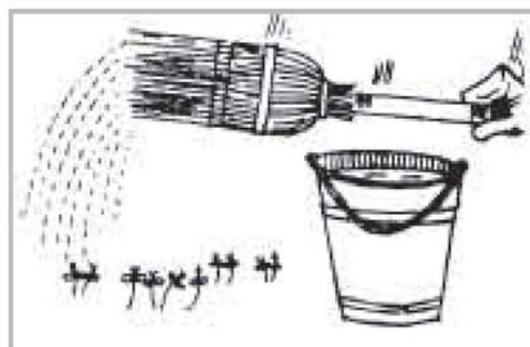
While the seeds are germinating and the seedlings are small, they must be watered daily. After this phase, watering every other day is sufficient. Use a water can or sprinkler made from a plastic container with small holes in it. Do not over-water as this can cause fungal diseases. Keep the pots or seedbeds free from weeds at all times.

Transplanting

Seedlings can be transplanted from seed beds when they are 3-5 cm tall. Transplant them to pots or another seedbed for bare root planting, keeping a distance of 5 cm x 5 cm between each plant. Water the seedlings and water the pots. Lift the seedling and make sure that the root will not be disturbed.

Make a planting hole with a finger or a stick. Make sure the hole is bigger than the root.

Press the soil firmly around the plant. Water again and give full shade to the seedlings for three days.

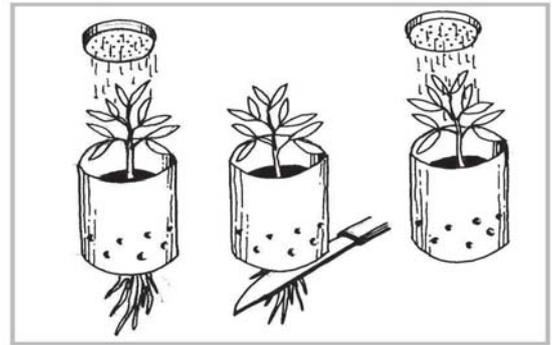


Watering seedlings with a broom

It is good to separate pots by size to make correct watering easier. Take away the empty pots where seeds did not germinate or where transplanted seedlings died. Re-sow or plant in these pots.

Root pruning

Eliminate small roots protruding from the pots by simply lifting the pots and breaking the roots by turning the pot around or by cutting the roots with a knife. This will give the seedling a denser root system that can better survive being moved. Without pruning, the roots will grow under the pots. This can cause difficulties during transplanting, as roots may be damaged or



Pruning of seedling roots

break. Before and after root pruning, the seedlings must be well irrigated. Give full shade to the seedlings for 2-3 days.



Tree seedlings in cans. The seedlings in the cans can be placed in the soil where you want the trees to grow. The roots will break through the cans.



Water gently. A bottle with holes will do as a sprinkler.

Month 7

Boys and girls as equals

Week 1 – The needs and rights of children

Lesson: Are the needs and rights of boys and girls different?

Both men and women are human beings. Science has proven that there is similarity between the male and the female human brains. In that sense, we are alike, as we are of the same species. No matter gender, color or beliefs, we are humans.



Biologically, there is a small difference, and biology has been a part of shaping the way men and women have co-operated since prehistoric times. For the human species, there has been a tremendous gain in that co-operation, as you can see how we, as a species, have multiplied to live all over the globe today, having reached more than 7 billion.

Since the woman biologically is the childbearing and nurturing entity, the woman has developed a set of emotions and skills, which circles around the responsibility and caring of the offspring. Whereas, the man has had the task of protecting the women and the offspring, keeping them safe, feeding and keeping them warm, the man has developed his set of emotions and skills to fulfill this task. This is how humans have lived since time began, and since the first humans saw the light of the day. The division of labor has shaped the co-operation between male and female, and has been useful in securing the next generation.

It is without doubt, that it is the women who have paid the highest price for that co-operation. The way it has been executed, has created inequality among men and women.

It especially took off when the hunter and gatherer society changed into becoming an agricultural society, which used cultivation by plowing as the means of production. These more heavy tasks required upper-body strength to control the plow. Consequently, it gave men an advantage over women, and led to a more prominent division of labor. It marginalized the women; they gave birth to more children than before, as the agricultural society produced more food for consumption than any time before in history. This gave rise to a culture, which confined the women to being in the home. As a result, women became subservient to men. The man started to look at the woman as his property, and

the laws and also the religion, in many cases, supported that way of looking at it. Thus, it has followed us into today's world, and can especially be seen practiced in rural communities, in countries all over the world.

Today, the biological differences still remain, as it is the women who give birth to the next generation. But, in general, society, science, education and the way we are living, has at many levels equalized men and women. This has developed faster during the last half of the century, especially in the so-called "developed world". Both the modern technology and the social economic organization of modern societies have brought a restructuring of the social role and the cultural values concerning the relationship between men and women.

Men and women today have an opportunity to achieve equal power and respect.

Zambia has signed two declarations regarding Children's Rights: The United Nations Convention on the Rights of the Child (UNCRC) and the African Charter on the Rights and Welfare of the Child (The Children's Charter). Both these instruments state that a child is any person under the age of 18 years.

Two rights stand out for all children, whether boys or girls:

Article 28: The child's right to primary education.

Article 32: The child's right to be protected from economic exploitation.

Instruction

- 1) The teacher gives the lesson, using the introduction and the "More knowledge" material.
- 2) In Trios, discuss and try to understand some of the findings in the history of men and women. Answer the following questions and write your answers in your notebooks:
- 3) What was the work of men and women in the society of gatherers?
How did this change when agriculture became common?
How is it in Zambia today?
- 4) Is there any difference between boys' and girls' ability to study?
List at least 5 jobs a woman cannot do.
List at least 5 jobs a man cannot do.
What do boys need, that girls do not need?
What do girls need, that boys do not need?
- 5) Discuss your answers in the whole club together.
- 6) Continue the discussion in the club. Give examples of the influence of gender in the village where you live.

More Knowledge

Relations between males and females. Looking back at our roots.

Two hundred thousand years ago – The first humans appeared in Africa. They lived as small bands of hunter-gatherer tribes consisting of 10-50 people. While men tended to do more of the hunting, and women more of the gathering, both sexes were equally indispensable to the survival of each community. It is suspected by many anthropologists, that these were egalitarian communities where men and women were treated quite fairly, and various forms of relations between men and women, including polygamy, were not only accepted, but sometimes also encouraged.

Over thousands of years, humans fanned out across the planet, and these sexual morals would change and adapt to the environmental surroundings. In more dangerous environments with scarce resources, the male strength and size would become more valuable, and societies would become more patriarchal, granting more polygamous rights to men, but not to women.

In safer environments with abundant resources, the man's size and strength would become less economical necessary, and these societies would provide more equal rights between men and women.



Over these millenniums, the biological bases of gender and sexual behavior evolved. A lot has been made of it. It seems clear that there are slight and significant psychological differences between men and women, but which differences and how significant they are, is still up for major debates.

One hundred and fifty thousand years ago – Spoken language developed. Men and women can finally communicate their thoughts and desires to one another.

Forty Thousand Years Ago – Humans began to paint, sculpt and make art.



7,000 BC – Agriculture is discovered. For the first time in human history, humans are able to accumulate surplus of food and resources, far beyond the need of one person's consumption. This means, that people can engage other people or keep slaves to produce the food they need. People, who are good at farming or have the best land, gain a huge economic advantage over the rest of the population. Socio-economic inequality emerges. Class systems begin to take hold. Humanity will never be the same.

5,000 BC – Agriculture slowly marginalizes women in society. The best farmers are required to work with heavy tools and large animals, for long periods of time. Men have a major advantage in farming due to their greater size and strength. Pregnant women cannot work as much. The women's economic contribution to a functioning society plummets, and as a result they become subservient to the men they are together with. By this time, women had no legal rights. They were basically treated as the property of their fathers or husbands.

2,000 BC – The earliest cities emerge in Mesopotamia and northern Africa, and later on in India and China. City/states usher in thousands of years of imperial conquests, beginning with the Sumerians and stretching all the way through the Romans and Mongols, to the British Empire almost four thousand years later.

Marriage is now the primary unit of economic organization in the city/state systems. As men struggle to accumulate land, resources and power, they need to guarantee paternity of their children, so that they may pass their wealth on to their own kin (subsistence hunter-gatherer societies seemed to lack this preoccupation). As a result, female chastity and submissiveness becomes necessary in women to appeal to powerful men. Female sexuality is objectified and fertility is a woman's highest economically viable option for social improvement.



Having eight children was not uncommon

As a result, women are, quite literally, traded on the open market between a woman's family and the eligible bachelors of a similar or higher social standing. More powerful men even take on multiple women as wives, or create harems for themselves. Divorces and remarriages become common as men shuffle between families, looking for the best option to move ahead. Meanwhile, families marry off their girls to create political alliances, and gain access to more resources and wealth. There is very little romance involved. Sex is a duty more than a pleasure. Women possess few personal rights and are entirely dependent on the men in their families for their needs. Often, girls were married to husbands who were old and cruel. This practice of social arrangement has continued for most of the remaining period, and it persists in many parts of the world today.

Our time, however, see the education of girls, and the mechanization of housework (washing machines, electric or gas fired cooking stoves, running water, etc.) slowly change the rules of the old society.

Since the 1950es, it has become common in many countries for girls to pass graduation, or at least class 10. Many women are now educated and working in all kind of professions, from



Today a woman can become a doctor

engineers to scientists to generals. With woman being able to generate their own income, they no longer depend on a man for their living. In some western countries, this combined with legislation that has given woman more rights, has led to a decrease in the number of marriages, as both men and woman choose not to enter into marriage, and an increase in divorces, as both sexes put higher demands to the quality of the live they want to live. It has also led to some 40 % of children in the 28 EU countries being born outside marriage in 2012.

This situation creates other problems, especially for children who often have to pendle between the homes of their parents.

Month 7

Boys and girls as equals

Week 2 – Growing up as a girl or as a boy

Lesson: Discuss the roles families and traditions are giving boys and girls

Gender in-equality today is larger in poor countries. This also includes Zambia. Here, cultural norms favor males, in education, health, personal autonomy and more.

Firstly, more boys than girls attend school; this difference becomes even bigger after primary school level. Where resources are limited or due to customs, parents prefer to invest in the boys' educations, and not the girls'.

Common saying states: "Raising a daughter is like watering your neighbor's field".

Women are still protesting because of severe under representation in the countries labor force, and because of unequal pay for the same work. Many women are now taking care of cultivating the families' land, but they often do not have a say in what to grow and how to use the money they earn.

Gender based violence at home is more often the order of the day, than not, for many women, and the communities' tolerance of these practices tend to be high.

In-equality between men and women is still high about who has the decision-making power in the family.

These facts have implications regarding the possibilities in the life of girls and the women.

Try to consider the answer to the following question: As a girl or a woman, how much freedom of choice and control over the way your life turns out, do you have?

In the rural area, economic developments are scarce, electricity, piped water, viable roads and communication are not commonly available, and the women and the girls often have to spend their time doing their daily chores to sustain the family's needs, instead of going to school, or producing products that can generate income, and bring on development. Without technological improvements in the production, the women's time will remain tied up at home: fetching water, firewood, cooking, washing, cleaning, doing the farm work, and tending to the children and the animals. The hours of a productive day will not be extended, because there is no electricity in the home. When

technological development reaches the rural areas, this will reduce the time needed for household chores. Just imagine getting light by pressing a button, and getting running water from a tap in the kitchen.

Women's health is also compromised as childbearing is more dangerous in poor countries, and a weak health system increases complications in connection with being pregnant. A patrilineal system is the norm. Here names, property and wealth are passed on to the next generation through the male descendants, and nothing goes to the female. This system puts the sons on a higher footing than the daughters, and it is affecting the gender gap. Some legal reforms are needed in many countries to allow sons and daughters to inherit equally.

To promote equality for girls and women, there is a dire need to change some of the existing cultural practices. Here are a few examples:

Early marriages must be stopped.

Gender based violence must be stopped.

Women must be promoted to become equal partners of decision making in the family.

Family planning and child spacing must be promoted, to prevent too many and frequent pregnancies.

The family should invest in the girl and send her to school to get an education.

You can start to discuss where you think changes are needed to give girls and women a better chance in life.

Instruction

- 1) The Teacher presents the lesson and the "More knowledge".
- 2) In Trios, discuss the following questions:
 - a. List examples from your daily life of how boys and girls are treated differently in the families.
 - b. Look at your examples and explain the reasons for the difference.
 - c. What does it mean for you, as a boy or a girl? Do you agree to the differences, or what would you like to change?
 - d. What are boys allowed to do, that you as a girl would also like to do?
 - e. What are girls allowed to do, that you as a boy would also like to do?
- 3) Share your ideas with the whole club.
- 4) Make a list on the blackboard of the types of work women are doing in your village.
- 5) Make another list of the types of work men are doing in your village.

6) What type of work would you like to do in your adult life? Write your wishes on the blackboard, and consider what it would take to make it a reality.

7) What changes would you like to make in the way boys and girls are treated, when you become a parent?

More knowledge

"Sex" refers to physical or physiological differences between males, females, and intersex persons, including both their primary and secondary sex characteristics.

"Gender," on the other hand, refers to social or cultural distinctions associated with a given sex.

When babies are born, they are assigned a gender based on their biological sex—male babies are assigned as boys, female babies are assigned as girls, and inter-sex babies are usually relegated into one category or another. Scholars generally regard gender as a *social construct*, meaning that it does not exist naturally, but is instead a concept that is created by cultural and societal norms.

From birth, children are socialized to conform to certain gender roles based on their biological sex, and the gender to which they are assigned.

As we grow, we learn how to behave from those around us. In this socialization process, children are introduced to certain roles that are typically linked to their biological sex. The term "gender role" refers to society's concept of how men and women are expected to act, and behave. Gender roles are based on norms, or standards, created by society. In many cultures, masculine roles have traditionally been associated with strength, aggression, and dominance, while feminine roles have traditionally been associated with passivity, nurturing, and subordination.

The socialization process, in which children learn these gender roles, begins at birth. Today, our urban society is quick to outfit male infants in blue and girls in pink, even applying these color-coded gender labels while a baby is in the womb. It is interesting to note that these color associations with gender have not always been what they are today. Up until the beginning of the 20th century, pink was actually more associated with boys, while blue was more associated with girls—take this as an illustration of how socially constructed these associations really are.

Gender socialization occurs through four major agents: *family, education, peer groups, and mass media*. Each agent reinforces gender roles by creating and maintaining special expectations for gender-specific behavior. Exposure also occurs through secondary agents, such as religion and the workplace. Repeated exposure to these agents over time, leads people into a false sense that they are acting naturally based on their gender, while they are actually following a socially constructed role.

Children learn at a young age that there are distinct expectations for them, based on their assigned gender. Cross-cultural studies reveal that children are aware of gender roles by age two or three; at four or five, most children are firmly entrenched in culturally appropriate gender roles. Parents often inspire the boy to "boy" types of chores, which promote motor skills, aggression, and solitary play, like looking after the herd of animal. The girl child is always given household chores, fetching water, firewood, cooking, cleaning, looking after younger siblings, etc. All tasks that are time consuming and foster nurturing and social skills.

Studies have shown, that children will most likely choose to play with "gender appropriate"

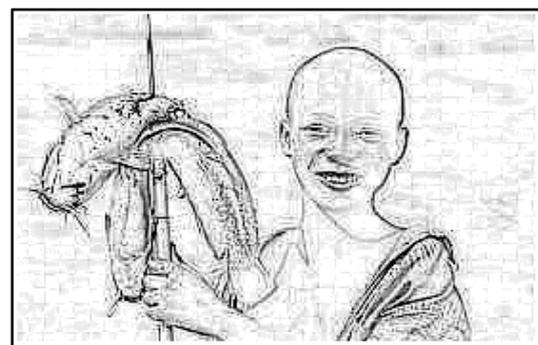
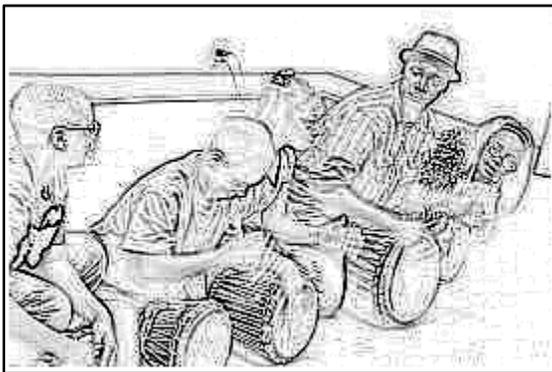
toys, even when cross-gender toys are available, because parents give children positive feedback for gender-normative behavior.

The drive to adhere to masculine and feminine gender roles continues later in life, in cases where both male and female work outside the home of the family. Men tend to outnumber women in professions such as law enforcement, the military, and politics; women tend to outnumber men in care-related occupations such as childcare, health care, and social work.

These occupational roles are examples of typical male and female behavior, derived not from biology or genetics, but from our culture's traditions.

The attitudes and expectations surrounding gender roles are not typically based on any inherent or natural gender differences, but on gender stereotypes, or oversimplified notions about the attitudes, traits, and behavior patterns of males and females. Gender stereotypes form the basis of sexism, or the prejudiced beliefs that values males over females. Common forms of sexism in modern society include gender-role expectations, such as expecting women to be the caretakers of the household. Sexism also includes people's expectations of how members of a gender group should behave. For example, women are expected to be friendly, passive, and nurturing; when a woman behaves in an unfriendly or assertive manner, she may be disliked or perceived as aggressive, because she has violated a gender role. In contrast, a man behaving in a similarly unfriendly or assertive way, might be perceived as strong or even gain respect in some circumstances.

Sexism can exist on a societal level such as in hiring, employment opportunities and education. In some of the richer countries, women are less likely to be hired, or promoted in male-dominated professions such as engineering, aviation, and construction. In many areas of the world, young girls are not given the same access as boys, to nutrition, health care, and education. In most countries, parents prefer a son for a daughter. In India, many baby girls are killed at birth, because the family wants a son. This has led to a lack of girls in some states, where boys now have problems finding a wife from their own society.



What boys and girls do

Month 7

Boys and girls as equals

Week 3 – 50 questions about girls and boys

Lesson: We ask questions of each other and give good answers

As a child in primary school, you are at a very good age. You are old enough to do many things. You are not old enough to have started to worry about your adult life. You are allowed to be curious, and you should be, because there are so many things to learn more about.

In the lesson today, you will learn more about how each of you in the Kid's Club thinks about different things in life.

Before you start asking each other questions, you need to decide to be frank and bold. You also need to decide to give good answers.

In this way, you will learn a lot about each other, and maybe also challenge some of each other's opinions and ideas.

Instruction

- 1) The teacher presents the idea of the lesson, and you follow the instruction together.
- 2) Start by agreeing to be serious and give good answers.
- 3) Make groups of girls and groups of boys with three in each group.
- 4) In the groups, write a list of 10 questions you want to ask another group.
- 5) Then meet in double groups, a boys group and a girls group together. Ask your questions and get answers. Note down the answers.
- 6) Meet in the whole Kid's Club and share the questions and answers you think are the most interesting, or you would like all of you to discuss.
- 7) Look at the example of questions in the "More knowledge" if you need more questions to discuss.



More Knowledge

A list of interesting issues you can discuss in the Kid's Club:

1. What qualities do you like in a friend?
2. What do you want your parents to do, if you ran out to play instead of doing your chores?
3. How do you feel if your father hits your mother?
4. Do you ever play with your younger siblings, or teach them something?
5. Have you ever smoked a cigarette? Why? Did you like it?
6. Do you like to be together with children who are afraid of you?
7. Why is it wrong to spread gossip about someone else?
8. What would you do if your best friend was about to drop out of school because he did not like to go to school?
9. Do you have a good friend from another tribe?
10. What can we do to treat all children with respect, never mind their color, or religion, or family, or tribe, or nationality?
11. What would you do if someone asked you to try to smoke or inhale some drugs?
12. Who is deciding what is smart?

Should we make these rules the rules of our Kid's Club?

Do not compete. Do symbiotic things.

Do not do evil. Do good things like good people do.

Do not make war. Make peace. Love peace. Keep the peace.

Month 7

Boys and girls as equals

Week 4: Presenting our 50 questions and answers about girls and boys

Action: Sharing what we found out about boys and girls

Introduction

This month you have been discussing questions about similarities and differences between boys and girls, and asked questions of each other about many different issues.

Today you are going to make your conclusions on the month, and share what you have got out of it with the rest of the kids in your school.

There are many ways to share opinions and ideas. Some people like to write what they think about. Others like to draw their ideas, or make drawings that make other people think differently about things, because they are presented from another angle. Others again like to make dramas where they present their ideas in different ways that make people curious, or make them laugh or cry.

When you have decided what you want to share, you can choose to use the form that suits you best.

Instruction

- 1) Read the introduction, and discuss in the Kid's Club which issues you want to share with your friends.
- 2) Make a list together on the blackboard and decide which issues to choose.
- 3) Now you know what you want to share, so you can choose how to do it.

Here are some proposals:

- Develop a short skit on each of the issues. Use humor and other ways to keep the engagement of the audience.
 - Make a "Talking wall" where you post different stories like in a newspaper.
 - Make a long row of drawings with texts underneath to explain what the drawings are about.
 - Write poems.
- 4) Maybe you chose one of these ideas, maybe you have another idea of your own, or maybe you want to use more than one method. Decide how to do it, and how to share your work with your friends at the school. Then get started.

Month 8

Doing good things like good people do

Week 1 – Good and bad behavior

Lesson: List good and bad behaviors, and discuss how these affect other people

Introduction

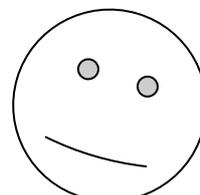
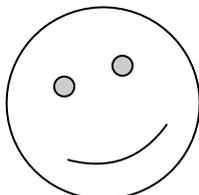
You are not alone in this world. Only Palle was alone. He is a character from a story about a boy who dreamt that he was all alone in the world. He did not like it, and he was very happy when he woke up and saw all the other people were still there.

Since you are not alone, everything you do or say affects the other people around you. You have probably noticed, that it means a lot to you how your mother's mood is. If she is happy and greets you when you are back from school, you also get happy. If she is sad or worried, you also get worried. If she is angry, even if it is not with you, you feel like running away.

Other people, children as well as grownups, feel exactly the same way about you. This is a good reason for thinking more about your own behavior.

Instruction

- 1) The teacher introduces the lesson, and asks you if you believe it is correct that the way you behave has an effect on other people.
- 2) Work in the Trios, and list five behaviors that you think are good, and five you think are bad. Describe why you think they are good or bad. Note, that children as well as adults can behave good as well as bad.
- 3) Meet again and share your lists. Do you agree with each other?
- 4) The teacher reads the "More knowledge". She distributes three "emotions" to each Trio and asks you to give examples of when you would feel this emotion. E.g. "Happy". What makes a person feel happy?
- 5) The whole club meets together again and hears the examples.
- 6) Make your final list on the blackboard of what you think are good behaviors, and what you think are bad behaviors, and how they make other people feel.



More knowledge

Hereunder is a list of what we call emotions or feelings:

Sad

Unhappy

Sorrowful

depressed

miserable

down

gloomy

hurt

insecure

unconfident

shy

unsure

jealous

insecure

envious

desirous

insecure

protective

vigilant

anxious

Angry

Mad

annoyed

irritated

furios

enraged

cross

frustrated

suspicious

wary

distrustful

cynical

hopeful

optimistic

confident

positive

sanguine

cheerful

upbeat

lighthearted

scared

frightened

nervous

panicky

terrified

alarmed

afraid

fearful

happy

cheerful

merry

pleased

love

fondness

attachment

tenderness

warmth

intimacy

affection

passion

Month 8

Doing good things like good people do

Week 2 – What it means to be a good friend

Lesson: Describe what it means to take good care of each other

Introduction

Every one of you would probably say yes, if you were asked, if you are a good friend. But are you? What does it actually mean?

First, it means you have to be observant of each other. This means to notice how each other feels, and be alert if something is wrong.

Next, to do something, if you can feel that something is wrong.

It also means to show respect for each other, and be happy on the others behalf.

These are all nice words. So what does it actually mean when we come down to flesh and blood? This is what we will discuss in this lesson.

Instruction

- 1) The teacher introduces the lesson.
- 2) Work in the Trios, and give five examples of what it means to be a good friend and take good care of each other, and five examples of not showing friendship.
- 3) Share your examples in the Kid's Club. Comment on each other's examples.
- 4) Write a story each of how you have experienced friendship, or choose one of the sentences below and finish the story.
- 5) Put the stories up on the wall for all to read.

More knowledge

- I knew Sheila was very nervous before she had to give the presentation for the class ...
- I told John, that what he did was not very nice, and why I did not like it...
- Sonia does not like math. She says she does not understand a word of it. I think it is because.....
- I had been very rude to Simon although I did not mean to. This was because.....
Now I need to say sorry, but I do not know how to do it, so I asked Prosper for advice. He said
- We have decided in class, that this year we all will pass, no matter what it takes. This is how we will do.....

Month 8

Doing good things like good people do

Week 3 – Am I of any help to my family?

Lesson: Come up with a list of examples of how children can bring joy in the life of others

Introduction

When you started the Kid's Club, you discussed what children could do, under the headline "Small people, big ideas", and you came up with examples of how children can participate in making life better for everyone.

Today you will look at yourself in the midst of your family.

What is your role? What are your chores? Are you a joy for your family? Or do you do things that make them worried, sad or angry?

Children are very important members of any family, and there are many things you can do to make life better for yourself and everybody else. Just think about it.

Instruction

- 1) The teacher presents the lesson and reads the stories in the "More knowledge".
- 2) Discuss in the club how to think about yourself as a very important member of your family. Come up with some examples where you have experienced yourself being of help to others.
- 3) Do you agree to continue with the lesson?
- 4) If yes, meet in the Trios and discuss what you can do to make life in your family better for everyone.
- 5) Share your ideas with the whole club.
- 6) Meet in the Trios again, and decide on what you want to do and how to do it, together or alone. Write down all the proposals.



I decided to teach the small children some games instead of fighting

More knowledge

My family does not have any land so we need to buy all our food, and I know that money is scarce. I decided to ask a nearby farmer if he could let me grow a row of sweet potatoes on his land. He thought it was a very good idea, and he gave me the vines to plant.

I used to be very irritated with my mother, because the first thing she asked me after school was to do a lot of housework. My friend Blessing had the same problem. So we decided to stay at the school for one hour to do our homework. Then we go to Blessings family and do her work, and afterwards we go to my family. In this way, it is more fun. My mum has accepted that in this way, she does not need to shout at me, and we will always come on the agreed time.

After school, I have to take the goats for grazing. Then I have no time for homework, because it is dark when I get home. I discussed with Peter what to do. He came up with a very good idea. Now we go together with the goats. We bring our homework along. When that is done, we use the time to make different experiments.

I like my grandmother a lot. She used to tell me stories when I was small. Now she is almost blind. One day I came up with the idea to read to her from my schoolbooks. She liked it very much, so now I read for her for half an hour every day.

I am 11 years old and I am the oldest child in my family. We have four younger children. In the afternoon, they always used to get unruly and fight, and shout at each other. This was very disturbing for everyone, and especially my mother, because she had to cook for dinner. So I decided to do something to keep the children occupied. First, I taught them a song with movements. They were very happy to learn to sing the song, and do the clapping correctly. Next day I chose to teach them a game. Now, when I am home from school, they all come running learn something new, and we have a lot of fun.

My mother always asks me to cook, and I have become good at it, but I always used to protest, because I think it is her job. Then I got a good idea. Instead of just cooking, I started to add new things to the food, like some spices and plants like African spinach, and black jack, to give it different tastes. When my grandmother saw that I was interested in learning to use the wild plants, she started to teach me which to use. Most of the times my family likes the new tastes.

After we started to clean the toilets in school, I realized that cleaning toilets is not such a bad thing. You just need to know how to do it, and then it is just a piece of cake. Now I have started to clean our toilet at home every day. So it is always clean and never smelling. There is ash to throw in the pit, and water and soap outside. All the members of the family really appreciate this.

When I looked at our kitchen, I could see that we did not have a good system for cleaning the utensils. Together with my brother, I made a dishrag of branches and some string. Now my mother has a place to dry the plates and pots.

Month 8

Doing good things like good people do

Week 4 – Doing good at home

Action: The Trios take actions at home

Introduction

Last week you decided in the Trios which actions you could take at home, and how to do it. Maybe some of you have already tried out your proposals, or maybe you want to start now.

Instruction

- 1) The teacher reads aloud the list of actions you decided on last week. Any Trio who already has started doing the actions tells about how it went.
- 2) In the Trios, discuss how to get started, or how to continue with your actions.
- 3) Go home to the families and do what you have planned. You can choose to go together or alone.
- 4) Meet in the Trios to discuss your experiences. You can meet after three hours, or agree to meet tomorrow.



Month 9

Diseases we want to avoid

Week 1 – What is HIV and Aids, and what to do to stay free?

Lesson: We learn about the HIV virus and how it spreads

Introduction

You need to know about HIV/AIDS.

To understand what it is! To keep attention.

To know how to protect yourself against HIV.

To make a conscious decision that you will protect yourself against it.

To decide how you will do it.

Instruction

- 1) The teacher presents the lesson and the “More knowledge” and you get the answers to the questions: What is HIV/AIDS? How can you get it? Why testing is important? What treatment for HIV/AIDS is possible?
- 2) Work in Trios. Set up questions on issues you want to know more about.
- 3) Share your questions and help each other to give the answers. Some of the questions the teacher will have to answer.
- 4) Write your own story of how HIV and AIDS have affected the life of people in Zambia. Put your stories up on the wall for all to read.
- 5) Together again, repeat how to stay free of HIV, and how to avoid spreading the virus.

More knowledge

What is HIV/AIDS?

HIV is the virus that causes AIDS.

HIV causes AIDS by damaging the immune system in your body

H - stands for **H**uman. The virus only infects humans, and not animals.

I - stands for **I**mmune-deficiency. The virus attacks the immune system.

V - stands for **V**irus. It is a virus - a small living organism - that causes disease.

The virus can spread from person to person via bodily fluids. One of these is blood. If blood from an infected person enters the body of a healthy person, the HIV virus comes into the healthy person’s blood. This can happen if a hospital does not follow the rules of only using a syringe once, or if an infected junkie shares a syringe with another junkie, or if you share a razor with someone who is infected. It can also happen during sexual intercourse. And it can happen during pregnancy and via breast milk, if a mother is infected. A person infected with HIV is said to be HIV positive.

It is very important to understand that this is the only way HIV spreads.

You cannot catch HIV:

- From living in the same house as someone who is HIV positive.
- From sitting next to someone who is HIV positive.
- From eating food from a plate or a spoon that has been used by someone who is HIV positive.
- From drinking from a cup that has been used by someone who is HIV positive.
- From a sterile needle at a clinic or other health centre.
- From a human bite.
- From an insect bite, including a mosquito bite.
- From an animal.
- From a sewing needle if you stab your finger.
- From kissing someone who is HIV positive.

There are many effective barriers that prevent infection.

Skin: Skin is an excellent barrier against HIV, unless there is an open cut or open wound.

Infectious fluid on skin is not a route for infection.

Mucous membranes in the mouth, throat and stomach: These membranes are good barriers against HIV infection, so long as there are not cuts, ulcers or sores.

Saliva: Saliva contains proteins, and a low salt content that actively reduce its infectiousness. Even when HIV is detected, it is unlikely to be in sufficient quantity to cause infection. Spit cannot transmit HIV.

Air: HIV is not transmitted by air.

Latex and rubber: Condoms prevent infection from HIV, and many other sexually transmitted infections.

This knowledge is very important. HIV is a virus that has only been around for the last 30 years. In the beginning, people did not know what was causing it, or how it spread. Therefore, they were very afraid of coming in contact with people who were infected. Sometimes this led to leaving very sick people alone without care or support.

Today we know better. You know better. You have to go against any form of discrimination against people, including children, who are HIV positive.

The spread of HIV in Sub-Saharan Africa

Since the beginning of the epidemic, almost 78 million people have been infected with the HIV virus, and about 39 million people have died of HIV globally.

HIV has affected Sub-Saharan Africa more heavily than any other region in the world. In the countries in Sub-Saharan Africa there are now 23.5 million people living with HIV.

1.2 million people become infected every year.

1.8 million people die every year.

These figures are from the UNAIDS report for 2013.

What happens in your body if you get infected by HIV

The HIV virus enters a human cell where it starts to replicate (copy) itself, again and again. The HIV virus cannot enter all our body cells - they can only enter the CD4 cells. CD4 cells are the commander cells of the immune system, the system that protects our bodies against diseases.

When you get infected with the HIV virus, it starts replicating very fast during the first two weeks. This happens because the immune system has no immediate defense against it - it takes some time to build up this defense.

After 2 - 3 weeks, the immune system has been able to build up its defenses, and the number of viruses will stabilize to a lower level.

There are, unfortunately, many things that can rock this balance.

Re-infection, (getting infected again) with a new set of viruses will give HIV stronger power to fight the immune system. Becoming sick with flu, malaria, or other diseases will force the immune system to deal with them, as well as having to fight against the HIV, therefore the HIV viruses will be able to increase in numbers.

- A perfectly healthy looking person can still be infected with HIV.
- A person is more infectious just after being infected.
- A person is more infectious just after being re-infected.
- An HIV positive person should avoid re-infection.
- An HIV positive person should avoid becoming sick from any other diseases.

When the HIV viruses increase vastly in numbers, they kill the CD4 cells faster than the body can produce new ones, and the immune system will gradually become weaker and weaker.

When the immune system is weak, the body can no longer protect itself against illnesses.

When this happens, we say that a person has AIDS.

It can take from 2 years to over 10 years from the time of the infection, before a person develops AIDS.

When a person gets ARV treatment, this drug supports the body's suppression of the HIV virus, and its ability to replicate.

What do the letters in AIDS stand for?

A - stands for **A**cquired. That you get it from someone.

I - stands for **I**mmune. That is your body's defense against diseases.

D - stands for **D**eficiency. That your immune system is not strong enough to protect you.

S - stands for **S**yndrome. This means a group of diseases or infections that act together.

It means that a person with AIDS has many infections working together, and that these infections have come because the immune system has been weakened by a virus the person has got from someone else.

How HIV infects you and how you can prevent it

HIV can only live in human bodily fluids such as blood, semen and vaginal fluids.

Infection can only take place when these bodily fluids from an infected person come into contact with another person.

Like many other viruses, HIV does not infect through air and water.

HIV can only infect through sexual contact, from mother to child during pregnancy, delivery or breastfeeding, blood transfusion, the use of contaminated needles and, in rare cases, open wounds and sharing razor blades.

- Most people get infected with HIV during sexual intercourse.
- You do not automatically get infected, when you have sexual intercourse with a person infected with HIV, but the odds are very high that you will.
- The odds of getting infected increases when you or your partner has an STI - a **Sexually Transmitted Infection** - because sores on your sexual organs make it easier for the HIV virus to enter your body.
- There are many examples, where people have become infected after having sexual intercourse just once, with a person infected with HIV.

The risk of having sexual intercourse with an HIV positive person without protection is never worth it.

ARV is the treatment of an HIV infected person

Anti-retro-viral drugs (ARVs) are drugs that significantly delay the progression of HIV to AIDS, and thereby allow people living with HIV to live relatively normal, healthy lives.

ARV hugely reduces death rates and suffering.

ARV is the most effective treatment of HIV infected persons.

Therefore, there are many good reasons to go to the nearest clinic to be tested if there is a chance that you can be infected with HIV. Most clinics all over the world can help you to get access to ARV drugs.

HIV positive people also need nutritious food, and people on ARV drugs need to eat vitamin tablets together with the drugs.



GO FOR TESTING!!

How to protect yourself

HIV/AIDS is a 100 % preventable disease.

When all people understand how their actions are a part of spreading, or not spreading AIDS, they can take control of their own lives. When all people take part in changing the conditions

that causes the epidemic to spread, they are taking part in controlling the spread of the epidemic in their community.

This means, that if you are not yet infected by HIV, you can avoid HIV infection by making the decision, that you **will** not be infected. In practice, you do that in one or several of the following ways:

You can abstain from sexual relations.

You can stick to one faithful partner, where both of you have taken an HIV test together, and know each other's HIV status.

You can use a condom correctly every time you have sexual intercourse.

You can use gloves when you treat open wounds.

You can take care never to share a razor or a syringe with anyone else.

You need to know if you are HIV positive or not, so go for an HIV test at your nearest clinic. If your test shows that you are HIV positive, you can get treatment. The disease cannot be cured, but it can be suppressed by taking Anti-retro-viral drugs (ARVS). The ARV drug treatment significantly delays the progression of HIV to AIDS, and allows people living with HIV, to live relatively normal and healthy lives.

Month 9

Diseases we want to avoid

Week 2 – What is TB, and what to do to stay free?

Lesson: We learn about TB and how it is spread

You might ask yourself why you need to learn about so many diseases. The answer is, that the more you know about the diseases and how they are spread, the better you will be able to protect yourself and your family against them. You will also be able to help other people, by telling them what you know. HIV and AIDS, TB and malaria are diseases that affect many people, but HIV can be treated with ARV, so that it does not develop into AIDS, and TB and malaria can be cured, when people seek help from the hospitals as early as possible.

Instruction

- 1) The teacher presents the introduction.
- 2) You share what you already know about TB. Write it on the blackboard.
- 3) Then the teacher shares the “More knowledge” material for this lesson.
- 4) Look at your statements on the blackboard again, and discuss if your knowledge was correct. If anything needs to be changed, wipe it out and write what is correct.
- 5) Now you know what causes TB, how it is spread, and how it can be cured.

More knowledge

What is TB?

Tuberculosis, or TB, is a bacterial infection, which most often affects the lungs, but it can also affect other parts of your body, including the bones and nervous system.

TB is caused by a bacterium called mycobacterium tuberculosis.

A person infected with TB is not likely to feel sick or immediately show any symptoms. Usually a healthy immune system will be able to kill the bacteria, and there will be no further symptoms.

However, sometimes the immune system prevents the bacteria from spreading in the body but cannot kill them completely. This is called latent TB. It means the TB bacteria will stay in the persons' body without him feeling sick.

Latent TB may later develop into an active TB infection, if the immune system becomes weak. This might never happen, or it might take weeks, months or even years. People with a lower level of immunity are more likely to have active TB.

Symptoms of an active TB infection include:

- Persistent cough that brings up phlegm (sputum), which is sometimes bloody, and lasts for more than three weeks.
- Fever, weight loss, chest pain, weakness, breathlessness, loss of appetite, nausea, or night sweats.

How does TB spread?

Only people who have an active infection of TB in the lungs are infectious. When they sneeze or cough, tiny droplets containing TB bacteria are spread, quite like the common cold. They are so small that you cannot see them.

When a person breathes in the droplets containing the bacteria, they can settle in the lungs and begin to grow. They can move through the blood to other parts of the body such as the kidney, spine and brain.

A person is most likely to get TB if he has a low immunity level, and spends a long time in close contact with an infected person.

What is the treatment for TB?

TB is curable if it is detected early, and if the full course of medicines is taken without interruption.

A person with TB infection of the lungs or throat, are probably infectious. He needs to stay home from work or school so that the TB bacteria are not spread to other people. After taking medicine for a few weeks, he will feel better and no longer be infectious to others. The doctor or nurse will tell when it is safe to return to work or school, or visit with friends.

Having TB should not stop a person from leading a normal life. When he is no longer infectious or feeling sick, he can do the same things he did before.

It takes at least six months to kill TB. A patient may feel better within a few weeks of treatment, but the bacteria will still be alive. Therefore, it is very important to complete the full course of medication.

This is the main problem for people on TB medication. It is not a pleasant treatment. To be able to continue throughout the six months, the patient needs to eat well and to get vitamins. If he does not continue to take the medicines or are not taking all the medicines regularly, this can be very dangerous. The TB bacteria will grow, and he will remain sick for a longer time. The bacteria may also become resistant to the medicines. Then a new, different medicine is needed to kill the TB bacteria. The new medicines must be taken for a longer time and usually have more serious side effects.

If the person becomes infectious again, he could give TB bacteria to his family, friends, or anyone else who spends time with him. It is **very important** to take the medicines as directed by the doctor or nurse.

Directly observed therapy (DOT) can help a person with TB to take the medicines

The best way to remember to take the medicines is to get on directly observed therapy (DOT). When on DOT, the patient will meet with a health care worker every day or several times a week. They will meet at a place they both agree on. This can be the TB clinic, at home or work, or any other convenient location. The patient will take his medicines at this place while the health care worker watches.

DOT helps in several ways. The health care worker can help the patient to remember to take the medicines and complete the treatment. This means he will get well as soon as possible. The health care worker will make sure that the medicines are working, as they should. She will also watch for side effects and answer questions about TB.

Pregnant women should start treatment as soon as TB is detected. This greatly reduces the chances of becoming ill during pregnancy. It also reduces the chances of the baby having health problems, such as being born too early or too small.

Month 9

Diseases we want to avoid

Week 3 – What is malaria, and what to do to stay fee?

Lesson: We learn about malaria, how it spreads, and how it affects the human body

Introduction

Africa suffers severely from malaria.

Every 30 seconds one child dies. You probably already have had experiences with this disease, you have seen a family member suffer from it, or maybe you even suffered from it yourself. Cases are reported daily. Why does it not cease to exist? You can become desperate when thinking about how many people it affects.

But do not become discouraged. In this lesson, you will see that it is possible to defeat malaria with coordinated efforts of different actions and resources.

In order to defeat malaria, you need to join hands and mobilize everyone to accept the responsibility of taking full control of malaria.

Malaria is spread by mosquitoes. The headlines for the two most important actions you can take to avoid getting malaria are:

- 1. Do not get bitten**
- 2. Stop mosquitoes from breeding where you live.**

If someone already has malaria or has a high fever, there is a need for immediate action. People suffering from high fever should be taken to the hospital immediately. It is possible to detect malaria by taking a blood test. The earlier the malaria is detected, the faster it can be treated.

By sharing knowledge on how malaria spreads, how being bitten can be avoided, and how breeding of mosquitoes can be stopped, you can decrease the cases of infected people, and even try to eradicate the disease.

Taking action to fight mosquitoes is something you will have to keep doing to reduce the cases of malaria. Read about the details in the ‘More Knowledge’.

Do you think an action of this kind is possible? With all the classes in the school involved, under the leadership of the Kid’s Club and the teachers, and using all the means available?

Instruction

- 1) The teacher reads the introduction.
- 2) Together you go through the “More knowledge” material.
- 3) In Trios, answer the following questions:
 - What causes malaria?
 - Learn the two headlines for actions to take to fight malaria.
 - List the actions you can take under each headline: in the school, and at home.
 - How can malaria be treated?
- 4) In the club together, discuss the answers from the Trios.
Did you get it right?
- 5) Go on by writing on the blackboard what to do to fight malaria:
 - What can you do?
 - What can families do?
 - What can the school do?
- 6) Next week you will plan the action in detail.

More Knowledge

What Is Malaria?

Malaria is a life-threatening disease. It is typically transmitted through the bite of an infected *Anopheles* mosquito. Infected mosquitoes carry the *Plasmodium* parasite. When this mosquito bites you, the parasite is released into your bloodstream.

Once the parasites are inside your body, they travel to the liver, where they mature. After several days, the mature parasites enter the bloodstream and begin to infect the red blood cells.

Within 48 to 72 hours, the parasites inside the red blood cells multiply, causing the infected cells to burst open. The parasites continue to infect red blood cells, resulting in symptoms like high fever that occur in two-to-three-day cycles.

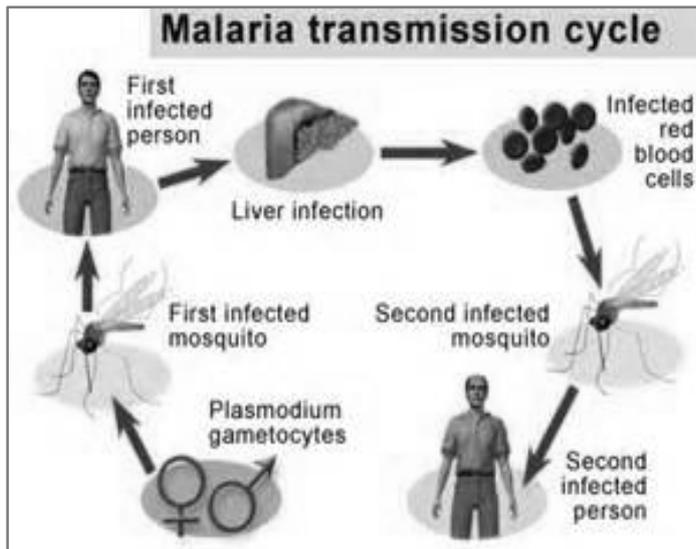


Malaria is typically found in tropical and subtropical climates (e.g., Africa), where the parasites can live. The World Health Organization estimates there were 198 million cases of malaria diagnosed in 2013. The disease killed more than half a million people in 2013.

How does malaria spread?

Malaria can spread if a mosquito infected with the *Plasmodium* parasite bites you. In addition, an infected mother can pass the disease on to her baby at birth. Because malaria is transmitted by blood, it can also be transmitted through an organ transplant, a blood transfusion or by shared use of needles or syringes.

This means, that if one person is infected, malaria can easily spread to many more. Because it takes some time before the disease breaks out, it is difficult to control.



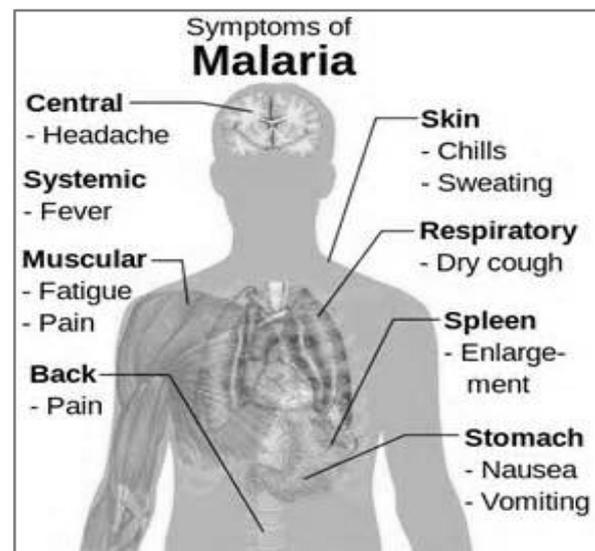
Malaria is especially dangerous for pregnant women and women who have just given birth

What are the symptoms of malaria?

Symptoms of malaria typically develop within 10 days to four weeks following the infection. In some patients, symptoms may not develop for several months. Some malarial parasites can enter the body, but will remain sleeping for a long period.

Common symptoms of malaria include:

- shaking chills that are moderate to severe.
- high fevers.
- profuse sweating.
- headaches.
- nausea.
- vomiting.
- diarrhea.
- anemia.
- muscle pains.
- convulsions.
- coma.
- bloody stools.



How is malaria diagnosed?

Diagnosis of malaria is made by your doctor. During your appointment, your doctor will perform a physical exam. Your doctor will be able to determine if you have an enlarged spleen or liver. If a person has a high fever, always insist on having a blood test taken. This is the best way to be sure of the result. There are many other diseases with the same symptoms, so only a blood test can tell if you have malaria or not.

The blood test will show:

- whether or not you have malaria.
- what type of malaria you have.
- if your infection is caused by a parasite that is resistant to certain types of drugs.
- if the disease has caused anemia.
- if the disease has affected your vital organs.

Life-threatening complications of malaria

Malaria can cause a number of life-threatening complications that can result in death. The following may occur:

- swelling of the blood vessels of the brain (cerebral malaria).
- accumulation of fluid in the lungs that causes breathing problems (pulmonary edema).
- organ failure (kidneys, liver, or spleen).
- anemia due to the destruction of red blood cells.
- low blood sugar.

How malaria is treated

Malaria is a life-threatening disease. Treatment for the disease is typically provided in a hospital. Your doctor will prescribe medications based on the type of parasite that you have. In some instances, the medication prescribed will not be effective. Drug-resistant parasites have been reported. These parasites make many drugs ineffective. If this occurs, your doctor may need to change medications, or use more than one medication to treat your condition.

What is the long-term outlook for patients that develop malaria?

Patients with malaria who receive treatment usually have a good long-term outlook. If complications arise as a result of malaria, the outlook may not be as good. Cerebral malaria, which causes swelling of the blood vessels of the brain, can result in brain damage. The long-term outlook for patients with drug-resistant parasites may also be poor. In these patients, malaria may reoccur. This may produce additional health complications.



Be aware of mosquitoes if you travel to another location

There is no vaccine available to prevent malaria. When you travel, you might come across another type of malaria, than the one you are used to. If you are traveling to an area where malaria is common, talk to your doctor. He may prescribe medication to prevent the disease. This medication is the same as those used to treat the disease, and can be taken before, during, and after your trip. It is not good to eat malaria medicines for a long period. You may also want to take extra precautions while traveling. Bring a mosquito net along. Sleeping under a mosquito net may help prevent being bitten by an infected mosquito. Covering your skin or using an insect repellent containing DEET may also help prevent infection.

What you need to know about how mosquitoes behave:

- 1) Mosquitoes breed in stagnant (not flowing) water like swamps, pit drains, water left in tins or other rubbish, and in tall grasses.
- 2) Mosquitoes do not fly very far away from the place they are hatched, usually they do not move more than 1-2 miles. So, if you can clear an area of about 2 miles around your village, you can get rid of them.
- 3) Mosquitoes can smell human beings from a distance of 30 meters.



Actions to take to prevent getting malaria

Do not get bitten

- 1) Sleeping under treated mosquito nets provide the best protection. The nets should be treated with a chemical that kills mosquitoes.
- 2) Wear long sleeves and trousers in the late afternoon and at night, because this is when mosquitoes are most active.
- 3) Some herbs keep mosquitoes away. Plant *Artemisia afra* or lemongrass around the house.
- 4) You can also use *Artemisia* leaves/branches and put them in the windows at night as a repellent.
- 5) Bring leaves of lemon grass, tephrosia and *Artemisia afra* into the rooms where you sleep, and brush the walls with them.
- 6) Use mosquito coils in the bedroom at night, to keep mosquitoes away.
- 7) Have fly screens in the windows.
- 8) Make sure that mango trees and maize plants are not planted too close to the houses. They attract mosquitoes because they are full of sugar. Find out locally which other plants attract mosquitoes.
- 9) Use mosquito repellent on your skin, particularly on your hands, neck, face and ankles.
- 10) Make your own insecticides from lemongrass, *Artemisia afra*, fish bean, papaya leaves and African cucumber.
- 11) Spray your house and surroundings with anti-mosquito spray to kill the mosquitoes.
- 12) In some areas where malaria risk is high, or if you have been sick from malaria many times, it may be a good idea to take anti-malaria tablets. These tablets reduce the effects of malaria, but they do not altogether prevent it, and some of them have unpleasant side effects. You should get advice from your local clinic about whether or not to take these tablets.



Make sure that children always sleep under treated mosquito nets

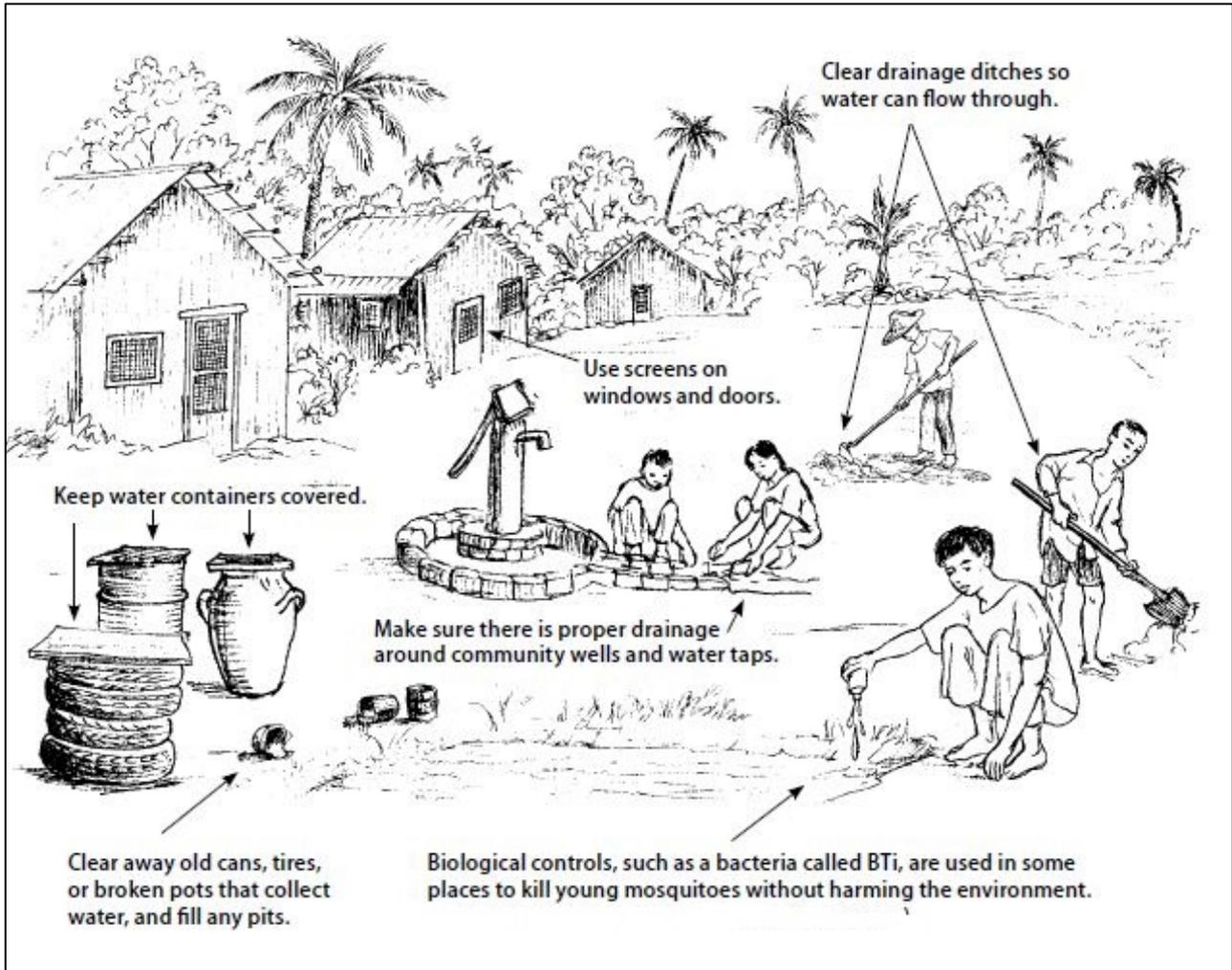
Stop mosquitoes from breeding in your surroundings

Destroy their breeding places

- Cut the grass around your house, the best is to clear an area of 1 square km.
- Get rid of all stagnant water indoor and outdoor
- Keep your surroundings clean, and clean up rubbish that could collect water.



Look at the picture to see which actions you can take in a village.



Together we can get rid of malaria

Month 9

Diseases we want to avoid

Week 4 – School action to fight malaria

Action: We take a look at the school surroundings, and organize to get rid of mosquitoes

In this month's action, you are going to start campaigning!

To stop malaria, campaigns are needed repeatedly, until you have reached mosquito free zones at the school, in the village and at your homes.

It is especially important to campaign just before the rainy season, to prevent mosquitoes from multiplying uncontrollably.

However, action is needed throughout the year if there are mosquitoes around.

Instruction

Plan a campaign that has two parts:

Part I - Information

- 1) Explain to all the students at school why you get ill from malaria, and why you need to get rid of ALL mosquitoes.

Use slogans, songs, drama and talks. Explain how to avoid being bitten, how to destroy the mosquitoes' breeding places, and why people with high fever need to get to the clinic and get a blood test.

Involve the teachers and maybe the village health authorities.

Part II - Take action

- 2) Plan the action.

Prepare how you can destroy the mosquitoes' breeding places by getting rid of all stagnant water, cleaning the surroundings for rubbish that can collect water, and cutting the grass around the school in an area of 1 km. Find out from the clinic how to get hold of treated mosquito nets free of cost. These are usually available for children and pregnant women. If possible, get hold of lemon grass and Artemisia plants to plant along the houses.

- 3) Make a plan for what each class shall do, what the teachers shall do and what you shall do. Tell everybody what tools to bring.

Make the invitations and go for it.

Avoid being bitten!

GET RID OF THE MOSQUITOES!

Month 10

We all stay healthy

Week 1 – How to stay healthy

Lesson: We learn about common childhood diseases, how to avoid them and how to be cured

Introduction

You have learned already that to grow up healthy you need to eat from all the food groups, and especially to remember to get vitamins and minerals from fruits and vegetables of all colors.

This will help you to stay healthy, and be better to fight off diseases.

You will, never the less, probably catch many different diseases during childhood. Some of these will help your body's immune system to develop defenses against the diseases, which you can make use of later if the same disease tries to attack you. This knowledge was used to develop some of the vaccinations you got when you were small. When you are vaccinated against smallpox, you actually get the disease in a mild form, and this is enough to make your immune system develop a defense that can protect you from this disease throughout life.

Other diseases, such as flu and some virus, do not have a vaccine yet.

Some of these common diseases can be avoided, when you know how to protect yourself against them, or how to cure them as soon as the pop up.

In this lesson, we will go through some of the common diseases, so that you learn to recognize them, and know what to do if you are attacked.

Instruction

- 1) The teacher presents the lesson.
- 2) You make a list on the blackboard of diseases you or your sisters, and brothers have been suffering from. Discuss what caused the diseases.
- 3) The teacher uses the "More knowledge – part 1" to tell about the common childhood diseases.
- 4) Meet in the Trios and discuss which of the causes for diseases you have written on the blackboard are correct, and which you need to think differently about.
- 5) Meet again in the club. List the vaccinations each of you have received.

- 6) The teacher uses the ‘More knowledge – part 2’ to tell about the vaccinations available for children in Zambia and what they are good for.
- 7) If all of you have had the vaccinations, you ought to have, then well and good. If not, the other children in the school probably also did not get them. In this case, agree to meet with the staff from the nearest health center, and ask if they can come to the school and vaccinate children on your action day of this month. Maybe the clinic can also help with a de-worming cure for all the children.

More knowledge – Part 1

Malaria, diarrhea, acute respiratory infections, and vaccine-preventable diseases such as polio, measles, tuberculosis, diphtheria, whooping cough and tetanus, are the main causes of childhood deaths in many developing countries.

During the last decades, there has been progress in reducing the mortality rate in Africa, but these gains are now threatened by HIV and AIDS, where children are infected through mother-to-child transmission.

Poor nutrition continues to affect many young children and their mothers. Forty-four percent of children under the age of five are stunted, and malnutrition is the underlying cause of half of all childhood deaths. Mortality rates from severe malnutrition remain very high.

You will find many of the children in your local district affected by these harsh realities. There are other common diseases affecting the health of children, but if treated properly and in time, the child will overcome the sickness and become well again.

It is therefore very important to know the signs and know how to act when a child in the family starts to get sick.

The most common childhood diseases

Children often contract general diseases such as worms, fever, flu with coughs and colds, often followed by infections of the respiratory (breathing) system, which can lead to pneumonia, an infection of the lungs, if not treated correctly or if the child is malnourished. Wide spread under nutrition of children under the age of 5 years are depriving the children of the necessary strength to stave off the illness.

The more serious diseases are measles, tetanus, whooping cough, polio, tuberculosis and diphtheria. Most countries carry out standard immunization programs to protect children from these diseases, but, unfortunately, they do not reach out to all the children in the world. On top of these there is malaria and diarrhea, which, if not treated timely and properly, is life threatening to young children.

Infectious and non-infectious diseases

When you consider how to prevent or treat different diseases, it helps to think of them in two groups: infectious and non-infectious.

Infectious diseases are those that spread from one person to another. Healthy people must be protected from people with infectious diseases.

Non- infectious diseases do not spread from person to person. They have many different causes. But they are never caused by germs, bacteria, or other living organisms that attack the body. They never spread from one person to another. It is important to realize that antibiotics, or medicines that fight germs, do not help cure non-infectious diseases.



Bacteria, like many of the organisms that cause infections, are so small you cannot see them without a microscope—an instrument that makes tiny things look bigger. Viruses are even smaller than bacteria.

Antibiotics (penicillin, tetracycline, etc.) are medicines that help to cure certain illnesses caused by bacteria.



Some of the common diseases

Diarrhea

Diarrhea is a very common disease. Most of you have probably had it already. Poor hygiene or eating spoiled food often causes diarrhea. When you have diarrhea, your body loses a lot of water, and you get dehydrated. This is dangerous, and to avoid dehydration you need to drink a lot of water.

It is best to use clean water. This means that it has to be boiled or chlorinated. But to get water at all is the most important.

About Dehydration

When a person has diarrhea, the body loses more water and minerals than it receives. This happens mainly when the diarrhea is persistent, and it will be worse if the person is also vomiting.

All persons with acute diarrhea are at risk of dehydration.

Dehydration can also happen if you are out in the sun on a hot day, working or playing, and do not drink water. Suddenly you might feel very uncomfortable. Then you need to drink water as soon as possible.

If a person is dehydrated and it does not help to drink water, you need to get to the doctor. He will give a re-hydration drink and maybe a transfusion of water through a tube and a needle directly into the persons arm.

Worms

Worm infection in the stomach is a common problem for children. It often hurts. The worms will weaken the body and often cause weight loss. If you have worms, other diseases have

easier access to your body. “Deworming” means eating a tablet every six months. The tablets will kill the worms and any eggs or larvae. They are not expensive.

Runny nose and sore throat

This is often triggered by the body being too cold. If you feel cold, you need to put on more clothes. If you feel that a cold is coming, drink lots of hot tea with lemon, and take vitamin C tablets, if you can get it.

If the throat is sore, it helps to gargle with warm salt water (1 teaspoon salt in a glass of water).

Stomach ache or feeling like vomiting

This is usually a sign of having eaten some spoiled food. The food should get out of your body, either by vomiting or by bowel motion. Then it is usually over in a couple of hours. Drink a lot of water.

An itchy rash or a scratch with infection

This should be washed thoroughly with clean water and soap. Do it 3-4 times.

High temperature / fever

A high fever is a sign of something being very wrong. It could be malaria, pneumonia, TB or another illness that needs to be treated with medicines. It might turn out to not be anything serious, but do not take any chances.

What to do immediately: take off the clothes to cool the body.

Give lots of liquid. Wet with cool (not cold) water, and fan the person.

The following four diseases are easily spread from child to child. It takes 1-3 weeks from when a child has contracted the disease until the first signs appear.

Chickenpox

Chicken pox is caused by a virus. Signs of chickenpox are small, red, itchy spots that turns into pimples or blisters.

The infection usually goes away in a week. Bathe daily with soap and warm water.

To calm itching, apply cool cloths soaked in water from boiled and diluted oatmeal. Do not scratch. Keep away from other children.

Measles

Measles is a severe virus that is especially dangerous for children who are malnourished.

It begins with the same signs as a cold, like fever, runny nose, red sore eyes and cough.

After 2 or 3 days, a few tiny white spots, like salt grains, appear in the mouth.

A day or two later rashes appear – first behind the ears and on the neck, then on the face and body. After the rash, you usually get better. Stay in bed, drink lots of liquid and eat nutritious food. Keep away from other children.

If a small baby gets measles and cannot suck milk from his mother, give him breast milk with a spoon. Keep him away from other children.

Pregnant women should stay away from children with measles.

Mumps

Mumps is caused by a virus. It begins with a fever, and pain on opening the mouth. After 2 days, a soft swelling appears below the ear.

The swelling usually goes away by itself in about 10 days without need for medicine. Keep away from other children.

Whooping Cough

Whooping cough is caused by bacteria. It begins like a cold with fever, runny nose, and a cough.

Two weeks later, the whoops begin. The cough continues without taking a breath, until some sticky mucus is coughed up, and then air rushes back into the lungs.

Whooping cough can last 3 months or more.

Whooping cough can be treated with antibiotics at an early stage.

If a baby stops breathing after a cough, turn him over and pull the sticky stuff from his mouth with your finger. Then slap him on the back with a flat hand.

To avoid weight loss and malnutrition, be sure he gets enough nutritious food.

Keep him away from other children

For any of these symptoms, you need to seek help from a clinic if there are no improvements within the first day.



Vomiting is usually one of the first symptoms to tell you that a child is sick



Give plenty of water

More knowledge – Part 2

Vaccination of newborn children in Zambia

Age	Vaccine	Disease
At birth	BCG	TB
6 weeks, 10 weeks, 14 weeks	DPT-Hep-Hib	Diphtheria, Tetanus, Whooping cough, Hepatitis B, Polio, Influenza (Hib)
3 times From birth to 9 months	Polio	Polio
9 months	Measles	Measles
9 times, every 6 months	Vitamin A	General health

Vaccination of school children in Zambia

School entry	BCG booster if no scar	TB
School entry	Measles, if not previously recorded	Measles
School entry	TT	Tetanus
Other school grades	TT to girls of childbearing age	Tetanus

Month 10

We all stay healthy

Week 2 – Our senses

Course: Our 5 senses – are they working well

Introduction

There are many different senses by which we learn what is going on around us, but five of them are so much more familiar than the rest that they are generally called the five senses. These are sight, hearing, taste, smell and touch.

The senses compared to a telephone:

In an ordinary telephone, there is at one end an instrument called the transmitter, into which a person speaks, and at the other end an instrument called the receiver, which another person holds to his ear. A wire runs between these two parts. In our bodies, the brain and spinal cord correspond to the receiver; the sense organs – such as the eyes and ears – are like the transmitter, and the nerves that run between these parts are like the wires.

Instruction

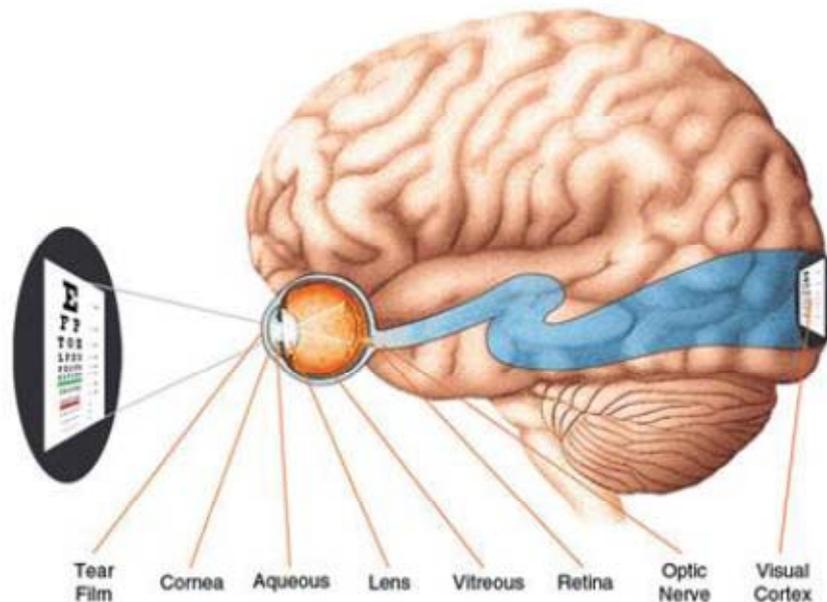
- 1) The teacher introduces the 5 senses.
- 2) She goes on to introduce the senses one by one. For each of the senses, you make some tests as described in the “More knowledge” to understand how they work, and test your own senses.
- 3) Write your own notes on what is important to know for each of the senses.
- 4) End the course by concluding, if all of you are doing all right. Maybe you find that some might need to do a more accurate test at the clinic. There are many ways to aid your senses, such as using glasses or hearing aid, or getting your nose cleared. This can have a huge effect on your ability to study or work.

More knowledge

The eye

The eyes teach us the greater part of what we know about the world. Through them we perceive the beauty of the sun, trees, and flowers, and through them we are able to learn what people thought and did in earlier times, by looking at the things they made and reading the books they wrote. The eye is somewhat like a camera. In the front is a transparent lens, which produces a little picture at the back of the eye, just as the lens in the camera makes a picture on the film, or plate by bending the rays of light that pass through it. The lens in the eye is not hard like glass, however, and its shape can be changed to make it flatter or rounder by the pull of tiny muscles and membranes attached to it.

At the back of the eye is the retina, which corresponds to the sensitive plate in the camera. In the retina, the picture of what we are seeing is changed into a nerve message, which passes to the brain by way of the large optic nerve. By means of this nerve message and the connections it makes in the brain, we know what the picture is that is formed on the retina. It is with the brain that we really see consciously. In the brain, the messages brought from the eye are passed on from one nerve cell to another.

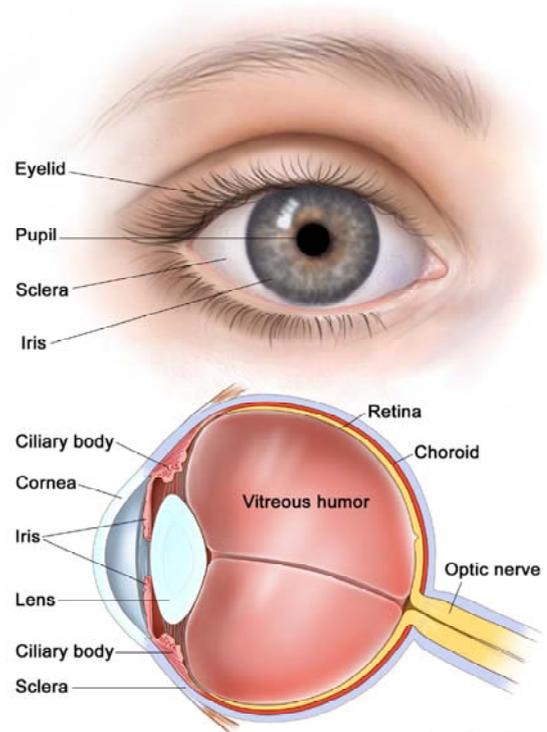


The lens and the retina are enclosed in a nearly spherical eyeball.

The eyeball has a circular dark central opening in front, opposite the middle part of the cornea. It is the pupil by which the light passes to the lens. A part around this opening forms a kind of curtain, called the iris, which can be expanded so as to make the central opening smaller or larger. It is the iris we see as a colored ring when we look into a person's eye (the part that makes the eye black or blue or brown).

The large space in the eye behind the lens is filled with a transparent jelly-like substance. In order that we may see clearly, the lens must focus, or form an exact picture, on the screen of the retina. In some eyes, the lens is curved too little, or is too close to the retina. People with such eyes cannot see things near at hand without effort, in spite of the contraction of the eye muscles; we call such people far-sighted. Other people have lenses that are curved too much. They can read a book in their hands, but cannot see a blackboard across the room clearly. Such people are said to be near-sighted.

Such difficulties may generally be solved at once by the use of eyeglasses. The lenses in the eyeglasses are shaped so as to correct the defects of the cornea and lens by bending the



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light rays, so that they will make a clear picture. A good oculist can find out just what is wrong with the eyes, and have a pair of glasses made to correct the trouble. With the right kind of glasses, a person can see clearly and without constant strain on the muscles used to focus.

Test your eyes

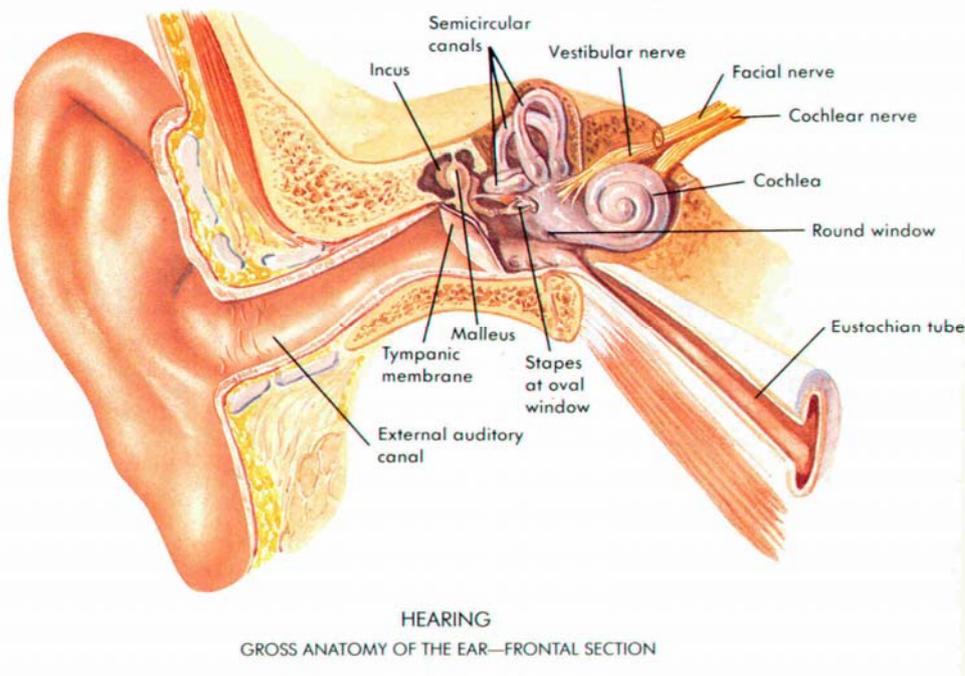
Work in pairs. On a piece of paper, each student draws 3 letters, one very small, one of medium size and one big. Ask the other student to cover one eye with her hand and tell you the letters she sees. Do the same, reading from a book. Test both eyes of both of you.

Imagine being blind. Try to move around blindfolded.

The ear

When a stone is thrown into the water, waves spread out from it in all directions. When a person calls out, when a bell rings or when any other noise is made, waves of air are produced, which are somewhat like these water waves. They are called sound waves. We cannot see them with the eyes or feel them with the hands, as in the case of the waves in water, but the ear is made in such a way that it is affected by them. There are only certain kinds of sound waves that the ear can catch, and people vary somewhat in their power of detecting them. The cry of bats, for instance, is so shrill that people cannot hear it at all.

The ear that we see on the outside of the head is just a kind of trumpet to catch the sound waves, and is not the real organ of hearing. It opens into a tube, at the end of which is a thin membrane called the eardrum. On the other side of the eardrum is a space called the middle ear, and beyond this is the inner ear, another curiously shaped space filled with liquid.



When sound waves arrive into the outer ear, they make the delicate eardrum quiver. This moves a chain of three little bones that stretch from the drum across the middle ear. These bones carry the motion along to the fluid in the inner ear, where the nerves of hearing are

situated, and where the movement of the fluid causes messages to pass along these nerves to the brain.

From the middle ear, there is an opening called the Eustachian tube, which enters the back of the throat. After a cold in the head, germs sometimes work their way up through this tube into the middle ear and cause serious disease and sometimes deafness. Pain or rumbling in the ears, or discharge from the ears, are signs of danger, and indicate that a physician should be consulted.

Wax in the ears helps to guard the approach to the eardrum. It should not be removed as digging into the ear with pointed instruments may injure the drum.

Test your ears

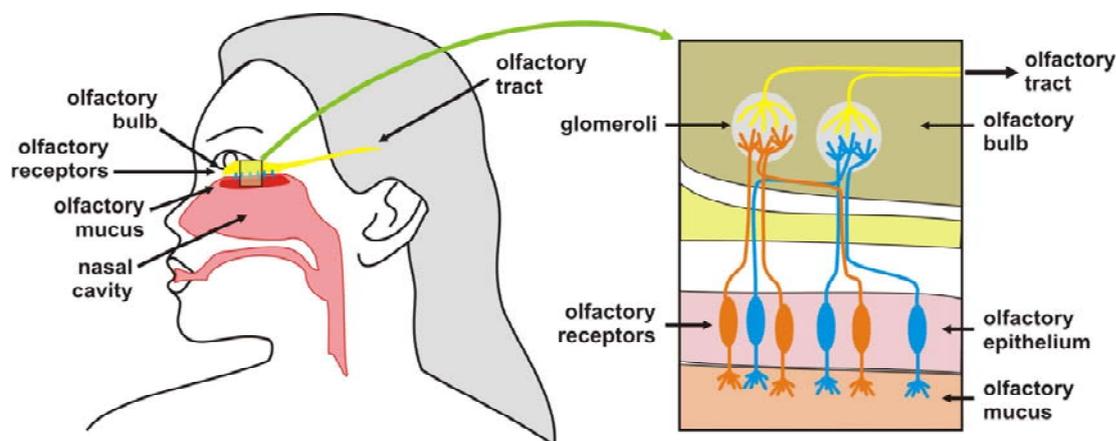
Work in pairs. One student blocks the left ear with a finger. The other says words and asks her to repeat them. Start with a normal voice and gradually go to speaking with a very low voice. Then test the other ear. Change, so both of you are testing your hearing.

Next one stands behind the back of the other and makes different noises (stamp with a foot, slam a door, tap a stone on a wall, on glass, on metal) – use whatever you have and ask the other to tell what made the noise. Then change.

The organs of taste and smell

If you look at your tongue closely in the mirror, you will see many little ridges like tiny mountains and valleys covering the whole upper surface. The organs of taste, called the taste buds, are situated in these little valleys. They are tiny rounded masses of cells, sensitive to the taste of certain substances. The organs of smell are similar groups of sensitive cells with nerve connections, situated in the upper part of the nose. They are affected by different substances from those that affect the taste buds.

It is with the sense organs of the tongue that we taste and distinguish sweet and salty things as well as sour, and bitter things; but most of the flavors of food, which we call “tastes”, are in reality smells, perceived by the sense organs in the nose. (An opening at the back of the throat directly connects the nose and throat.) If you hold your nose so that no air can get up to these sense organs, most of the flavors of the things you eat will not be noticed at all. Sometimes during a severe cold in the head, when there is difficulty in breathing through the nose, these so-called tastes, which are really smells, are almost lost.



The organs of smell are perhaps the most marvelously delicate sense organs of the body. Particles carried by the air, so small that they cannot be seen, upon coming in contact with these organs of smell will make one aware of odors. A bowl of dried rose leaves may stand in a room for a long time without losing enough of their substance to be detected by weighing

on the most delicate scales, yet through all that time microscopic amounts of fragrant substances have been given off from the rose leaves, and have affected the sense organs of the nose, so as to send an impulse to the nerves and produce in the brain the sensation of their characteristic odor.

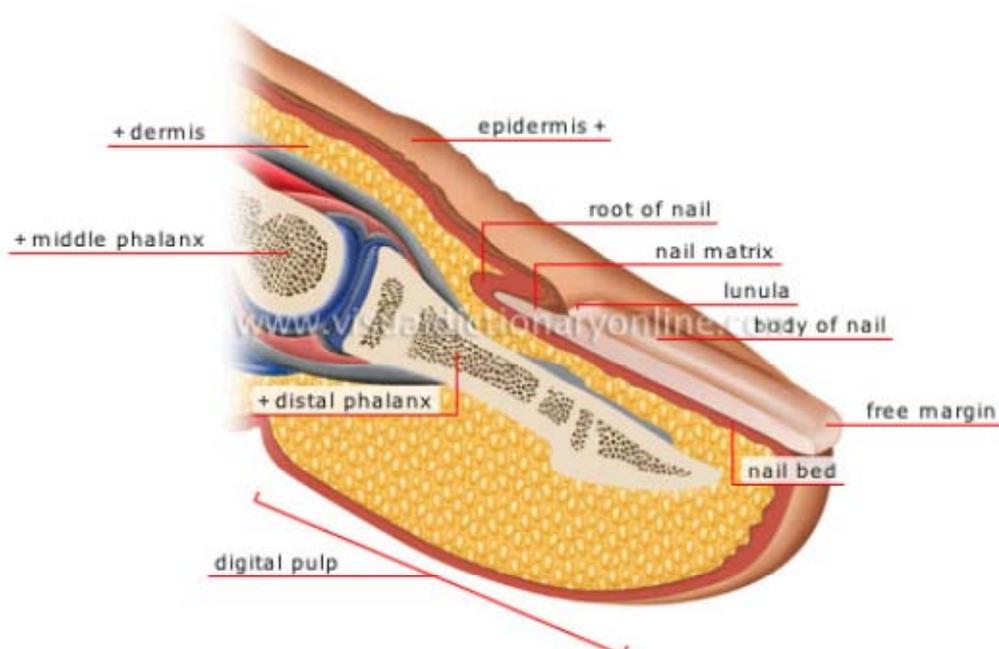
Test your ability to smell

1. The teacher has prepared a box or basket with different things with a clear smell (a flower, a fruit, an onion, an insect, etc.)
2. You all sit down in a small circle.
3. Cover your eyes with a piece of cloth or your hands. Do not cheat!
4. The teacher takes the things out of the box one by one, and puts them close to the nose of the students, and ask them to say the name of it by smelling it carefully.
5. Did they say the right name of the things?

The sense of feeling

Scattered over the surface of the body are tiny end organs of the nerves with which we feel the touch of things, and others by which we distinguish heat and cold.

These three kinds of sense organs appear to be distinct, some perceiving heat only and some cold only, while others serve for what we ordinarily call feeling. When careful studies are made of the power to feel very small hot and cold objects, it is found that only certain areas of the skin (having cold sense organs) are sensitive to cold, while others (having heat sense organs) are sensitive to heat. Sense organs of touch are particularly numerous in some parts of the skin. The ends of the fingers, for instance, have a delicate sense of touch, but on the back and shoulders, the sense of touch is very imperfect. If two blunt points an inch apart are placed on the back, you cannot tell whether two points or one are touching you.



Test your sense of feeling

1. The teacher prepares a box with things like a pen, a flower, a key – choose objects that are a little difficult to feel.
2. You all sit in a circle with your eyes covered.
3. The teacher passes the box by each student, asks you to touch what is in the box and to say the names of the objects.
4. Take the objects out of the box and put them on the table for all of you to see. Did you guess correctly?

Other senses

There are various other sensations – such as the sensations of position, pain, hunger, and thirst – all of which are felt by means of nerves connected with special sense organs in various parts of the body.

Test your balance

1. Go outside to a place with grass or sand, so it is possible to fall, without getting hurt.
2. First you stand directly on the ground with your bare feet.
3. Then you place some soft material under your feet, like a cushion.
(The balance will be disturbed, because the sensors in the skin of the soles of your feet get disturbed.)
4. Now you stand on one foot and start feeling some difficulties. This is because you only have half of the sensors from your feet to help you. (It will help you to stretch out your arms - some will do it automatically to keep balance).
5. You now blindfold a person, and for sure, she will start falling. This is because she can no longer see objects and use them to judge what is upright.
6. The last exercise is to ask everyone to stand on one foot. One of you counts aloud. How long time can you keep standing? Who can stand for the longest time?

You can train your sense of balance by standing on one leg for some minutes every day.

Month 10

We all stay healthy

Week 3 – Malnutrition is harming children’s growth

Lesson: What is malnutrition and how it can be prevented

Introduction

A healthy child is a growing child.

Most children are at the greatest risk of malnutrition from the age of about six months, when they are growing fast, and breast milk alone can no longer provide all the nutrients they need, and until they are 2-3 years old, when growth slows and they can feed themselves.

You can find out if children are well nourished or malnourished by weighing them regularly, and writing down their weights on paper to see the progress of the weight from month to month.

A child may gain weight at a healthy rate, which means the child is almost certainly eating well and is healthy;

A child may gain weight too slowly, or not gain weight at all, which signals that something is wrong. The child may be sick from a disease or from not eating enough, or both, and losing weight, which is a very dangerous sign.

A child is *severely malnourished* if there are signs of any of the following: severe lack of growth, thinness, swelling of both feet.

A severely malnourished child is dangerously ill and needs to be admitted to a hospital immediately. Make sure the child is kept warm and fed while travelling to the hospital!

Where malnutrition of a child is not so advanced, you should ensure that the child is being fed better. In this lesson, you will learn more about the dangers of malnutrition and how to treat a malnourished child.

Instruction

- 1) The teacher gives the introduction. Read the “More knowledge” together to understand how to detect severe malnutrition and serious diseases, and how to deal with these.
- 2) In the Trios, discuss if of any of the small children you know may be malnourished. If yes, what can you do to help them?

- 3) Share your discussions with the whole Kid's Club.
- 4) Discuss if your gardens have been able to provide better food for your families. Share ideas of what more to grow.

More knowledge

Health problems due to malnutrition in children:

- Failure of the child to grow or gain weight normally.
- Slowness in walking, talking or thinking.
- Big bellies, thin arms and legs.
- Common illnesses and infections that last longer, are more severe, and could cause death.
- Lack of energy, the child is sad and does not play.
- Swelling of feet, face, and hands, often with sores or marks on the skin.
- Thinning, straightening, loss of color or shine of the hair.
- Poor vision at night, dryness of eyes, blindness.

Signs of malnutrition and how to detect it:

- Malnutrition occurs when there is lack of food, or the nutritional value of the food is insufficient.
- It can happen at any age, but occurs more easily in infants and children under 5 years and in pregnant women.
- A child with malnutrition does not grow, even loses weight, and is very weak.
- Lack of growth can be observed when the child is weighed regularly and the weight is registered each time.
- To control the growth of small children, it is important to bring them regularly for checkups at a health center.

Reasons for malnutrition:

- Supplementary food is introduced too late, which means the child is not getting enough nourishment.
- The food in the family is insufficient in quantity and quality.
- The child is ill with diarrhea, malaria, measles, anemia or other diseases, which make him lose nutrients due to diarrhea or vomiting, and lose appetite, with the result that the child does not get enough to eat.



Keep track of children's growth

It is a good idea for a mother to make a health card for each child under 5 years of age and noting the children's weight every month.

Children can be weighed at a clinic, at an 'under 5 centre' or on a homemade scale.

Measure the center of the left, upper arm



At 6 months:
Under 11 cm:
Acute malnutrition
Under 13 cm:
Malnourished

Signs of the two main types of malnutrition

Dry malnutrition – the child is starved

- He is small, very thin and wasted
- He may have thinning hair, the face of an old man, a potbelly
- He is always hungry
- He is little more than skin and bone



Wet malnutrition – due to lack of proteins

- She has a swollen 'moon' face
- She has stopped growing
- She has sores and peeling skin
- She has swollen hands and feet
- She has lost color in hair and skin
- She is miserable



- She has thin upper arms and wasted muscles but might have some fat
- She is skin, bones and water

Actions that can prevent malnutrition:

- Exclusive breastfeeding for the first 6 months.
- Introduction of appropriate complementary feeding from six months, continuing with breastfeeding for up to two years.
- Nutrition and health care appropriate for a child who is already sick and malnourished.
- Good nutritious food for the family, especially for pregnant women.
- Adequate Vitamin A supplementation for children, and for women the first 6 months after giving birth.
- Proper supplementation with iron and folic acid to pregnant women.
- Adequate iodine supplementation and regular consumption of iodized salt.
- Maintaining good personal hygiene and a clean environment.

Treating a malnourished child:

You can treat chronic malnutrition, even if you do not have many resources, by providing better food. For children from birth to 6 months old: give breast milk and nothing else. Any other food makes the problem worse. As the child grows, continue to give breast milk and add other foods.

For everyone else with signs of malnutrition: give a high-energy porridge. Start by making porridge from your main starchy food and add to it:

1. **Protein:** Groundnut flour, peanut butter or any nut or bean flour or paste. Or add cooked beans, eggs, fish, milk, yogurt, or cheese. Choose any protein that is affordable and available to you.

2. **Energy:** Add a spoon of oil and a spoon of sugar, honey, or any sweetener.
Or add fruit.
3. **Vitamins and minerals:** Serve cooked vegetables, fruit or moringa leaves.

Anemia by iron deficiency -7 in 10 children



Vitamin A deficiency -7 in 10 children



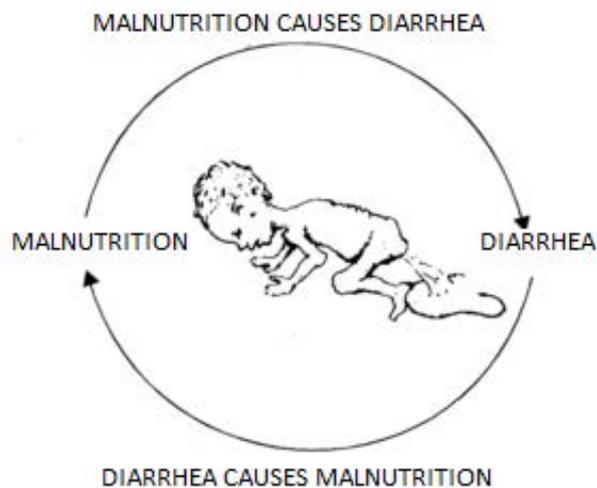
Iodine deficiency -5 in 10 children



Many children suffer from deficiencies

There may be times, when there is not enough food to give a child a healthy meal with protein and vegetables every day. Still, try to avoid giving only starchy food and nothing else. With only starch, the child will feel full, but will grow weak and sick.

Add a spoon of oil. A spoon of oil does not make up for lack of protein and vegetables. But for a short time, it can give the energy that a child cannot get from starch alone.



Malnutrition is common and often chronic. When people go hungry for long periods, they do not grow and get as tall as they could, they get sick more often than they should, and have diarrhea, anemia, and other health problems more frequently.

Month 10

We all stay healthy

Week 4 – Health action

Action: We organize a common health check-up in school

Introduction

During the last ten months, you have learned many things about health, and how to stay healthy. Has this changed the way you used to eat, do exercises or take care of you and your family's health?

Did you do the fitness test again? Have you improved your results?

In this action, you are going to use what you have learnt by sharing it with the other students at your school.

Instruction

- 1) Have a brainstorming session in the Kid's Club on what you want your friends to learn about health, and how to stay healthy.
- 2) Discuss how you can make each of your points interesting. Here are some ideas. You can surely add many more.
 - You could start with making the same fitness test you made yourself when the Kid's Club started – maybe you can improve on the test.
 - You could make different “stations” where students could come and check their senses.
 - You could invite a person from the local clinic to come and give advice on specific issues, which you already know is of concern in your area. It might be rashes, pimples or sores – or something else.
 - You could make an exhibition on malaria and TB.
 - You could organize de-worming treatment for everyone and explain why it is needed.
 - You could present healthy food from the school garden, and explain about the importance of eating from all the food groups, and how to get enough vitamins and minerals.
 - Sports could also be part of the day.
 - You could ask everyone to make a health protocol. (See “More knowledge”)
 - You could end the day with a dance competition.

More knowledge

How to make a health protocol

Your body lets you know what it needs; when it is hungry, tired, or overwhelmed, you feel it. But it is your responsibility to listen to it and act accordingly. Personal health is all about listening to your needs and limits so you can prevent avoidable health difficulties.

A Personal Health Protocol consists of deciding how you want to improve your health. Take time to assess your health status and to think about your priorities.

The Personal Health Protocol is owned by you, and it is up to you what information you wish to include in your plan.

You can choose to make the protocol on your own, or you can make it together with a friend.

Your Personal Health Protocol should include the following elements:

- Decide what you want to eat. This depends on whether you are too thin, too healthy or just ok and want to stay that way. This is more about including local healthy food than about money. Find out how to get hold of it. Maybe decide to make a garden or raise chickens.
- Decide on the type of exercise you want to carry out and how often, and for how long. It should be something you like to do. It can be different things on different days, like body building one day, football one day and walking another day. Find some friends who want to do the same.
- Decide on special actions to take to maintain or improve your general health. These can be special actions like de-worming, visiting a dentist etc...
- Decide to keep track of any specific health issues that you might have, and take the steps necessary to solve them. Always treat sores, do react on tooth pain, ...
- Decide what to do to learn more about health and health issues to improve your own health, and to mobilize others to improve their health.

Write the decisions you take in a notebook.

Write the schedule for when to do what.

Follow up on your decisions every week.



The production of this Program Manual has been assisted by use of material from the following sources:

FAO

A vegetable garden for everyone

Hesperian Foundation

A Community Guide to Environmental Health

Humana People to People

Food For Knowledge Newspapers 1-4

The GAIA-Movement

40 Green World Actions

Carbon reducing Activities at HPP Projects

UNICEF and DAPP Namibia

Give every child the best start in life

Wikipedia

The free encyclopedia



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