

ACKNOWLEDGEMENT

This manual is adapted from a manual developed in Peace Corps Honduras by the following people:

Project Officers:

Dr. Helmuth Castro

Hector Pavon

Peace Corps Volunteers:

Anastasia Buyanova

Andrea Catalano

Lauren Roberts

Margaux Yost

New illustrations made specifically for The Hunger Project were designed by:

Yvonne Zhao

TABLE OF CONTENTS

Intro	1
Health & Nutrition: 1000 Days Initiative	
THP Objectives	
Nutrition	4
I. Information	
II. Presentation	
III. Activities	
IV. Index	
Maternal Health & Nutrition	17
I. Information	
II. Presentation	
III. Activities	
IV. Index	
Infant Nutrition	27
I. Information	
II. Presentation	
III. Activities	
IV. Index	
Hygiene & Water	37
I. Information	
II. Presentation	
III. Activities	
IV. Index	
Appendix	41
Food Images	

Prioritizing Maternal and Childhood Nutrition



An expert panel of Nobel laureate economists known as the Copenhagen Consensus met in May 2012 to set priorities for solving the world's greatest challenges. After extensive research and consultation, they determined that the single best investment the world could make to advance health and prosperity would be to fight malnutrition in young children. The consensus: tackling malnutrition is not only the right thing to do, but it also makes economic sense. Research showed that for every \$1 invested in nutrition, as much as \$138 in better health and increased productivity is generated.

This consensus comes at a time when new scientific data has revealed the vital importance of good nutrition during the first 1,000 days (from the first day of a woman's pregnancy to the child's second birthday) as a crucial window for developing a child's cognitive capacity and physical growth.

Evidence shows that the right nutrition during the 1,000 days window can achieve **lasting progress in global health and development**: saving more than one million lives each year; reducing the human and economic burden of diseases like malaria, tuberculosis and HIV/AIDS; improving an individual's education achievement and earning potential; and increasing a country's GDP by at least 2-3 percent annually.

The Hunger Project Action

In 2011, The Hunger Project's Global Board set integrating action for nutrition in the 1,000-day window as a top strategic priority in all our programs. The Hunger Project is deeply committed to ensuring that our programs leverage this opportunity.

- We are working to ensure that our village partners have **access to operational health centers** that provide antenatal services, safe deliveries, education on breastfeeding and maternal and child nutrition, and child health monitoring. In Africa, such services are provided at our epicenters in partnership with local government ([read more about our Epicenter Strategy](#)). In South Asia and Latin America, this entails awareness-building and training as well as the facilitation of improved partnerships with local government to ensure access to resources like government-provided health centers for those that need them.
- Throughout our programs, **education and food security programs now incorporate 1,000 day nutrition awareness and training** utilizing the Essential Nutrition Actions (ENA) framework ([read the booklet on the 7 Essential Nutrition Actions](#)). For example, in Malawi, we have launched a project to conduct awareness campaigns on safe motherhood, carry out vaccination campaigns targeting children under five years old, and train mother-to-mother (M2M) support groups on safe motherhood and nutrition.



- Around the world, THP Country Directors and Global Leadership **play active roles in the 1,000 Days global initiative, the United Nations Scaling Up Nutrition (SUN) initiative** and other global and national nutrition advocacy forums.

The Hunger Project has been involved in the formulation of and has been an active leader in the **1,000 Days** global initiative, which was launched in September 2010 by Hillary Clinton ([watch her remarks](#) where she thanks The Hunger Project along with our partner organizations for our role in establishing the **thousanddays.org** website as a unified hub on nutrition issues).

The **SUN Movement** is a country-led, global effort to advance health and development through improved nutrition. The Hunger Project is an endorsing civil society organization, committed to working together to support, to encourage and to mobilize robust action and necessary resources to scale up nutrition.

THP 1000 Days Initiative Staff Objectives

- I. Build the capacity of national staff of THP-Africa countries for effective partnerships**
 1. Partner with existing health & nutrition NGOs in the country.
 2. Use NAC to “get a seat” at the health & nutrition table in country.
 3. Adopt best practices from health organizations.
 4. Advocate for local government officials to provide improved nutritional programs to all epicenters.

- II. Establish effective nutrition programs at epicenter level**
 1. Increase epicenter communities’ awareness on nutrition.
 2. Strengthen nutrition training and education programs in epicenters and develop training modules.
 3. Identify households with good nutritional practices, and use them as models in Epicenter communities.
 4. Facilitate the supply of vitamin supplements to women and children (Vitamin A and Iron).
 5. Pilot a specific nutrition program in each epicenter.

- III. Strengthen health programs**
 1. Make maternal health more central to programs.
 2. Increase accessibility and utilization of health and nutrition services in all epicenters by all women and children.

- IV. Mainstream the 1000-days initiative in all programs:**
 1. Ensure that nutrition education is included in all epicenter programs (literacy, health, WEP, food security, etc.).
 2. Identify & expand cross-cutting nutrition opportunities (i.e, school feeding program and kindergarten).
 3. Diversify agricultural production to include vegetable and fruit farming to enhance nutrition and establish food processing units to ensure year round nutritious food.

Nutrition

Objectives:

- What is nutrition?
- What are nutrients?
 - Types of nutrients
- Food Groups
- Balanced Diet
- The importance of a good nutrition

I.

Nutrition is the intake of nutrients (in the form of food), considered in relation to the body's dietary needs. Good nutrition – an adequate, well balanced diet – is a cornerstone of good health. Poor nutrition can lead to reduced immunity, increased susceptibility to disease, impaired physical and mental development, and reduced productivity.

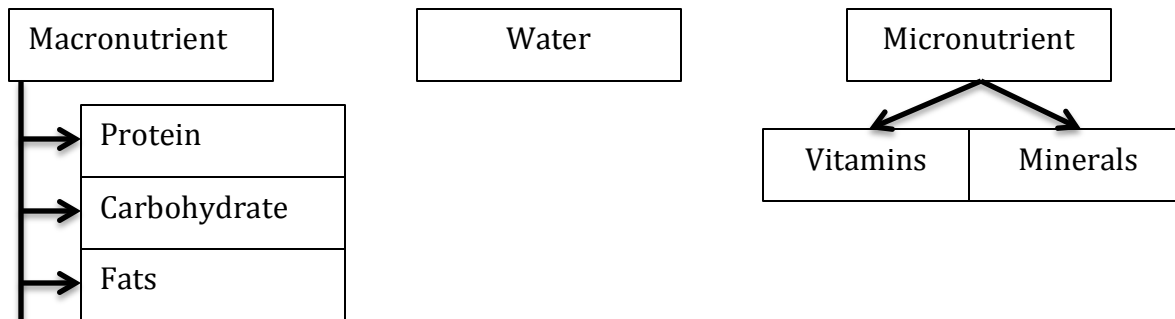
Nutrients are the materials found in food that living organisms absorb in order to provide the necessary energy to different parts of the body so that it can function correctly. Different types of nutrients are present in foods: Macronutrients, Micronutrients and water. Macronutrients are present in a wide variety of food and are needed in larger quantities by the body. Micronutrients are present in a small variety of foods and are needed in smaller quantities than macronutrients.

Macronutrients are: Proteins, Carbohydrates and Fats.

- Proteins: nutrients are related to muscle growth and tissue repair. A growing body is in dire need of proteins in order for the body to form itself well.
- Carbohydrates: nutrients used for fast energy that the body can break down easily.
- Fats: nutrients that are mostly stored in the body to then (later) be used as energy. Fats are not recommended as a source of food because 1) the body can only store so much fat before it starts experiencing health problems and 2) foods that are high in fat are most likely very low in other nutrients.
- Macronutrients directly impact the overall health of the body. A person with low macronutrient intake will struggle either forming his or her body completely (or at all) for a growing child or have enough energy to use his or her body at high capacity.

Micronutrients are: Minerals and Vitamins

- Minerals: are inorganic materials that come from the earth and are absorbed by plants and herbivore animals.
- Vitamins: are organic materials that animals and plants synthesize internally.
- Essential vitamins and minerals in the diet are vital to boost immunity and healthy development. Vitamin A, zinc, iron and iodine deficiencies are primary public health concerns. About 2 billion people are affected by inadequate iodine nutrition worldwide. More than one third of preschool-age children globally are vitamin A deficient. Vitamin A deficiency is the leading cause of preventable blindness in children.



Water: Our body is composed of 70% of water. The replenishment of this water is essential for the body to digest and use nutrients properly. A person without water can only go a couple of days without water before reaching body exhaustion leading to death.

Nutrients are not found in different levels in a variety of foods. That is, no single food has only one type of nutrient but rather is composed of different types of nutrients in different amounts. Nutrition has become a science in the last decades and that science has allowed to define what consists of a healthy diet (one that includes nutrients in the right quantities) in order to reach optimum capacity. Given that foods are composed of different nutrients, the guide to knowing what to eat to have good nutrition is done through the use of food groups:

- Grains
- Fruits
- Vegetables
- Dairy
- Meats/Legumes/Nuts
- Fats

Generally, each group can be associated with foods that are rich in a certain nutrient:

- Grains => carbohydrates
- Fruits => Vitamins
- Vegetables => Minerals
- Dairy => Minerals and Fats
- Meats/Legumes/Nuts => Proteins
- Fats => Fats

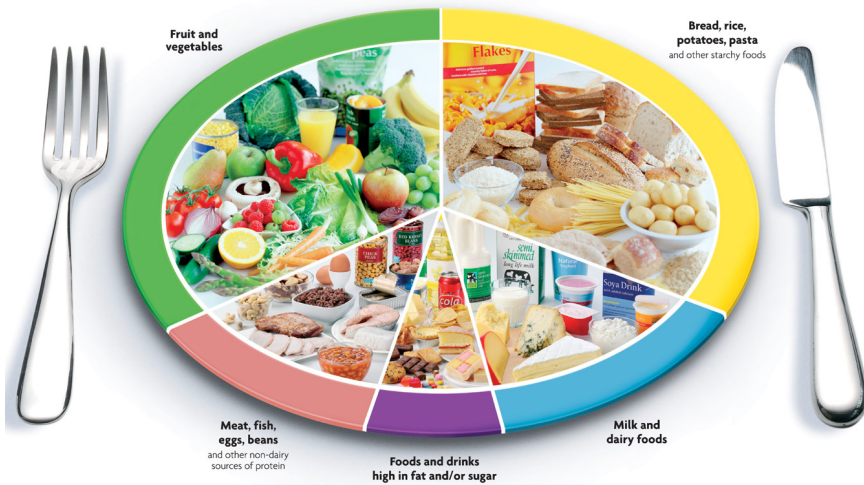
Good nutrition results from a balanced diet that weighs out food groups so that the body receives the ideal levels of nutrients. Ideally the following image shows how much from each food group should be consumed in a day:

Importance of Nutrition:

Nutrition is a critical part of health and development. Better nutrition is related to improved infant, child and maternal health, stronger immune systems, safer pregnancy and childbirth, lower risk of non-communicable diseases (such as diabetes and cardiovascular disease), and longevity.

Healthy children learn better. People with adequate nutrition are more productive and can create opportunities to gradually break the cycles of poverty and hunger.

Malnutrition, in every form, presents significant threats to human health. Today the world faces a double burden of malnutrition that includes both undernutrition and overweight, especially in developing countries. See Malnutrition chapter for further details.




II.

- 1) Start with activity #1 as a backdrop to this presentation about nutrition
- 2) Activity #1 ends by stating that a child needs proper nutrition to grow. As such, ask your audience whether they know the meaning or definition of “nutrition”
 - a. Nutrition: the provision of the materials necessary for organs to function. In other words, the intake of nutrients which are properly absorbed and consumed by the body.
- 3) Nutrition: a critical part of health and development. Better nutrition is related to improved infant, child and maternal health, stronger immune systems, safer pregnancy and childbirth, lower risk of non-communicable diseases (such as diabetes and cardiovascular disease), and longevity.
- 4) Ask your audience: what are nutrients?
 - a. Any element that living organisms can break down and use for energy.
- 5) Where can we find nutrients?
 - a. In food
- 6) Different bodily activities and parts of the body require different types of nutrients in order to work correctly. As such, there is not just one type of nutrient since each nutrient brings a different type of energy.
- 7) Nutrients are classified as either macronutrients or micronutrients.
 - a. On a piece of presentation paper write on top (on each side) these two nutrient categories (see figure 1)
 - b. What does macro mean?

- i. Macro means large in scale or scope.
 - c. What does micro mean?
 - i. Micro means small in scale or scope.
 - d. In the context of nutrients, the meaning of these two prefixes translates to the same meaning:
 - i. Macronutrients: are found in a wide variety of foods and are needed in large quantities
 - ii. Micronutrients: are found in specific foods and are needed in small quantities
- 8) Within each category, we need to acknowledge the types of nutrients.
- 9) In macronutrients, there are 4 types of nutrients:
 - a. Protein
 - b. Carbohydrates
 - c. Fats
 - d. Water
 - i. Add these nutrients under the word macronutrient on your presentation paper
- 10) Proteins are nutrients related to muscle growth. As such, proteins are essential for a child whose muscles are forming/building/repair themselves as well as an adult that carries out physical activities (this means everyone because we are all to some level physically active)
 - a. Stick the image of a child growing next to the macronutrient of protein
- 11) Carbohydrates are nutrients related to fast energy. As such, carbohydrates are crucial for anyone that needs energy on a daily basis (that means everyone). Carbohydrates are first used for energy and then stored if the person consumes more than is used.
 - a. Stick image of child running next to the macronutrient of carbohydrate
- 12) Fats are nutrients that are stored in the body to be used as energy when the body doesn't have anything ready to use.
 - a. Stick image of child running next to the macronutrient of fat
- 13) Water is necessary for every type of function in the body.
 - a. Stick image of body made of water next to the macronutrient of water
- 14) In the category of micronutrients, there are 2 types of nutrients
 - a. Minerals
 - b. Vitamins
 - i. Add these nutrients under the word micronutrient on your presentation paper
- 15) Minerals are inorganic material that aid enzyme function (bone structure and nerve impulse)
- 16) Vitamins organic materials that enable chemical reactions
 - a. Both of those micronutrients are used for very specific functions in the body.
 - b. Stick image of generic body with organs
- 17) Before moving on, let's backtrack and make sure that the previous is clear
- 18) What does nutrition mean?
 - a. Answer: the provision of nutrients to the body.
- 19) Can you eat well and still be malnourished?
 - a. Answer: yes, nutrition is not just about the consumption of food but also its absorption
- 20) What are nutrients:

- a. Elements/materials that are found in food and provide different types of energy
- 21) What are the two categories of nutrients
- a. Macronutrients
 - b. Micronutrients
- 22) What is the difference between the two?
- a. Macronutrients are needed in large quantities and found in many foods
 - b. Micronutrients are needed in small quantities and found in
- 23) When we talk about good nutrition, we refer to a well-balanced intake and absorption of these nutrients. So far, nutrition has been explained in terms of specific nutrients. We are now going to translate these nutrients into actual foods.
- 24) Nutrients are found in all foods. But foods have been categorized in groups in order to pinpoint which types of foods are rich in certain nutrients.
- 25) There are 6 foods groups
- a. Grains
 - b. Fruits
 - c. Vegetables
 - d. Meats/legumes
 - e. Dairy products
 - f. Fats
- 26) Do activity #2
- 27) Foods are composed of many different types of nutrients. As such, it is impossible to match food groups directly with nutrients. However, it is helpful to explain that food groups are rich in specific (have more of certain nutrients).
- 28) Ask your audience: can you think of any food groups that you already know are rich in certain nutrients?
- a. Answer:
 - i. Protein : Meats/legumes
 - ii. Carbohydrates: Grains
 - iii. Fats : fats
 - iv. Minerals: vegetables
 - v. Vitamins: fruits
 - vi. Protein, minerals and fats: dairy products
 - vii. Water: everything
- 29) As previously stated, nutrients are not created equal: our body requires more of some and less of others.
- 30) Since now we have a certain notion of which nutrients pertain to which foods, let's go through which food groups we should eat more and which we should eat less.
- 31) Do activity #3

III.

Activity #1	Flower
Materials & Preparation	<ol style="list-style-type: none"> 1. Photocopy of images in index for this activity (cut out for each image) 2. Tape 3. Flipchart paper 4. Draw a background picture on the flipchart
Length	5-10 min
Process	<ol style="list-style-type: none"> 1) Draw a nature background on a piece of presentation paper as such: <div style="text-align: center; margin: 10px 0;">  </div> 2) Tell the audience that you have just planted a flower bulb (stick the picture of the bulb on your background on the soil) 3) Ask them if the soil needs certain elements/qualities in order for the flower to start growing <ol style="list-style-type: none"> a. Answer: <ol style="list-style-type: none"> i. Yes: nutrients (stick strong arms and hearts to represent to different nutrients/elements found in rich soil) 4) Once the soil has its nutrients, replace the bulb with the minimal growth bulb 5) Ask them what else is needed for this growing flower to grown to its full capacity <ol style="list-style-type: none"> a. Answer: <ol style="list-style-type: none"> i. Water ii. Sun 6) Once each element has been listed, stick your healthy flower on the drawing 7) Explain that in order for the flower to bloom and be healthy all elements are needed 8) Ask them what would happen if you take one element out (and take off an element from your drawing) <ol style="list-style-type: none"> a. Answer: <ol style="list-style-type: none"> i. The flower would grow and be unhealthy (replace healthy flower with unhealthy one) 9) Ask them what would happen if you take out 2 or more elements <ol style="list-style-type: none"> a. Answer: <ol style="list-style-type: none"> i. In many cases the flower would be unhealthy for a while and might die (replace unhealthy flower with dead flower) 10) Ask them what would happen if the flower was planted far away from the tree? <ol style="list-style-type: none"> a. It might not get shade b. Intercropping (it might not get some good nutrients that the tree gives off)

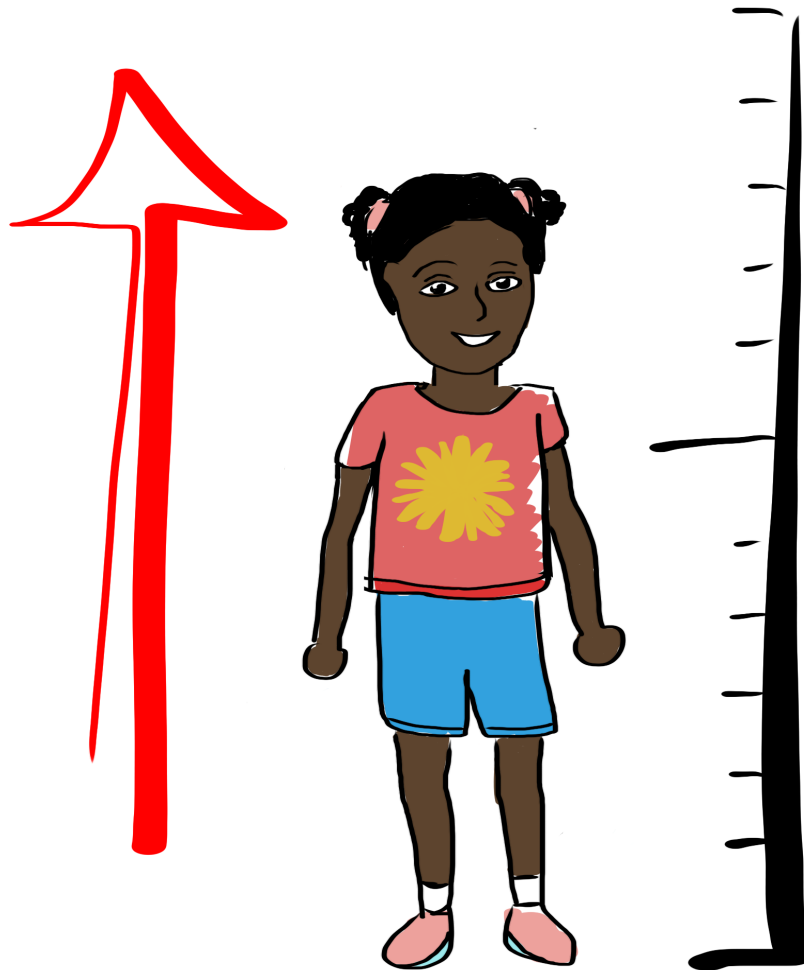
	<p>11) Could we compare this story to a child's growth and life? a. Answer: i. Yes</p> <p>12) What element of the flower's growth would be that of the child's growth? a. Answer: i. Soil: Mother's 9 month long pregnancy and breastfeeding (her nutrition affects the baby directly) ii. Rain and sun: the nutrition of the baby once it is born iii. Tree: Environment in which the baby grows (basic hygiene)</p> <p>13) Discussion: Looking just as the soil, if we see that in order for the flower to grow well we need rich soil what does that say about the pregnant woman? a. Answer: i. We want the woman to be healthy as soon as the soil is planted as well as during her nine-months long pregnancy.</p> <p>14) Discussion: Looking at the flower, if we see that in order for the flower to grow well we need sun and rain/water, what does that say about a child's growth? a. Answer: i. A child needs proper nutrition to grow to his/her own potential</p>
Activity # 2	Foods into Food Groups
Materials	Photocopy of all foods included in the index Photocopy of each foods group in the index Handmade signs with the name of each food group written on it
Length	
Process	<ol style="list-style-type: none"> 1) Explain that although the name of the foods groups are self-explanatory, it is best to go through each food and place them in each category 2) Hand on the wall the signs of the names of each food group as well as its visual description 3) Hand out all of the foods to your participants 4) Ask them one by one to come up and place the foods under the correct foods groups 5) Answer <ol style="list-style-type: none"> a. Grains <ol style="list-style-type: none"> i. Sesame ii. Teff iii. Flour iv. Injera v. Rice vi. Oatmeal vii. Pasta viii. Bread ix. Flaxseed b. Fruits <ol style="list-style-type: none"> i. Papaya ii. Pineapple iii. Avocado iv. Tomato v. Banana vi. Citrus vii. Tamarind viii. Coconut c. Vegetables <ol style="list-style-type: none"> i. Squash ii. Corn iii. Chile iv. Potatoes

	<ul style="list-style-type: none"> v. Carrots vi. Asparagus vii. Beets viii. Broccoli ix. Cabbage x. Sweet Potatoe xi. Taro xii. Cassava xiii. Onion xiv. Garlic xv. Peppers xvi. Moringa xvii. Sweet potato leaves <ul style="list-style-type: none"> d. Fats <ul style="list-style-type: none"> i. Oil ii. Butter <ul style="list-style-type: none"> e. Meats/Legumes <ul style="list-style-type: none"> i. Beans/lentils ii. Fish iii. Chicken (poultry) iv. Eggs v. Lobster vi. Squid vii. Crab viii. Shrimp ix. Cashews x. Red Meat <ul style="list-style-type: none"> f. Dairy <ul style="list-style-type: none"> i. Yogurt ii. Cheese iii. Milk <ul style="list-style-type: none"> g. Other <ul style="list-style-type: none"> i. Chips ii. Soda iii. Candy iv. Honey v. Juice
Activity #3	Balanced Diet
Materials	<p>Handmade signs with the name of each food group written on it</p> <ul style="list-style-type: none"> a. Grain b. Meats/Legumes c. Fruits d. Vegetables e. Fats f. Dairy <p>Photocopy of balanced diet chart in the index</p>
Length	
Process	<ol style="list-style-type: none"> 1) Ask your audience to guide you in putting in order food groups from the group that should be most eaten in a healthy balanced diet to the one that should be eaten the least 2) Put them in order on the wall 3) Then correct them as needed <ul style="list-style-type: none"> a. Answer: <ul style="list-style-type: none"> i. Grains (most eaten)

- | | |
|--|---|
| | <ul style="list-style-type: none">ii. Vegetablesiii. Fruitsiv. Meats/Legumesv. Dairyvi. Fats (least eaten) <p>4) Once the groups are in order, distribute the healthy diet plate guide to show the proportion of the groups</p> |
|--|---|

III.

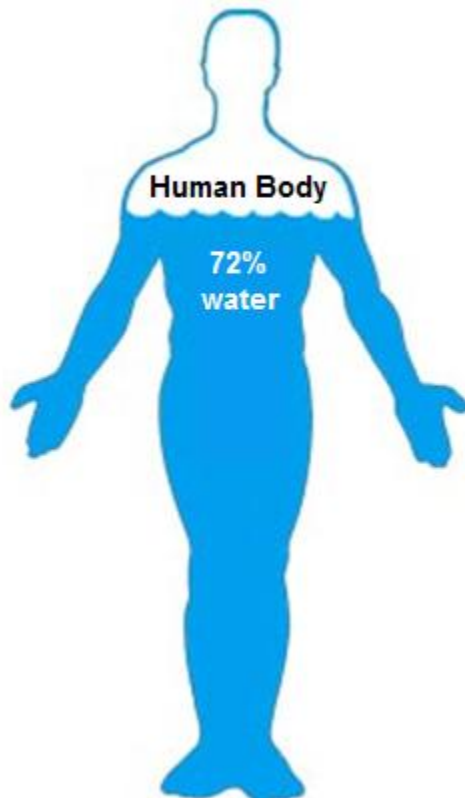
Nutrition Macronutrients, Micronutrients and Water Presentation Images



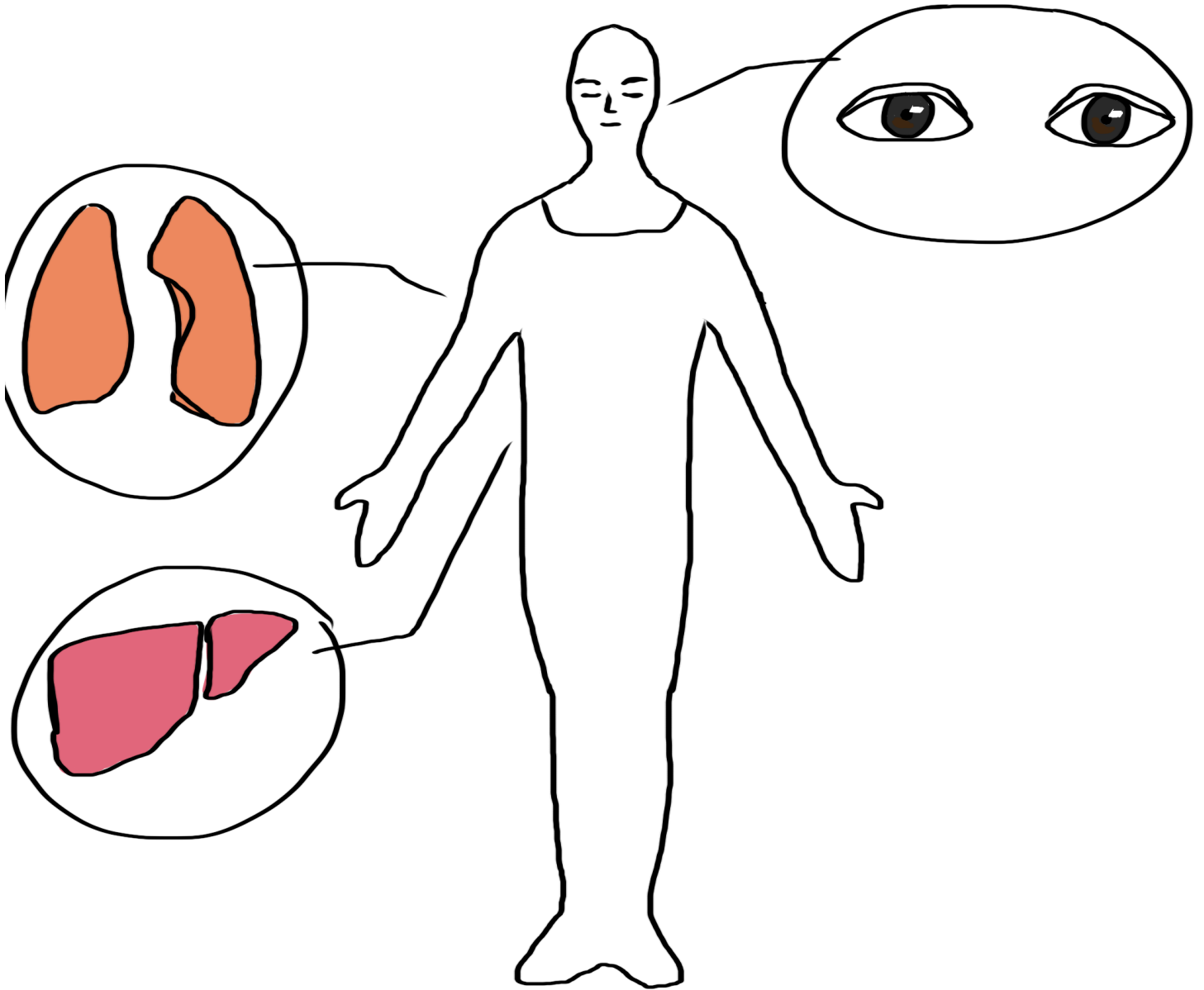
Growth/Muscle development and repair = protein



Fast energy used right away = carbohydrates
Fast energy that can be stored = fats

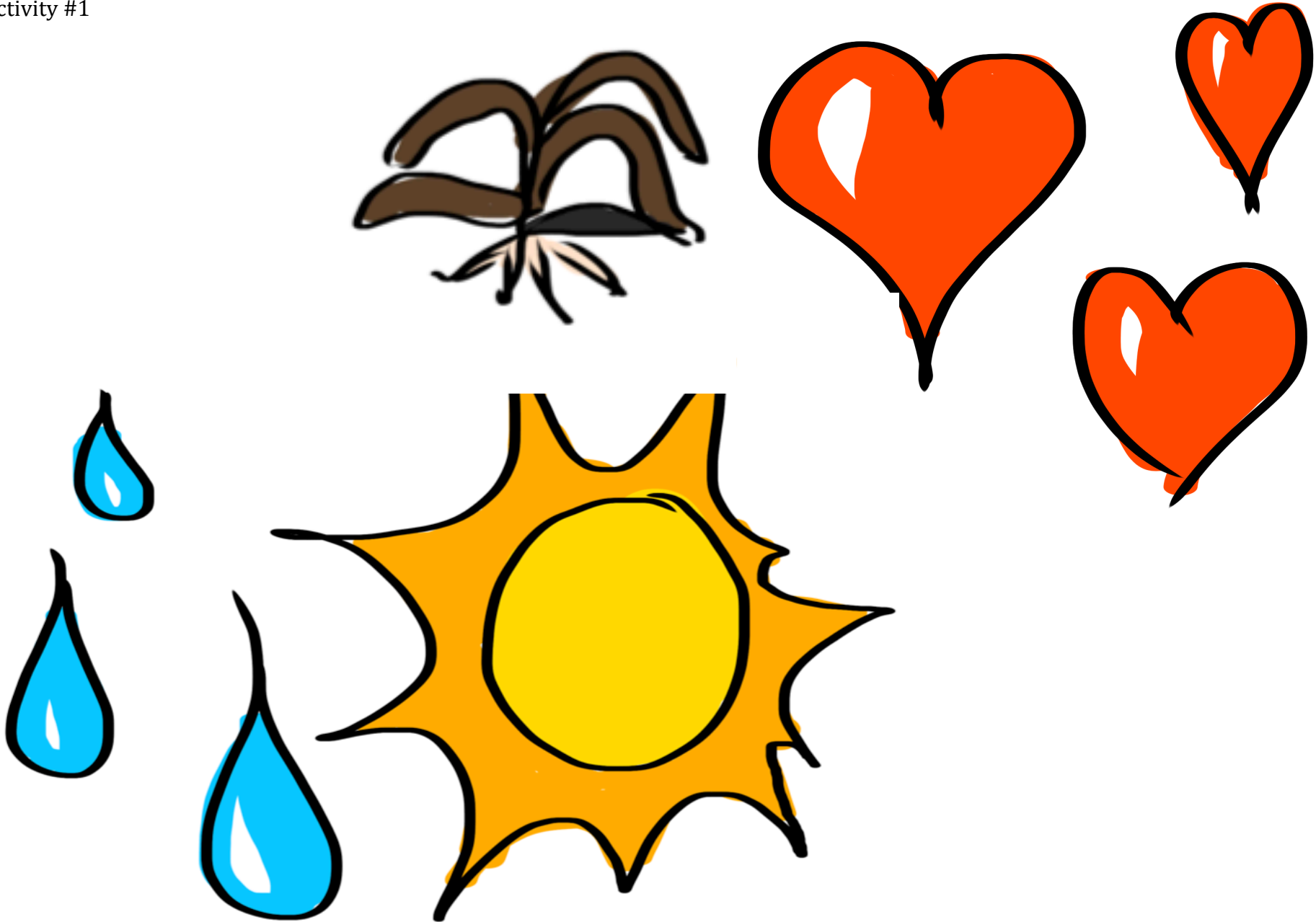


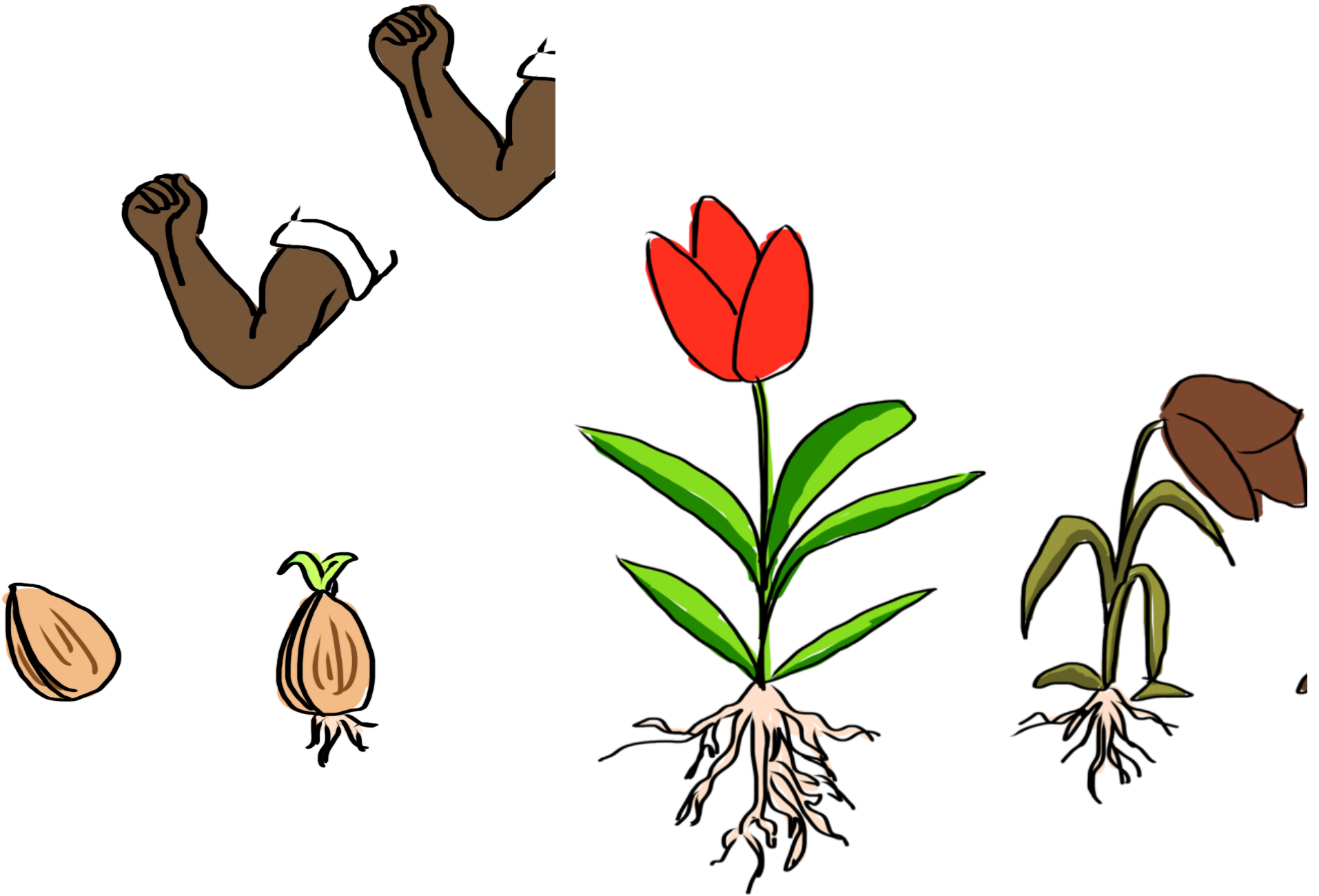
72% of the body = Water



Specific function of particular organs = Micronutrients (Vitamins and Minerals)

Activity #1





Maternal Nutrition

Objectives:

- What is nutrition?
- What are nutrients?
 - Types of nutrients
- Food Groups
- Balanced Diet
- The importance of a good nutrition

I.

A child's nutritional future begins before conception with the mother's nutritional status prior to pregnancy. A chronically-undernourished mother is likely to give birth to an underweight baby, who may be stunted as a child and in turn give birth to malnourished baby. A well-nourished woman over the age of 18 has a much greater chance of surviving pregnancy and her child of growing up healthy.

Eliminating malnutrition in mothers can reduce disabilities in their infants by almost one third. It is also important that expectant mothers eat a variety of foods, receive essential micronutrients and have adequate rest. During fetal growth is when most of the child's organs and tissues, blood, brain and bones are formed, and his or her potential is shaped. Lack of maternal nutrition and nutritional stores can create irreversible harm.

Maternal nutrition consists in following the general guidelines of a healthy diet (as explained in the nutrition chapter). Nevertheless, specific precautions have to

II.

- 1) Generally speaking, a mother should be eating what is considered a well-balanced diet as described in the nutrition session
- 2) However, now that her body is providing nutrients to a growing fetus, she requires other specific micronutrients and supplements:
 - a. Iron
 - b. Folic Acid
 - c. Antenatal pills
- 3) Iron-- The immune system is dependent on iron for its efficient functioning and physical and mental growth require sufficient iron levels, particularly important in childhood and pregnancy, where the developing baby solely depends on its mother's iron supplies. In short Iron goes toward the energy a mother uses for herself in order to sustain the energy the baby requires to develop.
- 4) Folic Acid (folate)-- Adequate folate intake during preconception and pregnancy helps protect against a number of congenital malformations, including neural tube defects (which are the most notable birth defects that occur from folate deficiency). The higher intake of folate, hence, goes toward the baby's growth and development.

- 5) Do activity #1
- 6) Once the baby is born, the antenatal pills are no longer necessary, but the same balanced diet should be continued as breast milk carries through those important nutrients to the baby
- 7) Good nutrition during lactation is crucial for the mother to produce the best milk possible
- 8) It is hard for a new mom not to produce milk; even a highly malnourished mother can make milk. However, the quality of the milk will differ based on that mother's nutrition
- 9) During pregnancy and the lactation period, there are certain things a mother should and should not do.
- 10) Do Activity #2

III.

Activity #1	Iron and Folic Acid
Materials	<ol style="list-style-type: none"> 1. Photocopies of signs 2. Tape 3. Photocopies of the following foods: <ol style="list-style-type: none"> i. Broccoli ii. Asparagus iii. Citrus foods (papaya, oranges) iv. Avocado v. Brussels sprouts vi. Okra vii. Beets viii. Carrots ix. Meats (red meats) x. Egg yolks xi. Poultry xii. Liver xiii. Oranges (help the absorption of iron) xiv. Squash xv. Cabbage xvi. Spinach xvii. Lettuce xviii. Beans xix. Cashews xx. Flour xxi. Rice
Length	
Process	<ol style="list-style-type: none"> 2) Stick all four signs on the wall horizontally 3) Hand out the foods for this activity 4) Ask your participants to place folic acid rich foods under the folic acid smiley face and to place the iron rich foods under the iron smiley face

	<p>5) Answer:</p> <ul style="list-style-type: none"> a. Folic Acid: <ul style="list-style-type: none"> i. Broccoli ii. Asparagus iii. Citrus foods (papaya, oranges) iv. Avocado v. Brussels sprouts vi. Okra vii. Beets viii. Carrots b. Iron <ul style="list-style-type: none"> i. Meats (red meats) ii. Egg yolks iii. Poultry iv. Liver v. Oranges (help the absorption of iron) c. Both <ul style="list-style-type: none"> i. Squash ii. Cabbage iii. Spinach iv. Lettuce v. Beans vi. Cashews d. Other <ul style="list-style-type: none"> i. Flour ii. Rice
Activity #2	Yes or No?
Materials	Photocopies of images in the index for activity #2
Length	
Process	<ol style="list-style-type: none"> 1) Divide your audience in small groups (3-4 people) 2) Distribute the photocopies from the index which pertain to this activity. Depending on the amount of groups, this could be a single image per group or several 3) Tell your audience to decide whether this/these images are something we should see during the pregnancy and lactating period. Each group needs to come up with an explanation that gives details as to what they have decided 4) Answers: <ul style="list-style-type: none"> a. Smoking or use of tobacco b. Carrying heavy products c. Eating junk food (chips, coca cola...) d. Balanced Diet e. Father taking care of baby f. Iron rich foods

	<ul style="list-style-type: none">g. Folic Acid rich foodsh. Antenatal pillsi. Vaccines<ul style="list-style-type: none">i. BCG – as soon after birthii. Hepatitis B – as soon after birthiii. Polio – 6 weeks after birthiv. DTP – 6 weeks minimum after birthv. Haemophilus influenzae type b - 6 weeks minimum after birthvi. Pneumococcal - 6 weeks minimum after birthvii. Rotavirus - 6 weeks minimum after birthviii. Measles – 9-12 months oldix. Rubella – 9-12 monthsx. Yellow fever – 9-12 months after birth
--	---

IV.

Activity #1

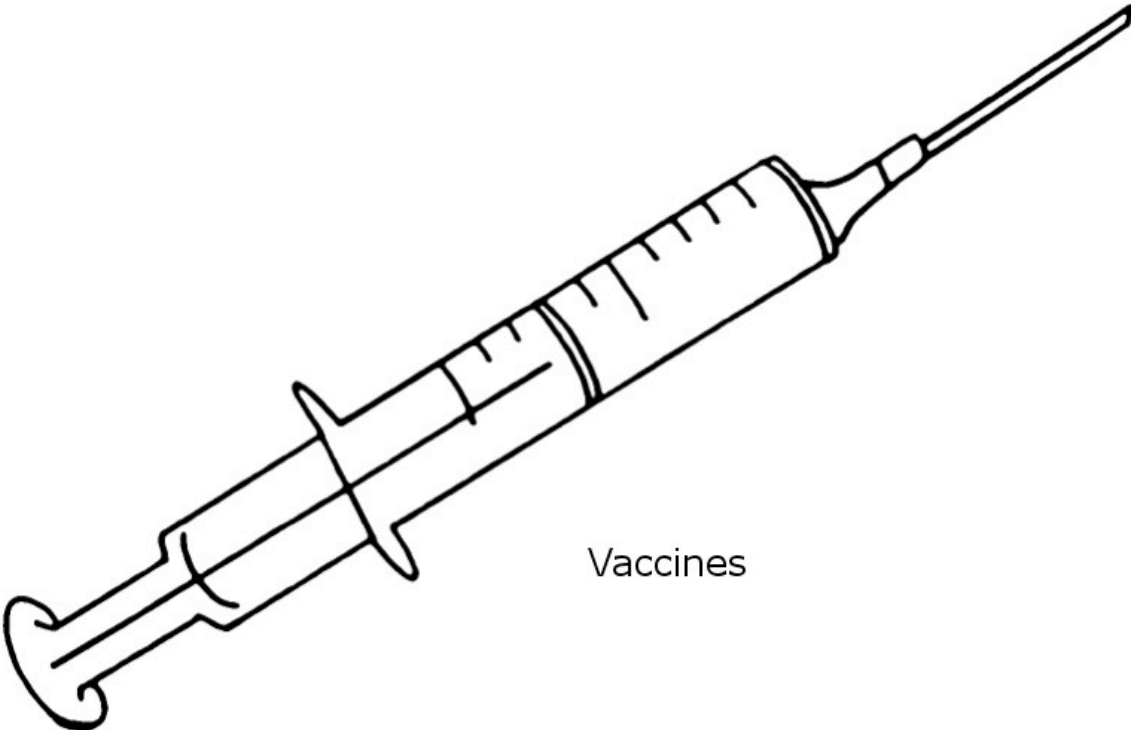
IRON

FOLIC ACID

BOTH

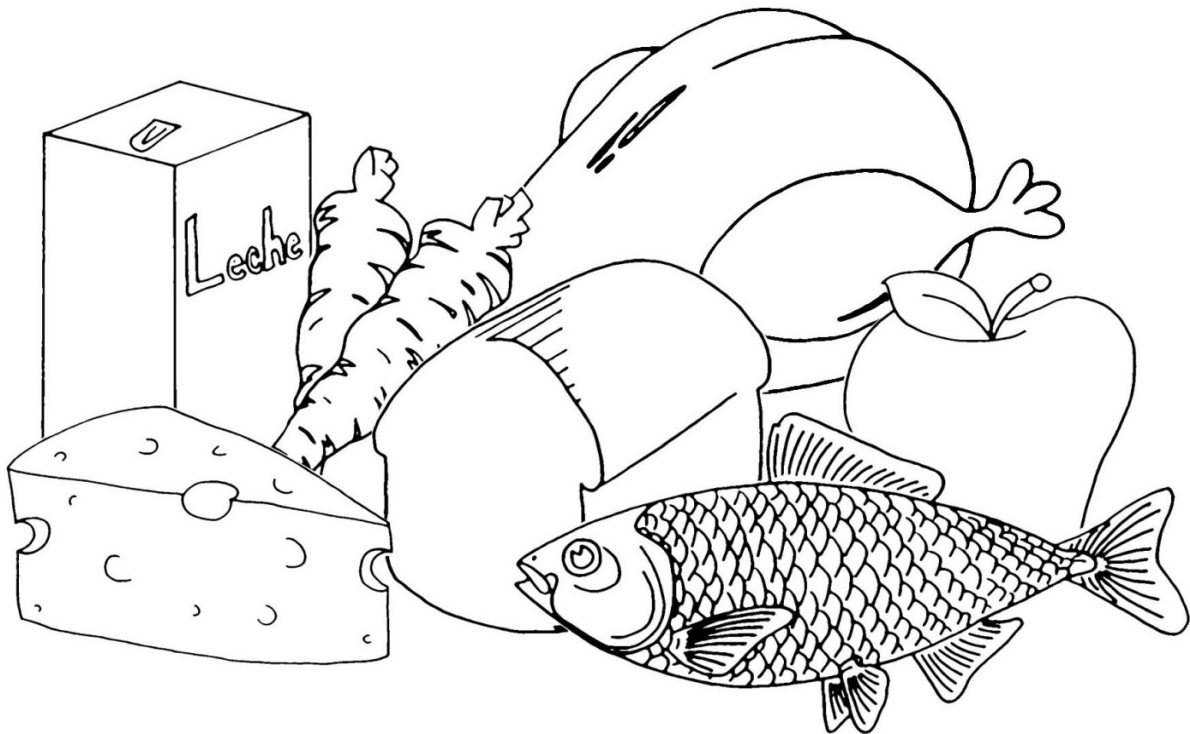
NEITHER

Activity #2



Vaccines







Folic Acid

Carrots

Oranges

Beans

Avocado

Asparagus

Okra

Lettuce

Cabbage

Beets

Iron

Squash

Spinach

Beans

Eggs

Poultry/Chicken

Cabbage

Liver

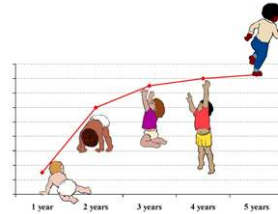
Cashews

Lettuce

Infant Nutrition

Objetives:

- Importance of exclusive breastfeeding
- Basics of weaning children off breastmilk
- Foods for children at specific ages



I.

The period from birth to the age of three is a time of rapid growth and represents a singular opportunity to provide a child with a strong nutritional and immunological foundation. Intellectual and physical growth is the most rapid, with doubling of brain size and quadrupling of body weight. If a child is malnourished during these early years, much of the damage is irreversible – the answer lies in prevention.

If every baby immediately put skin-to-skin at the breast, hypothermia would be prevented, saving about 200,000 lives annually. If every baby were exclusively breastfed for six months, an estimated 1.3 million additional lives would be saved every year, and millions more would benefit in terms of health, intelligence and productivity. Breastmilk is the perfect food – it contains all the nutrients and micronutrients an infant needs for normal growth during the first six months of life.

Breastfeeding stimulates an infant's immune system and response to vaccinations, and is continually changing to meet the baby's needs. Breastmilk contains hundreds of health-enhancing cells, proteins, fats, hormones, enzymes and other factors found nowhere else but in mother's milk.

Breastfed babies have at least six times greater chance of survival in the first months because breastmilk has factors that protect the mucous membranes of gastrointestinal and respiratory tracts, and cells and immune factors that actively fight infections, shielding babies from diarrhoeal diseases and upper respiratory infections. (SOWC, 1998) Exclusive breastfeeding increases the chance of survival many times more, and may also lower the chances of an HIV-positive mother passing on the virus via breastfeeding.

After six months, the infant should continue her frequency of breastfeeding while beginning responsive complementary feeding with nutrient- and iron-dense foods that provide additional vitamins, minerals, proteins and carbohydrates to meet her or his growing needs. Complementary feeding should start gradually, but the 6-8 month old child should receive.

Breastmilk:

Breast milk is the ideal food for newborns and infants. It gives infants all the nutrients they need for healthy development. It is safe and contains **antibodies** that help protect infants from common childhood illnesses - such as diarrhoea and pneumonia, the two primary causes of child mortality worldwide. Breast milk is readily available and affordable, which helps to ensure that infants get adequate sustenance.

Beyond the immediate benefits for children, breastfeeding contributes to a lifetime of good health. Adults who were breastfed as babies often have lower blood pressure and lower cholesterol, as well as lower rates of overweight, obesity and type-2 diabetes. There is evidence that people who were breastfed perform better in intelligence tests.

Importance of Exclusive Breastfeeding

Breastfeeding is one of the most effective ways to ensure child health and survival. Optimal breastfeeding together with complementary feeding help prevent malnutrition and can save about a million child lives.

Globally less than 40% of infants under six months of age are exclusively breastfed. Adequate breastfeeding support for mothers and families could save many young lives.

WHO actively promotes breastfeeding as the best source of nourishment for infants and young children. This fact file explores the many benefits of the practice, and how robust help for mothers can increase breastfeeding worldwide.

- Breastfeeding should begin within an hour of birth;
- Breastfeeding should be "on demand", as often as the child wants day and night; and bottles or pacifiers should be avoided.

Why not infant formula?

Infant formula does not contain the antibodies found in breast milk. When infant formula is not properly prepared, there are some risks arising from the use of unsafe water and unsterilized equipment or the potential presence of bacteria in powdered formula. Malnutrition can result from over-diluting formula to "stretch" supplies. Further, frequent feedings maintain the breast milk supply. If formula is used but becomes unavailable, a return to breastfeeding may not be an option due to diminished breast milk production.

HIV and breastfeeding

An HIV-infected mother can pass the infection to her infant during pregnancy, delivery and through breastfeeding. Antiretroviral (ARV) drug interventions to either the mother or HIV-exposed infant reduces the risk of transmission of HIV through breastfeeding. Together, breastfeeding and ARV interventions have the potential to significantly improve infants' chances of surviving while remaining HIV uninfected. WHO recommends that when HIV-infected mothers breastfeed, they should receive ARVs and follow WHO guidance for breastfeeding and complementary feeding.

Regulating breast-milk substitutes

An international code to regulate the marketing of breast-milk substitutes was adopted in 1981. It calls for:

- all formula labels and information to state the benefits of breastfeeding and the health risks of

substitutes;

- no promotion of breast-milk substitutes;
- no free samples of substitutes to be given to pregnant women, mothers or their families; and no distribution of free or subsidized substitutes to health workers or facilities.

Support for mothers is essential

Breastfeeding has to be learned and many women encounter difficulties at the beginning. Nipple pain, and fear that there is not enough milk to sustain the baby are common. Health facilities that support breastfeeding - by making trained breastfeeding counselors available to new mothers - encourage higher rates of the practice. To provide this support and improve care for mothers and newborns, there are now more than 20 000 "baby-friendly" facilities in 152 countries thanks to a WHO-UNICEF initiative.

The next step: phasing in new foods

To meet the growing needs of babies at six months of age, complementary foods should be introduced as they continue to breastfeed. Foods for the baby can be specially prepared or modified from family meals. WHO notes that:

- breastfeeding should not be decreased when starting complementary feeding;
- complementary foods should be given with a spoon or cup, not in a bottle;
- foods should be clean, safe and locally available; and ample time is needed for young children to learn to eat solid foods.
-

Amounts and types of foods to offer

Age	Texture	Frequency	Amount at each meal	Foods
6–8 months	Start with thick porridge, well mashed foods Continue with mashed family foods	2–3 meals per day, plus frequent breastfeeds Depending on the child's appetite, 1–2 snacks may be offered	Start with 2–3 tablespoonfuls per feed, increasing gradually to ½ of a 250 ml cup	Vegetables Fruits (except acidic fruit) Grains Meats/Legumes Fats (used to cook other food groups) Breastmilk
9–11 months	Finely chopped or mashed foods, and foods that baby can pick up	3–4 meals per day, plus breastfeeds Depending on the child's	½ of a 250 ml cup/bowl	

		appetite, 1–2 snacks may be offered		
12–23 months	Family foods, chopped or mashed if necessary	3–4 meals per day, plus breastfeeds Depending on the child's appetite, 1–2 snacks may be offered	$\frac{3}{4}$ to full 250 ml cup/bowl	Dairy products Nuts
a Note: If baby is not breastfed, give in addition: 1–2 cups of milk per day, and 1–2 extra meals per day.				

II.

- 1) Child nutrition is elemental in giving that child a chance to grow and develop maximum capacities both physical and mental
- 2) Over years of research, specific guidelines have been created to ensure the best possible set of nutrients for the infant at the appropriate time
- 3) Do activity #1
- 4) Certain deficiencies are known to be prevalent among young children. These are vitamin A deficiency and iron deficiency.
- 5) In order to prevent such deficiencies, it is important to recognize which foods are rich in these micronutrients.
- 6) Generally speaking, we can say that iron rich foods are dark green and vitamin A are orange or dark yellow
- 7) Do activity #2

III.

Activity #1	Timeline
Materials	<ol style="list-style-type: none"> I. Make photocopies of Activity #1 signs from the Index II. Tape III. Photocopy of the following foods <ol style="list-style-type: none"> a. Pineapple b. Tomato c. Lemon d. Nuts/Cashews e. Milk f. Yoghurt g. Breast milk x 2 h. Formula

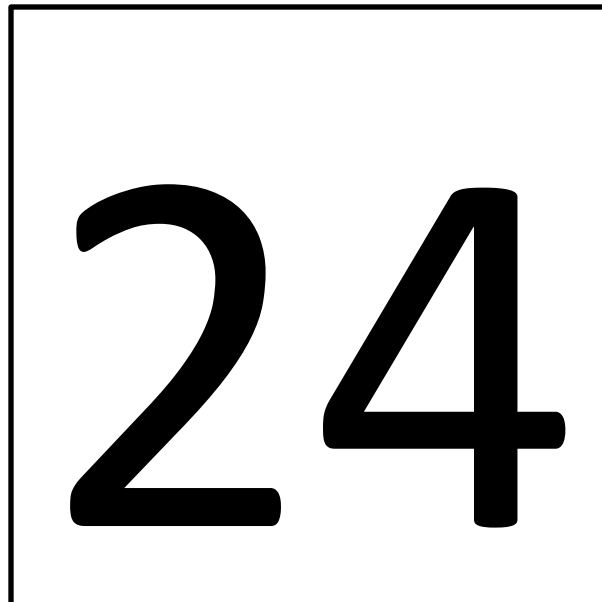
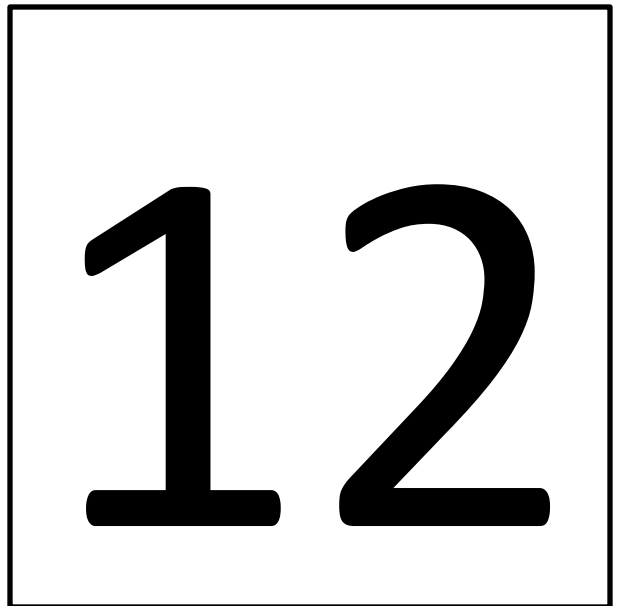
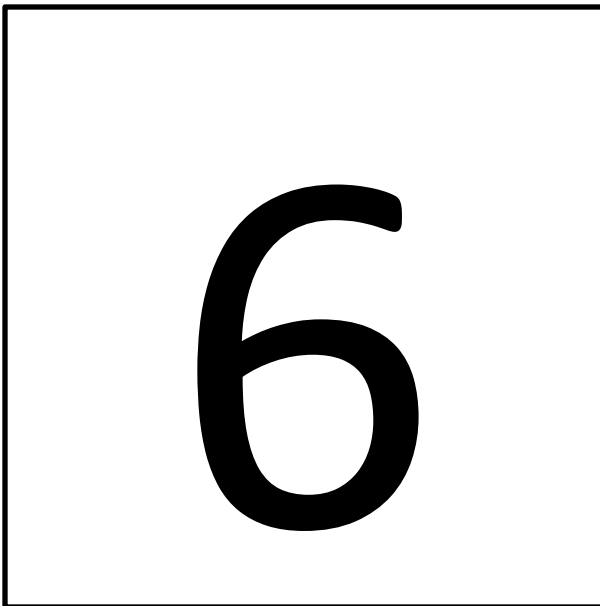
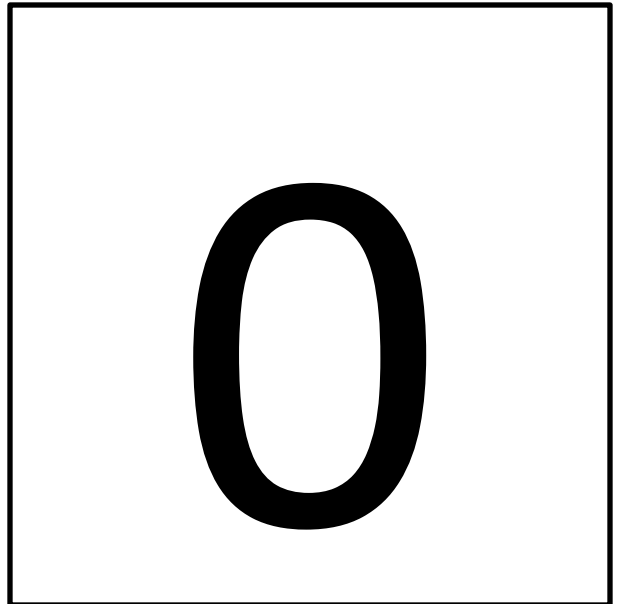
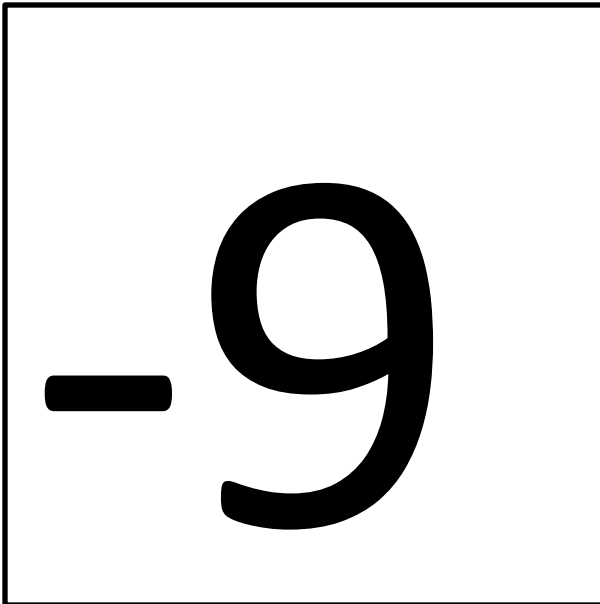
	<ul style="list-style-type: none"> i. Beans j. Rice k. Bread l. Moringa m. Squash n. Bell peppers o. Salt, honey, juice p. Oatmeal q. Teff r. Soda s. Lettuce t. Spinach u. Papaya v. Sweet Orange Potato w. Carrots x. Full Balanced Diet Plate
Length	15-20 min
Process	<ol style="list-style-type: none"> 1) Place the handmade signs on a wall as a timeline with a clearly defined space between each sign 2) Handout the photocopies for this activity 3) Ask participants to come up one at a time and place their image on the timeline <ol style="list-style-type: none"> a. Answer: <ol style="list-style-type: none"> i. -9-0 months: balanced diet for mother <ol style="list-style-type: none"> 1. Full balanced diet plate ii. 0-6 months: <ol style="list-style-type: none"> 1. Exclusive breastfeeding <p>Note: HIV positive mothers should be taking their ARVs as HIV can be passed from mother to child from the breastmilk</p> iii. 6-12 months: <ol style="list-style-type: none"> 1. Breastfeeding 2. Beans 3. Rice 4. Bread 5. Moringa 6. Squash 7. Bell peppers 8. Teff 9. Oatmeal 10. Papaya 11. Sweet Orange Potatoes 12. Meats 13. Spinach <p>Note:</p> <ol style="list-style-type: none"> i. Puré (6-8 months) ii. Chunky foods (8-12 months) iv. 12-24 months: <ol style="list-style-type: none"> 1. Milk

	<ol style="list-style-type: none"> 2. Yoghurt 3. Pineapple 4. Tomato 5. Lemon 6. Nuts <p>v. Not in the first two years:</p> <ol style="list-style-type: none"> 1. Salt 2. Soda (coca cola) 3. Juice 4. Honey 5. Chips
Activity #2	Iron and Vitamin A
Materials	<ol style="list-style-type: none"> I. Make photocopies of the Activity #2 signs which read “Vitamin A”, “Iron”, “Both” and “Neither” II. From the foods in the Index, have the following ready: <ol style="list-style-type: none"> 1. Meats (red meats) 2. Egg yolks 3. Poultry 4. Oranges (help the absorption of iron) 5. Beans 6. Cashews 7. Carrots 8. Sweet potatoes 9. Papaya 10. Cabbage 11. Spinach 12. Lettuce 13. Squash 14. Teff 15. Moringa 16. Liver 17. Tomato 18. Oil 19. Rice 20. Tortilla/Enjera 21. Banana 22. Cheese 23. Chips
Length	10-15 min
Process	<ol style="list-style-type: none"> 1) Place the three faces on the wall with the deficiency signs above the smiley faces 2) Hand out all of the foods to your audience 3) Ask them to one at a time place their foods under the correct micronutrient or if it doesn't belong to either under the sad face <ol style="list-style-type: none"> a. Answer: <ol style="list-style-type: none"> i. Iron <ol style="list-style-type: none"> 1. Meats (red meats)

	<ul style="list-style-type: none">2. Egg yolks3. Poultry4. Oranges (help the absorption of iron)5. Beans6. Cashews7. Teff Moringa <p>ii. Vitamin A</p> <ul style="list-style-type: none">1. Carrots2. Sweet potatoes3. Papaya <p>Note: A vitamin A drop can be given to children in health centers</p> <p>iii. Both</p> <ul style="list-style-type: none">1. Cabbage2. Spinach3. Lettuce4. Squash5. Liver <p>iv. Neither</p> <ul style="list-style-type: none">1. Tomato2. Oil3. Rice4. Tortilla/Enjera5. Banana6. Cheese7. Chips
--	--

IV.

Activity #1



IRON

VITAMIN A

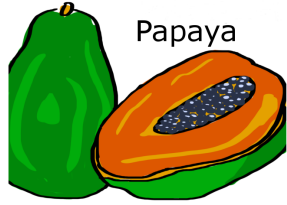
BOTH

NEITHER



Squash

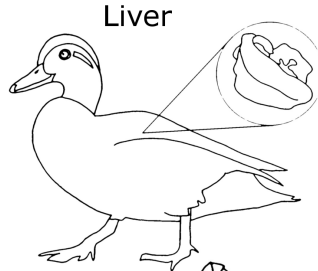
Vitamin A



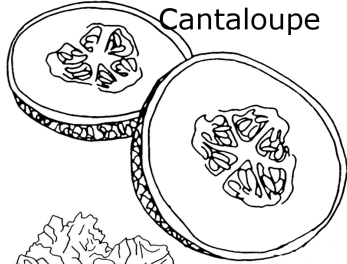
Papaya



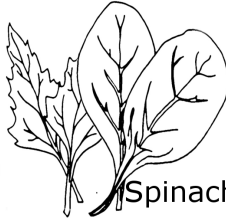
Beets



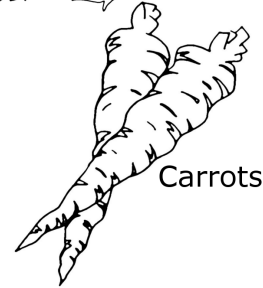
Liver



Cantaloupe



Spinach



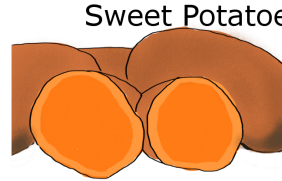
Carrots



Lettuce



Cabbage



Sweet Potatoe

Sweet Potato Leaves



Lettuce



Iron

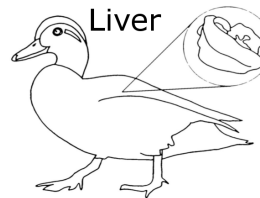
Squahs



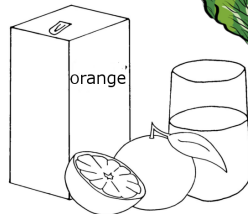
Cabbage



Liver



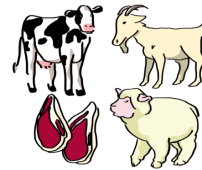
Spinach



orange



MORINGA

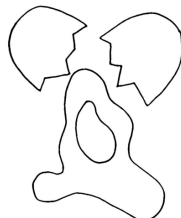


RED MEAT

CASHEW NUTS



Eggs



Poultry/Chicken

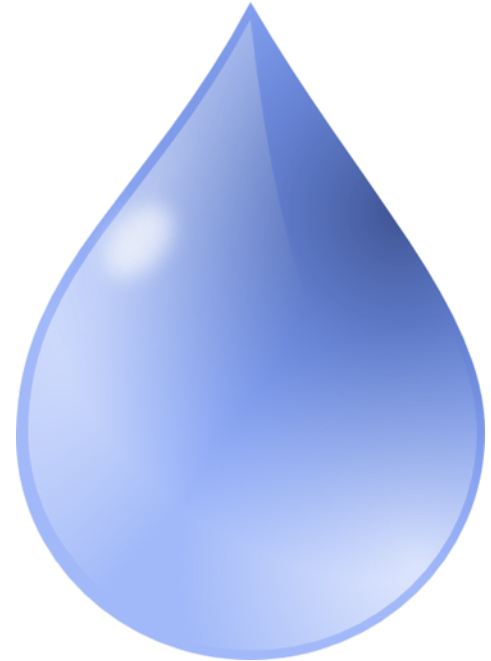


Beans

Water and Hygiene

Objectives

- Importance of potable water
- Learn the different purification methods
 - Boiling water
 - Bleaching water
 - SODIS
 - Filters
- Water outside
- Importance of hand washing



I.

The importance of water

Water is a natural resource essential for our lives. The human body is composed of approximately 70% of water which is essential to our survival. For ideal intake of water, an approximate 2 liters per day is recommended. Furthermore, we use water for many different tasks: to cook, to wash ourselves, to wash our clothes, to water the plants ect. It is important that the water we drink and use to cook be clean. Contaminated water can contain germs, parasite and bacteria that can cause different disease leading to diarrhea.

Water Purification

It is estimated that 80% of diseases and deaths in developing countries are related to water. Each year, 1.5 million children die of diarrhea due to having drunk contaminated water. International statistics show that about 10% of deaths in children under 5 years of age are caused by diarrhea. In addition, to drink contaminated water can cause other diseases such as typhoid fever, cholera, intestinal parasites, hepatitis and other bacterial infections. However, the prevention of these diseases is very easy and it is something that can be done in one's own house by cleaning the living area, having good basic hygiene and purifying water.

There are different methods for purifying water. It is important to understand the pros and cons of each method. Also, please note that it is important to think of the type of water that can be purified:

- Rain water
- Tap water
- Creek water
- River water

Purification Methods

There are several methods to purify water:

- Boiled water
- Bleached water

- SODIS water (Solar Water Disinfection)

Boiled water

Pros

1. Kills germs
2. Easy to use
3. Works with water that has sediment

Cons

1. Water will be hot at end of process
2. In some cases, boiling the water changes the taste of the water
3. Cost of gas or wood could be high
4. The water can easily become contaminated after if not stored correctly

1. Place clean water in a pot
2. Place pot on stove or burning wood
3. Once the water has reached boiling point, wait a full minute until taking the pot off its hot source
4. Place the water in a closed container (after it has cooled down)
5. Enjoy the water at-ease

Bleached water

Pros

1. The chemicals in bleach eliminate nearly all germs
2. Available in most places
3. Low cost
4. Hard for the water to become contaminated again

Cons

1. Does not kill Cryptosporidium (a parasite that causes diarrhea)
2. Does not work if there is sediment in the water
3. Need to wait 30 minutes before consumption
4. Taste of water changes

1. Find a plastic bottle
2. Wash the bottle
3. Fill the bottle with clean water
4. Add two drops of bleach per liter
5. Wait a full 30 minutes
6. Enjoy the water at-ease

SODIS water

Pros

1. Eliminates almost all germs
2. Plastic bottles are easily found
3. Low cost

Cons

1. It is effective in small quantities
2. The process takes at least a day
3. Does not work on rainy days
4. Does not work with water that has sediment

1. Find a **clear** plastic bottle (1 liter or 2 liters)
2. Take off any label
3. Wash the bottle with soap
4. Fill the bottle with clean water
5. Place the bottle on the roof (or a place high enough so that it is in direct contact with the sun/sky)
6. If it is sunny, leave the bottle for 6 hours
7. If it is cloudy, leave the bottle for 24 hours
8. Enjoy the water at-ease

Basic Hygiene

Knowing how to purify water and adopting this practice into one's lifestyle is key to preventing water based diseases. However, basic hygiene is just as important! This starts with basic practices such as hand washing before every meal, before cooking, after using a latrine and washing ourselves daily. And goes all the way to keeping a clean house and living environment.

II.

Please use information section as template for presentation.

III.

Activity #1	Water Purification
Materials	<ol style="list-style-type: none"> 1. Water from each purification method prepared as explained in the information session 2. Cups 3. Copy of water purification methods handouts
Length	
Process	<ol style="list-style-type: none"> 1. Label the bottles so you know which one is which purification method but the audience does not 2. Explain that they are going to drink each type of water and guess which purification method was used 3. Take one of your bottle, pour just enough for each person to taste and get them to guess what water purification was used 4. Write it on the wall 5. Repeat for each other water type 6. Give the answer (if they have not guessed correctly) 7. Handout the purification methods to each participant
Activity #2	Where is it wrong?
Materials	4-5 copies of the river scenario in the index
Length	
Process	<ol style="list-style-type: none"> 1. Divide your audience into 4-5 groups (or less based on the audience size) 2. Give each group a copy of the river scenario 3. Have each group discuss amongst them for 5-10 minutes the scenario and decide which practices are not hygienic and should not be practiced 4. Have the whole audience discuss it as a whole
Activity #3	Basic Hygiene: Where to improve?
Materials	Copy of the images in the index
Length	
Process	<ol style="list-style-type: none"> 1. Have 8 volunteers from the crowd come up and give them each an image 2. Depending on your audience size have either the sitting audience or those with the images put the storyline in order. Your audience needs to decide, not you. 3. Answer: <ol style="list-style-type: none"> i. Little boy goes putty outdoors ii. Pig eats human waste

	<ul style="list-style-type: none"> iii. Pig goes in household iv. Baby plays with pig v. Mother picks up little boy vi. Mother cooks vii. Family eats meal mother prepared viii. Family has diarrhea ix. The cycle repeats itself <ol style="list-style-type: none"> 4. Once the story is in order, run through the story for everyone to hear 5. Ask what the problems are in this story 6. Answer: <ul style="list-style-type: none"> i. No latrine ii. Little boy is naked (no clothes to protect him) iii. Mother does not wash her hands iv. Pig is not in his own fenced off area 7. Have your audience explain what the solution is for each of those problems 8. Answer: <ul style="list-style-type: none"> i. No latrine: Have at least a pit ii. Little boy is naked: put clothes on him to protect him from any outside bacteria iii. Mother does not wash her hands: Hand washing before cooking, after going putty, before eating... iv. Pig is not in his own fenced off area: create an “animal only” space away from the living environment
Activity #4	Tippy Tap
Materials	<ul style="list-style-type: none"> Empty plastic bottle Scissors String
Length	
Process	<ol style="list-style-type: none"> 1. Slice across the very bottom of the bottle 2. Flip the bottom part upside down to fit inside the bottle (to serve as a soap tray) 3. Pierce two holes on each side at the bottom of the bottle 4. Insert a string in each hole that creates a loop outside that allows you to hold the bottle upside down 5. Fill bottle with water (if cap is on and closed) from the bottom by taking out the soap tray 6. Attach bottle to a tree or hook using the string 7. Slowly open the cap to get a little water in order to wash hands

IV.

Activity #1

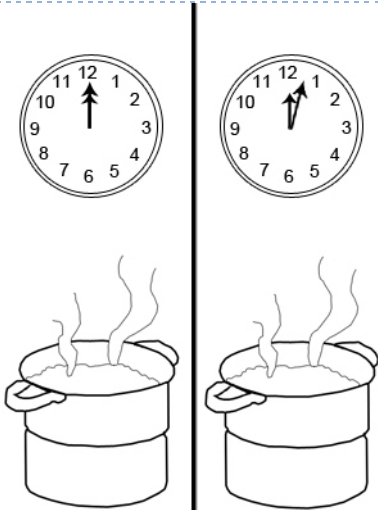
Boiled Water



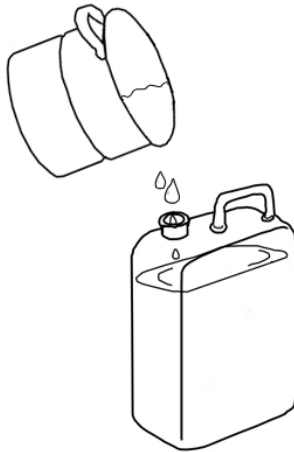
1. Place water in pot



2. Place pot on stove or burning wood



3. Once the water has reached boiling point, wait a minimum of 1 minute

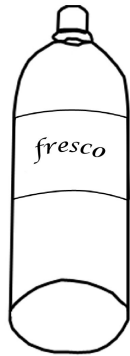


4. Place water in a closed container.

Enjoy!



Bleached Water



Look for a plastic bottle.



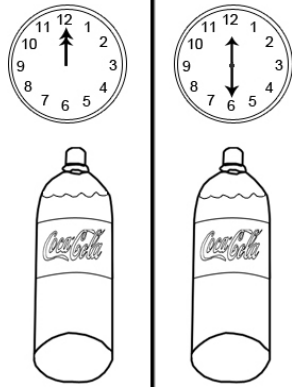
Clean the bottle.



Fill the bottle with clean water.



Put 2 drops of bleach for each liter of water



Wait 30 minutes.



Enjoy!

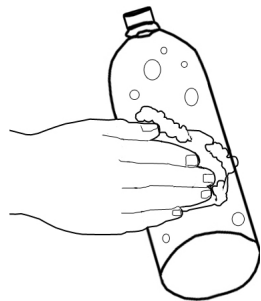
SODIS Water



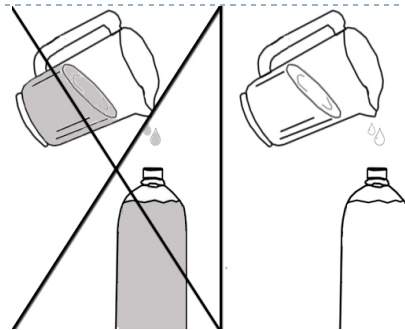
Look for clear plastic water.



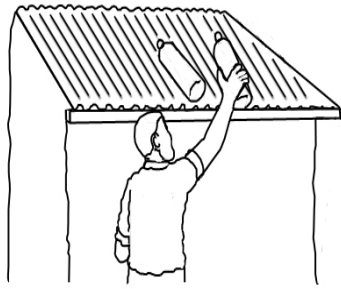
Take any label off.



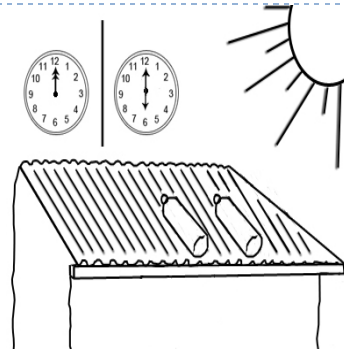
Clean the bottle.



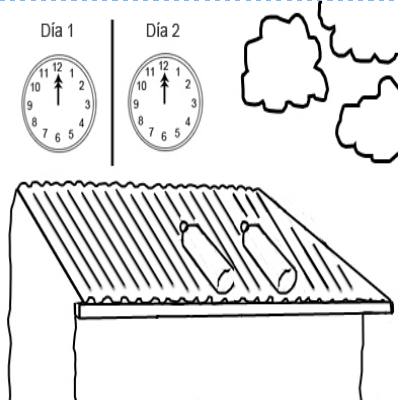
Fill the bottle with clean water.



Place bottle on the roof.



Wait 6 hours when there is sun...

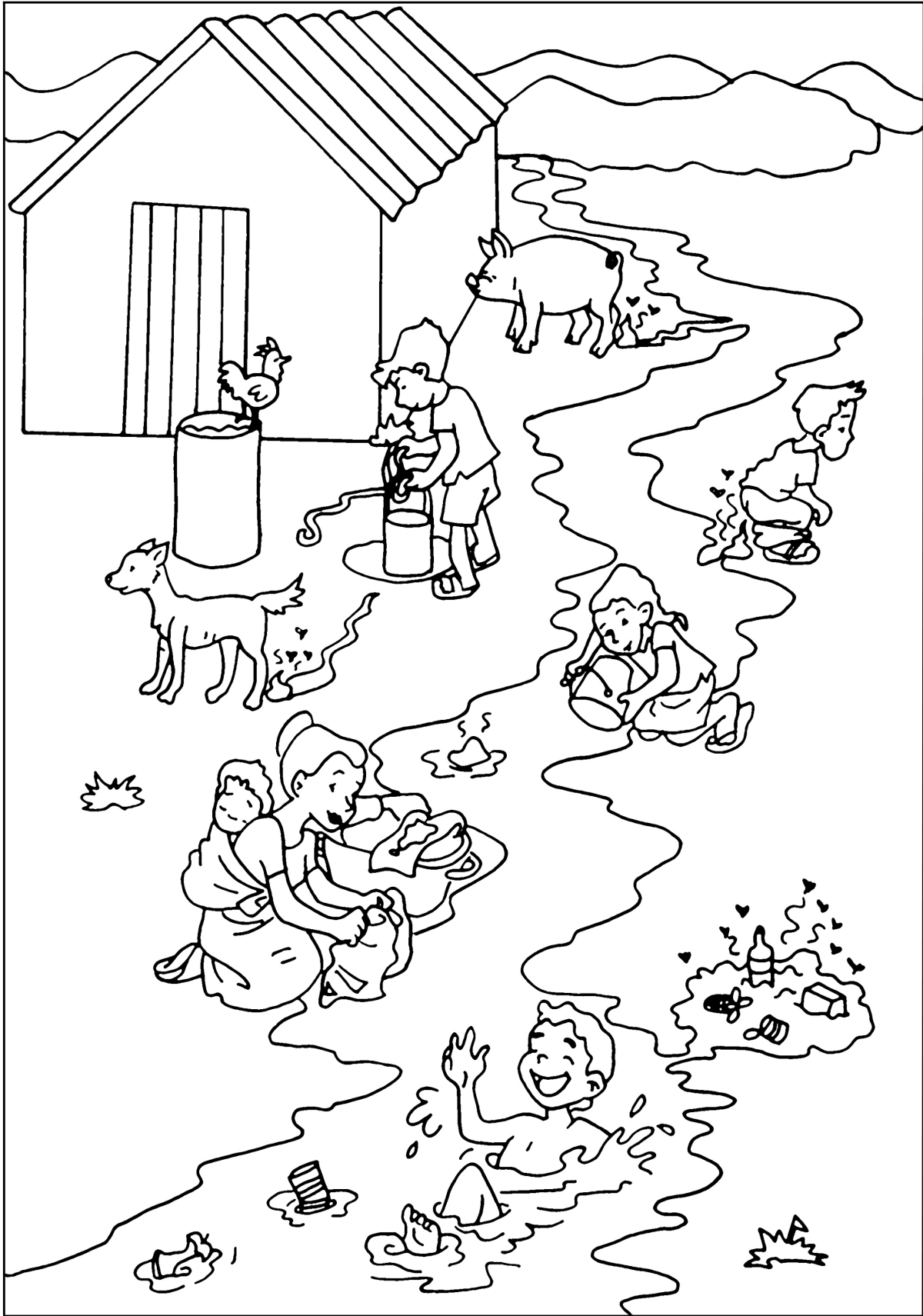


Or wait 24 hours when it is cloudy.

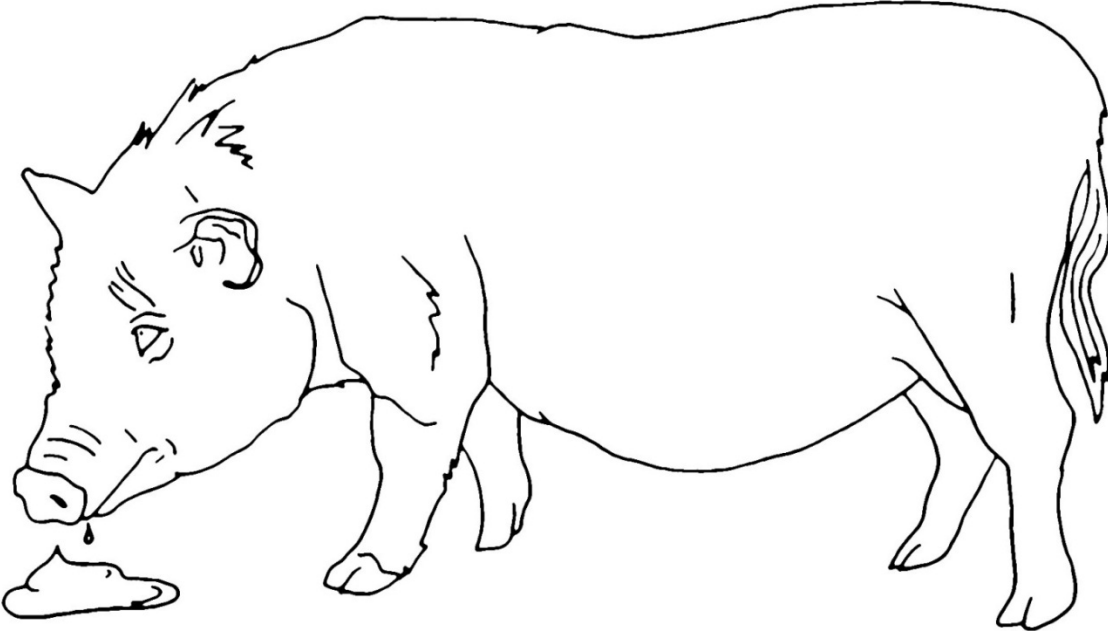
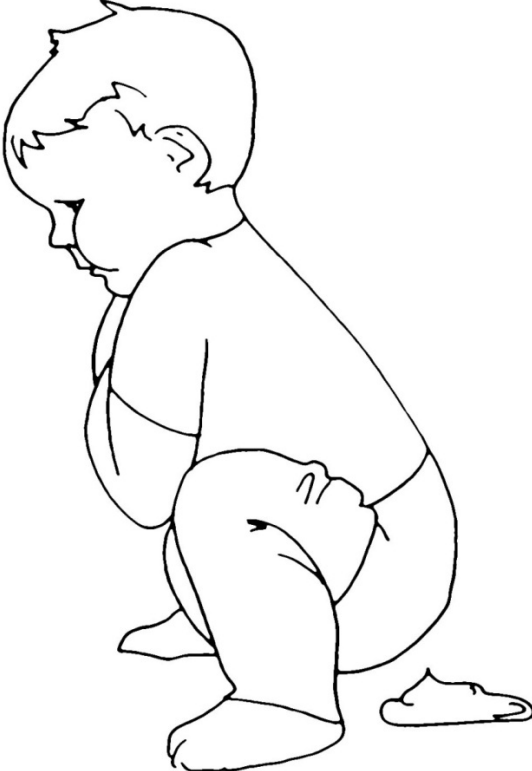


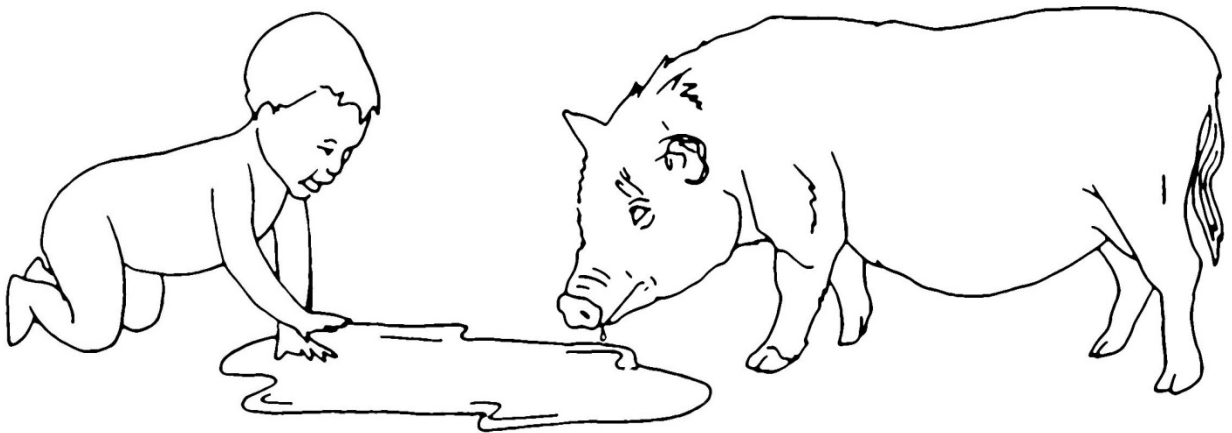
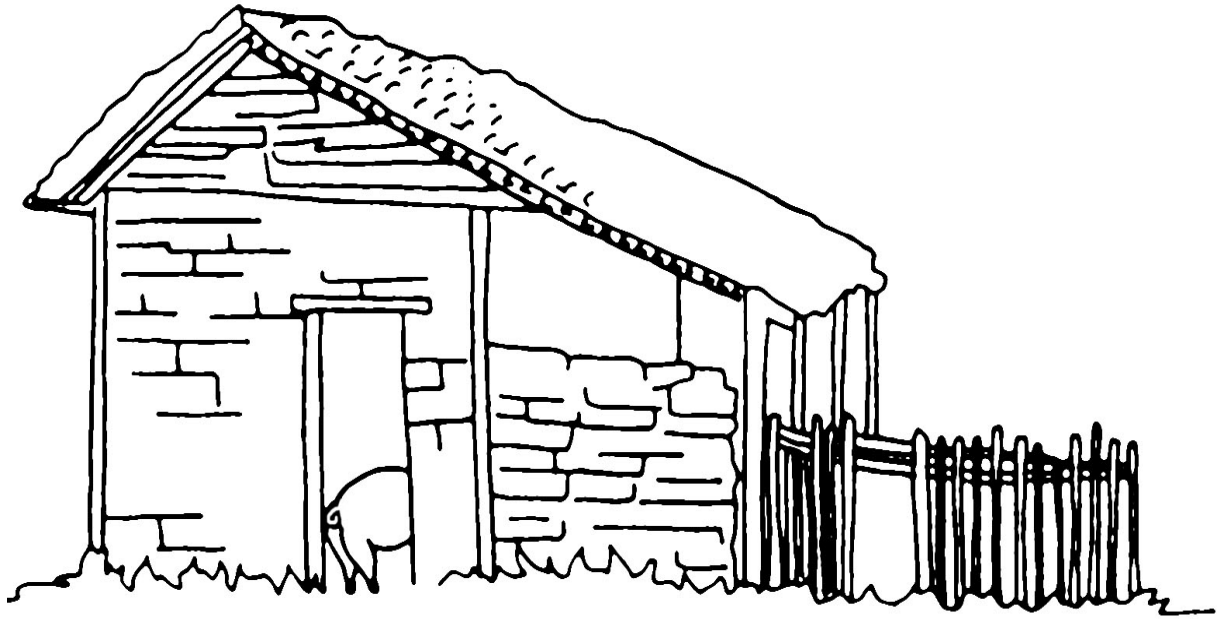
Enjoy!

Activity #2

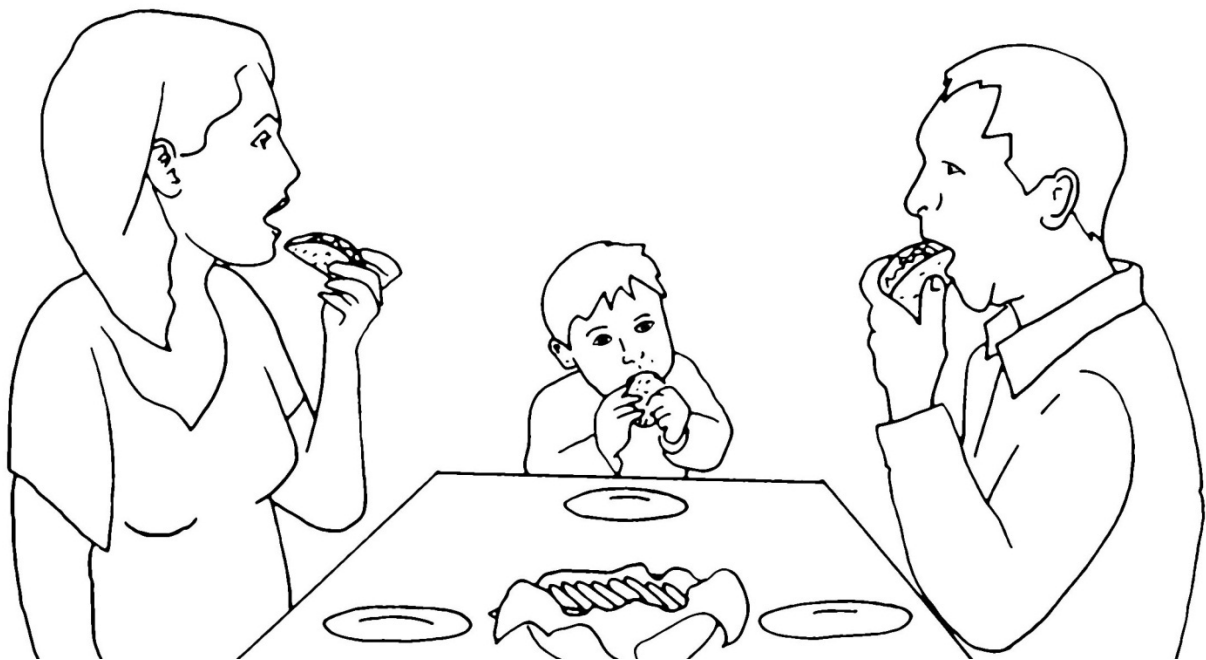
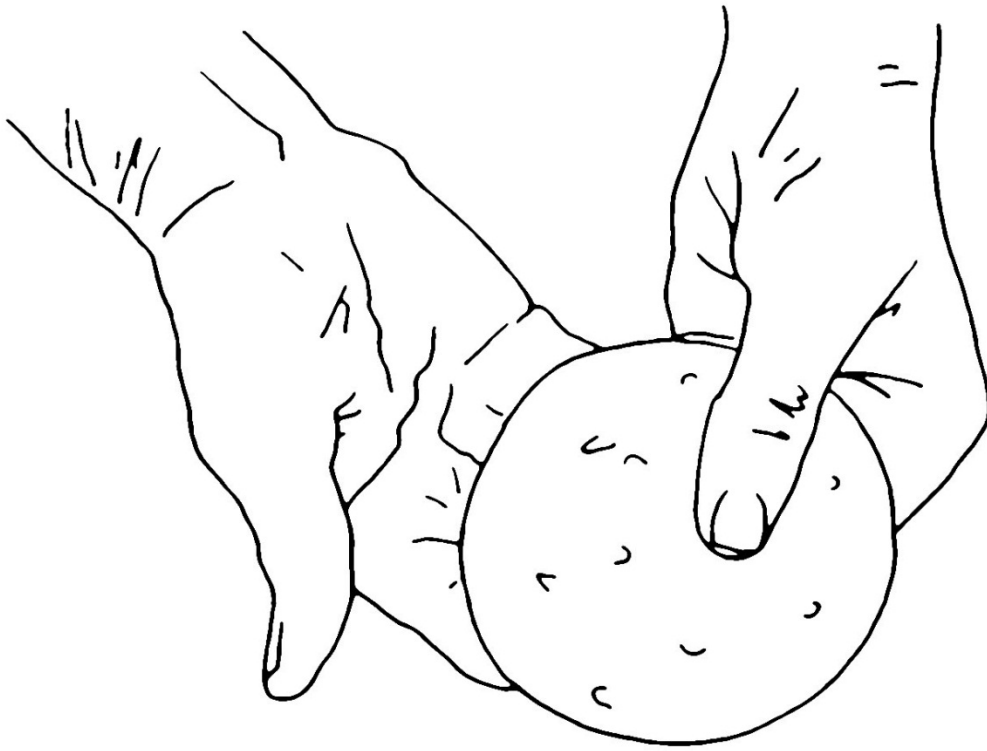


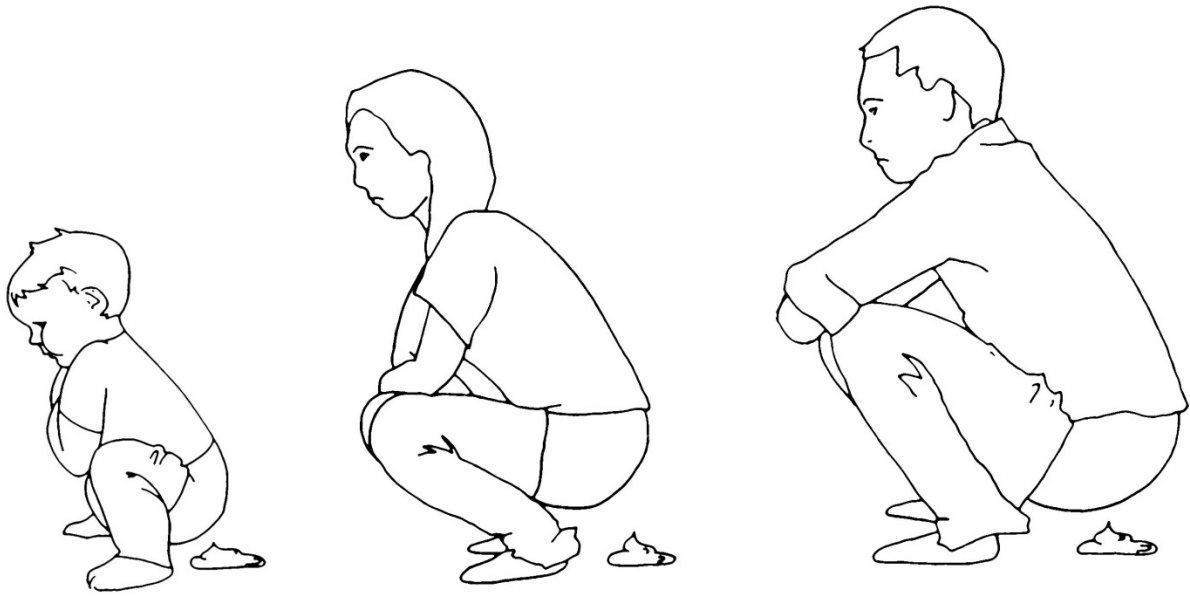
Activity #3



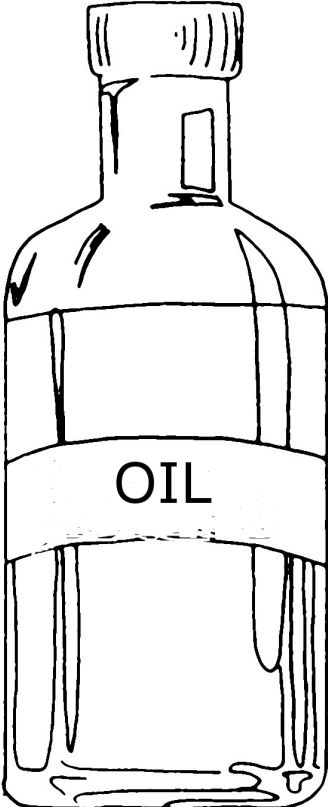




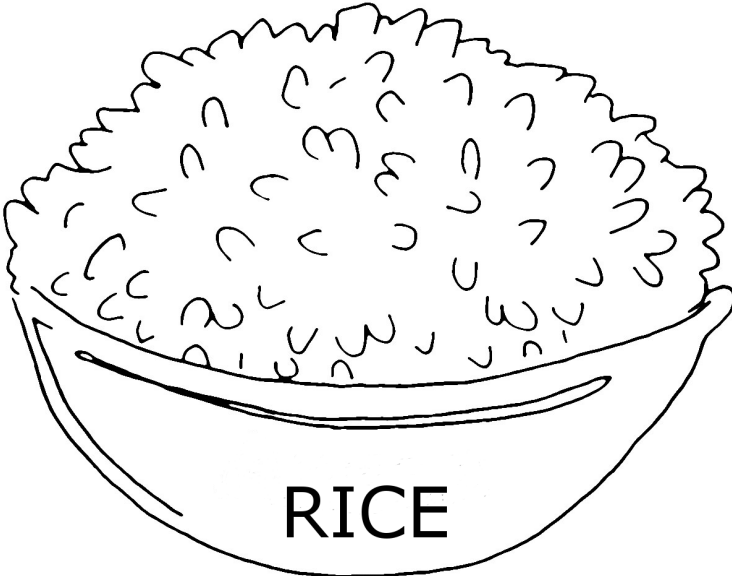
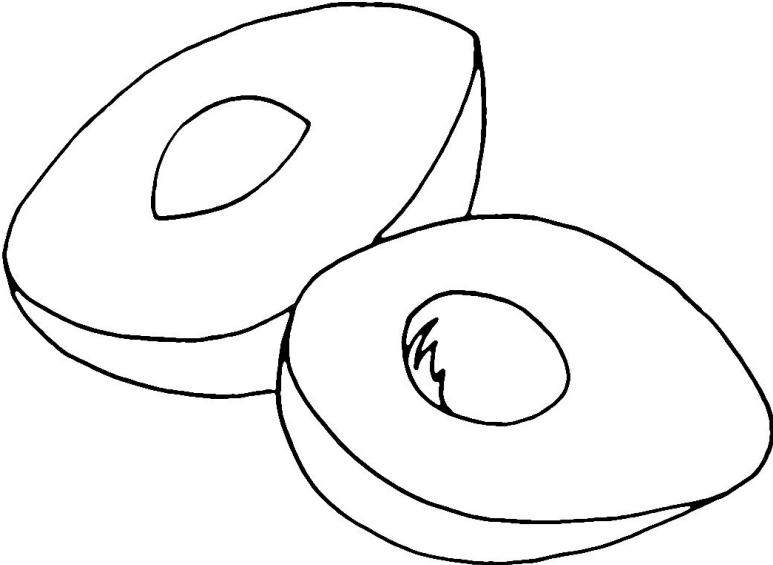




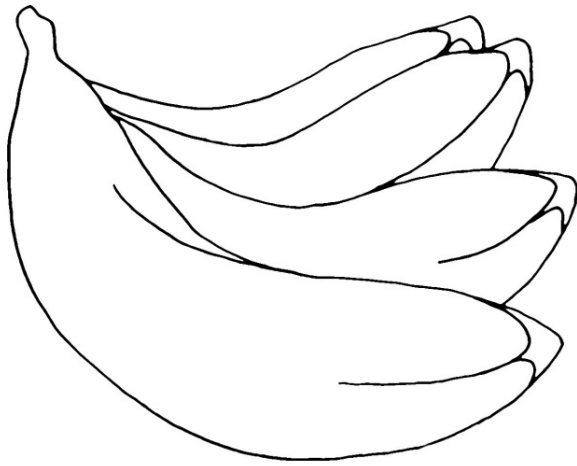
Appendix



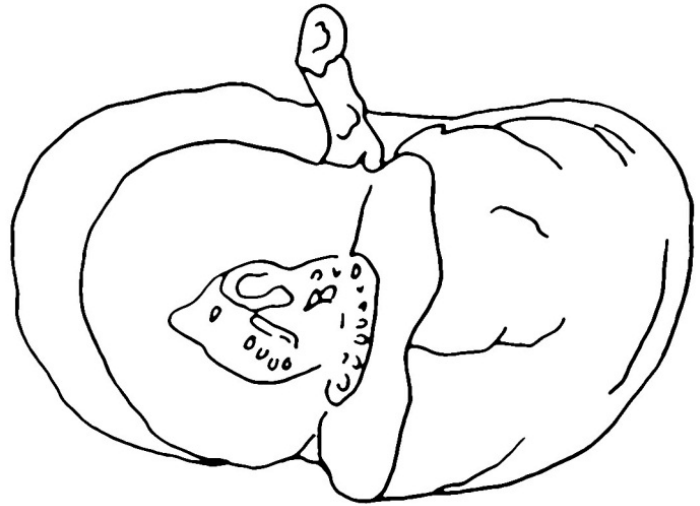
AVOCADO



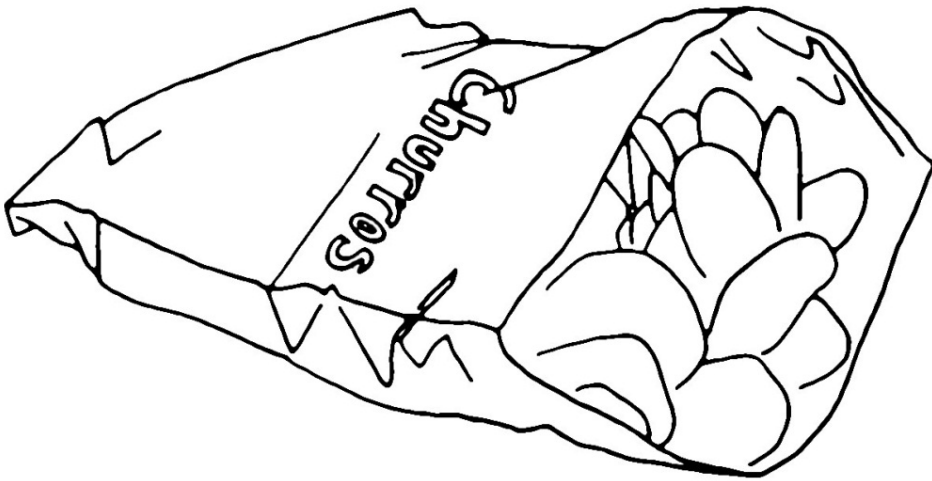
OATMEAL



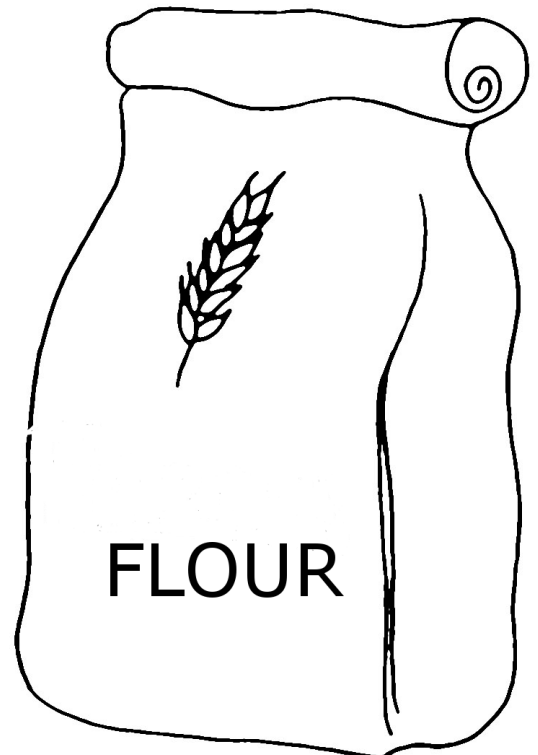
BANANA



PUMPKIN/SQUASH

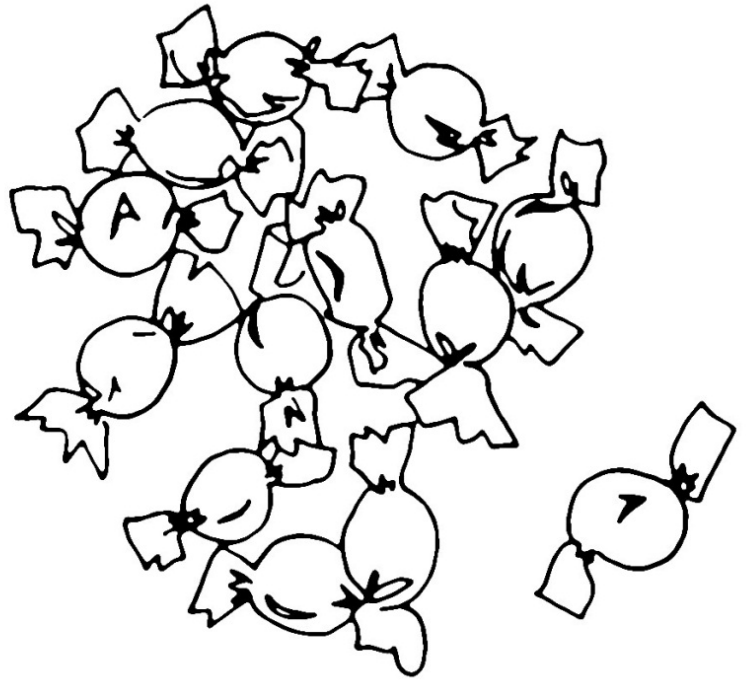


CHIPS



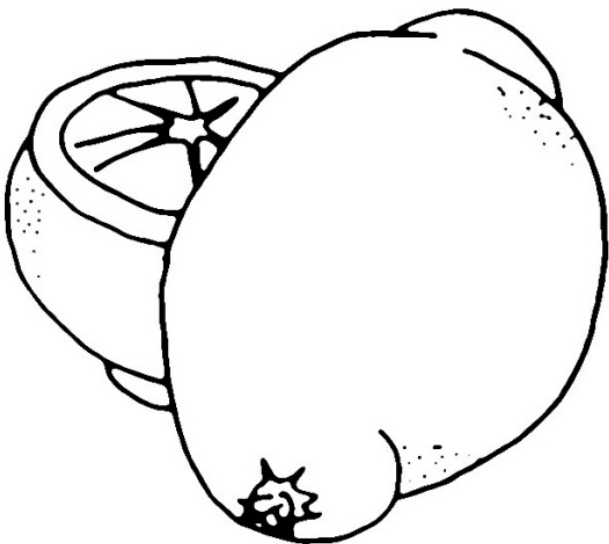
FLOUR

SODA: COCA-COLA/PEPSI

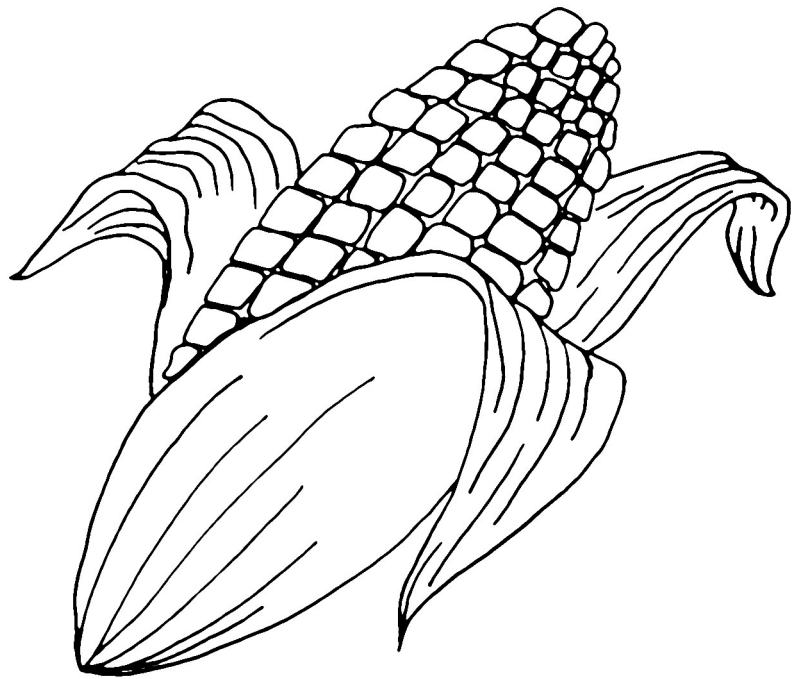


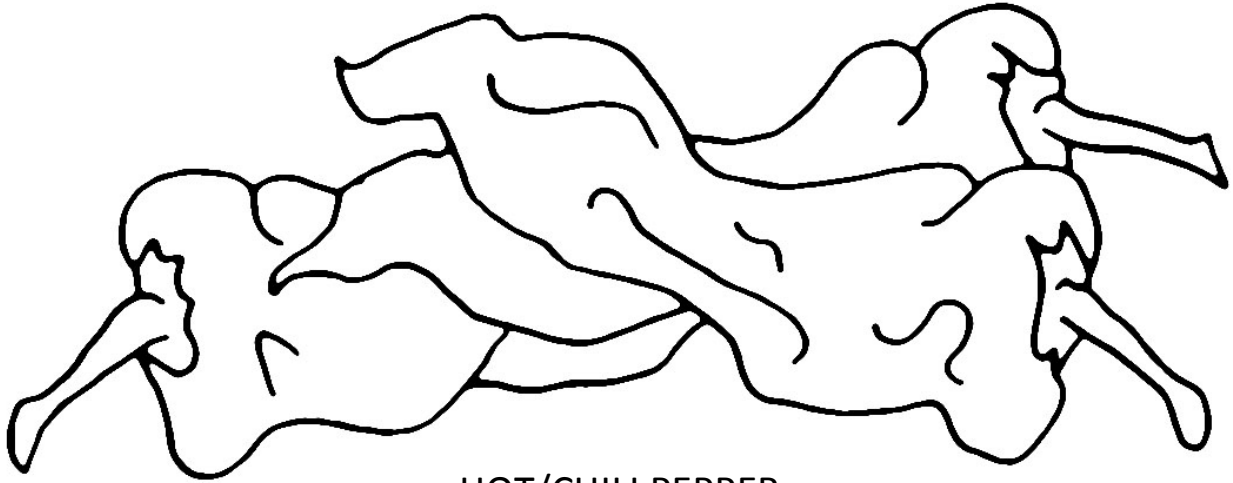
SWEETS/CANDY

LEMON

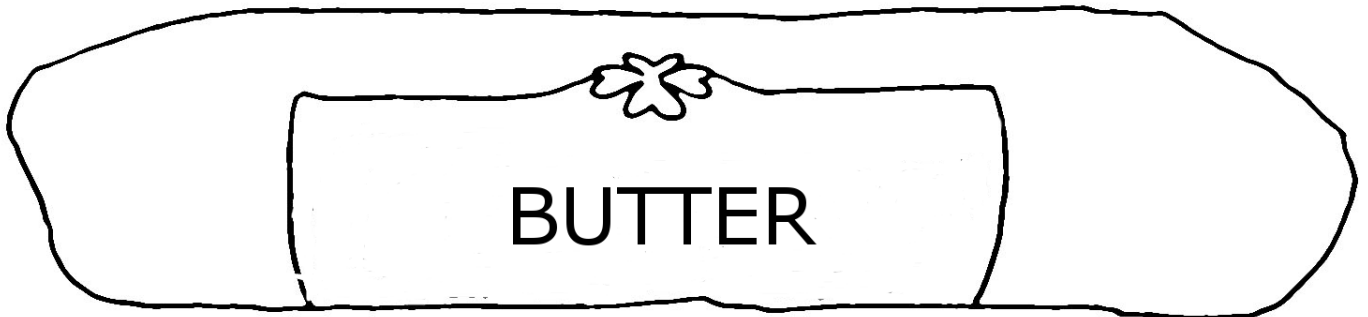
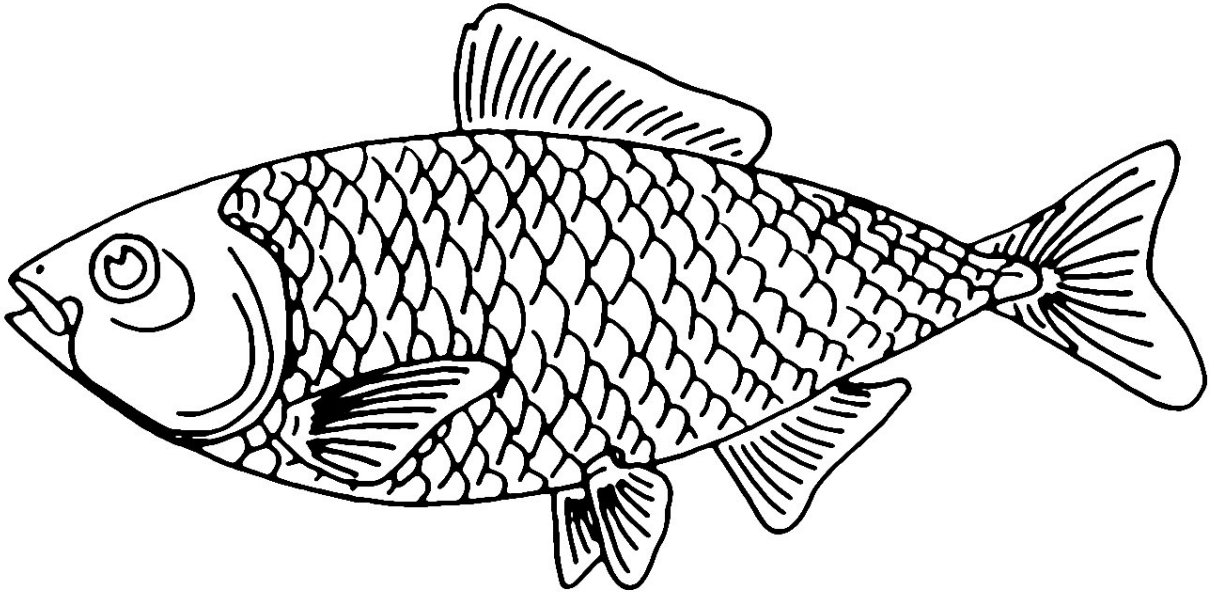


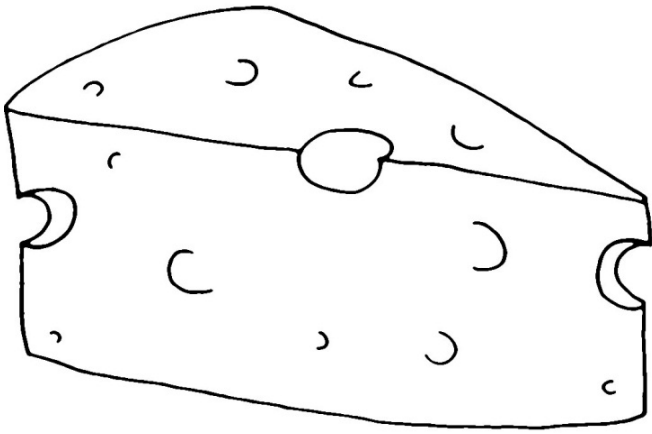
CORN



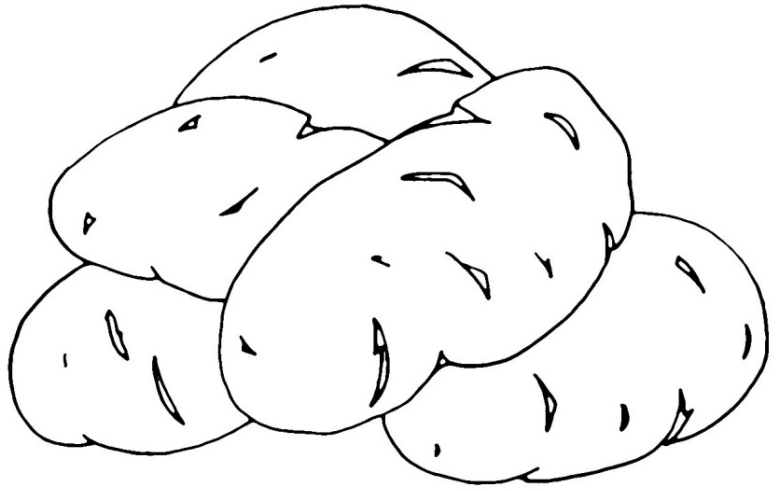


HOT/CHILI PEPPER

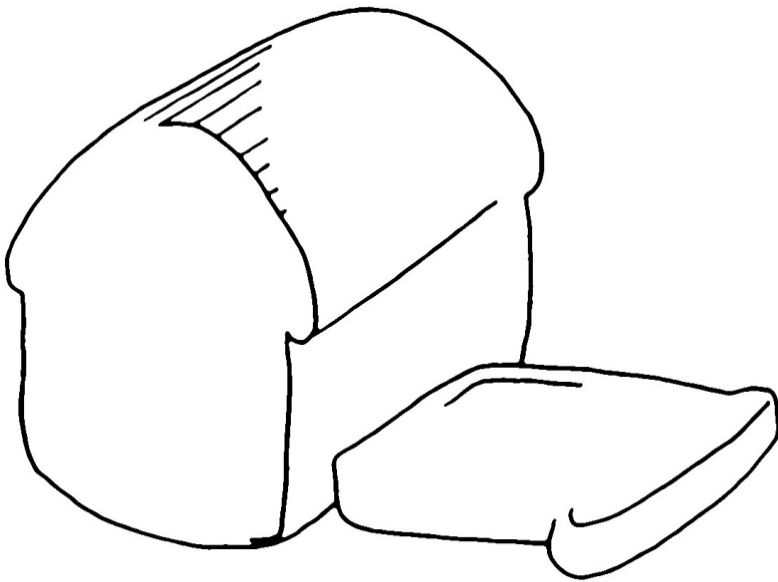




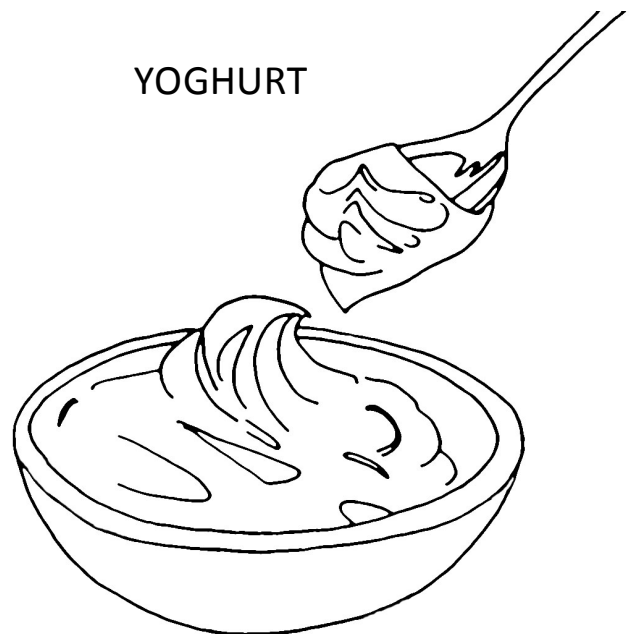
CHEESE



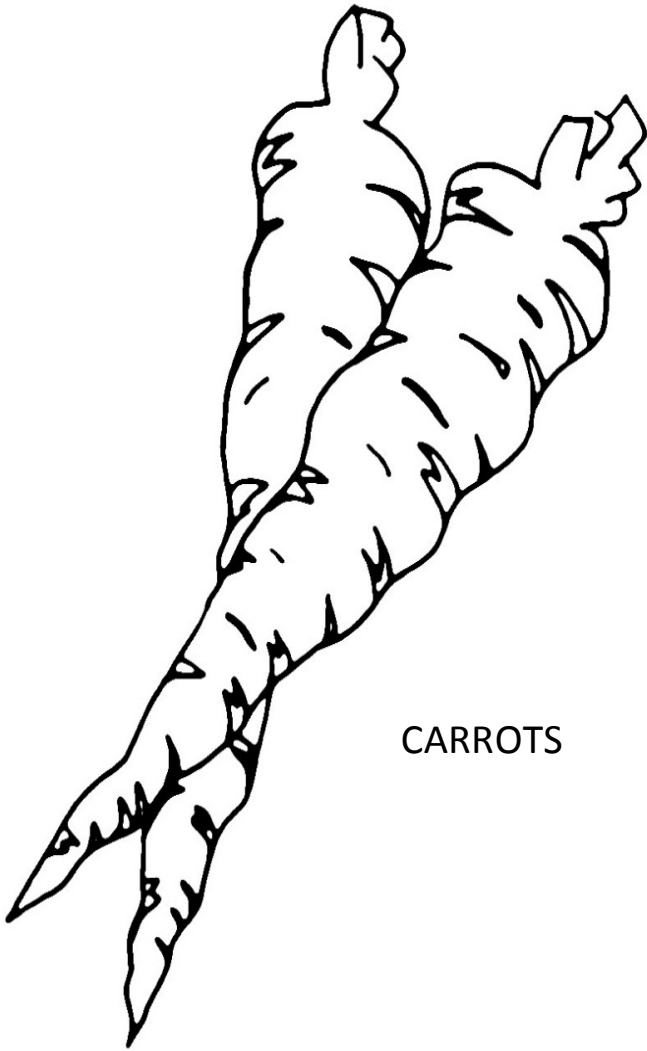
POTATOES



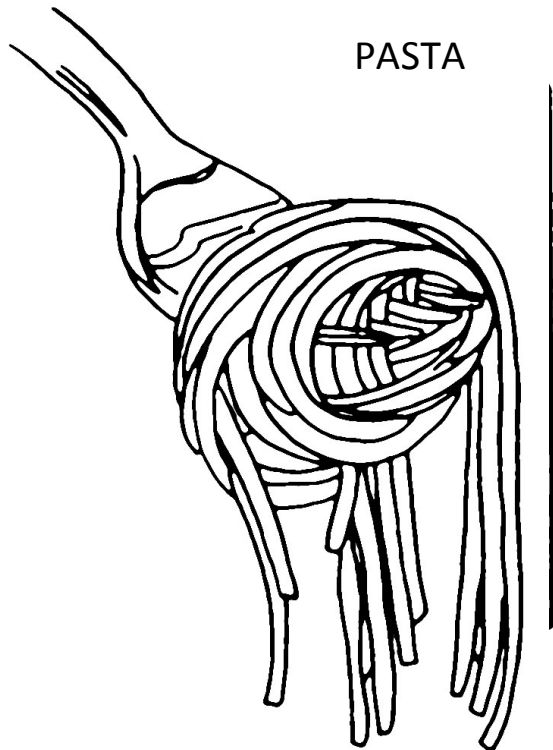
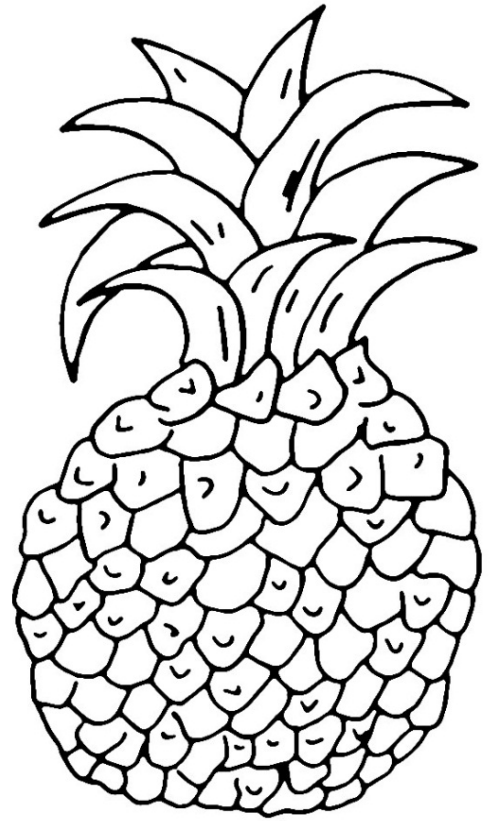
BREAD



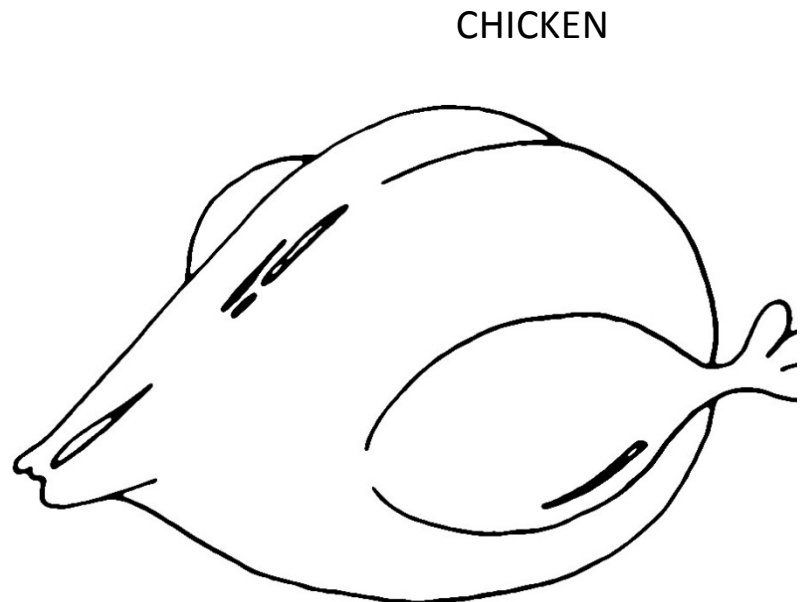
YOGHURT



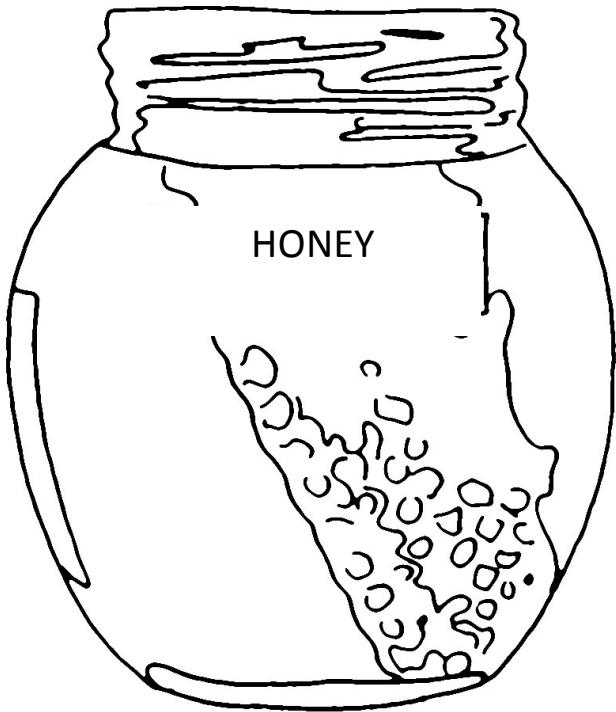
CARROTS



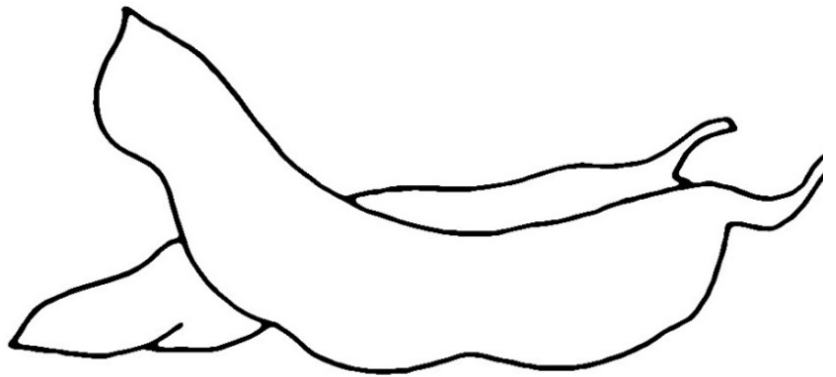
PASTA



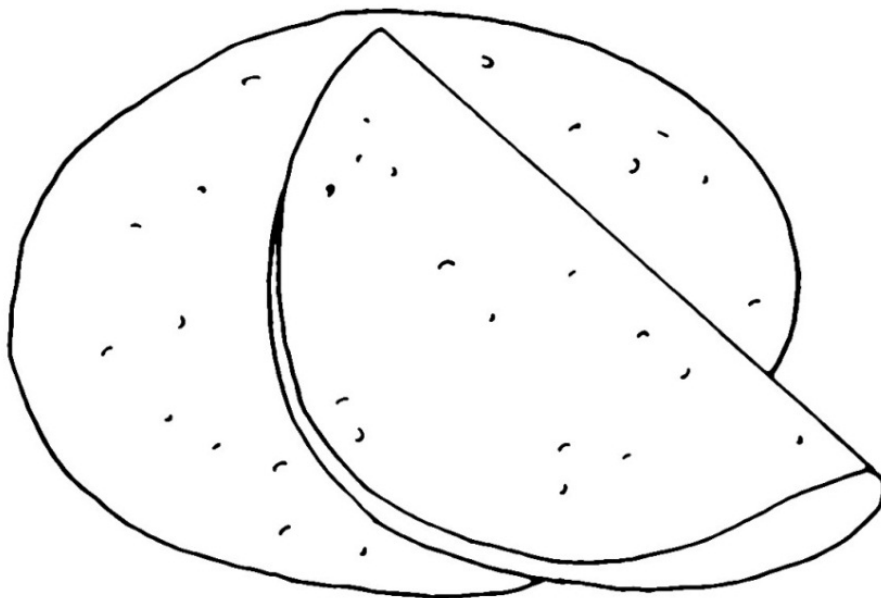
CHICKEN



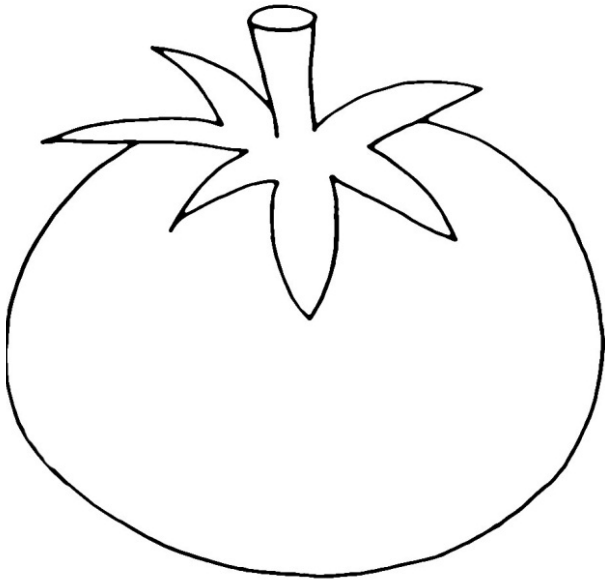
HONEY



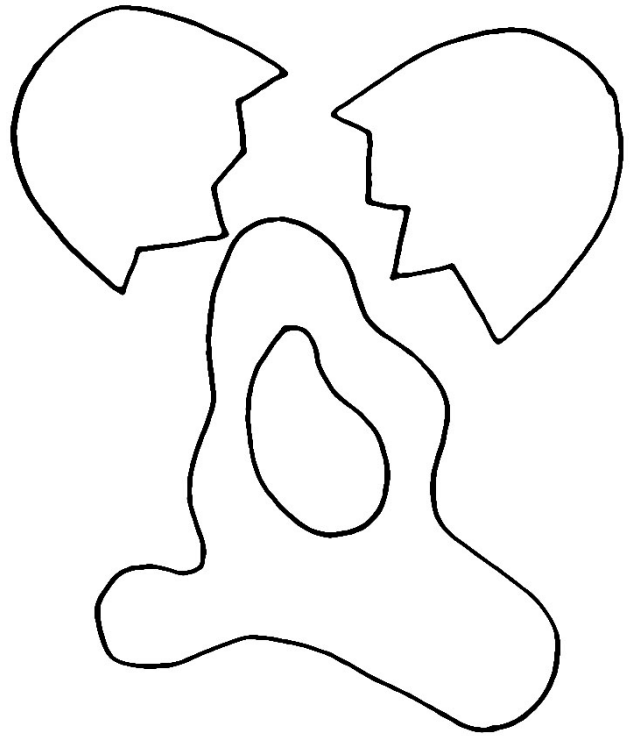
TAMARIND



ENJERA



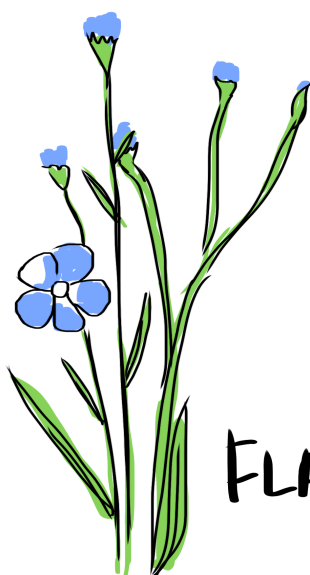
TOMATOES



EGGS

BROCCOLI





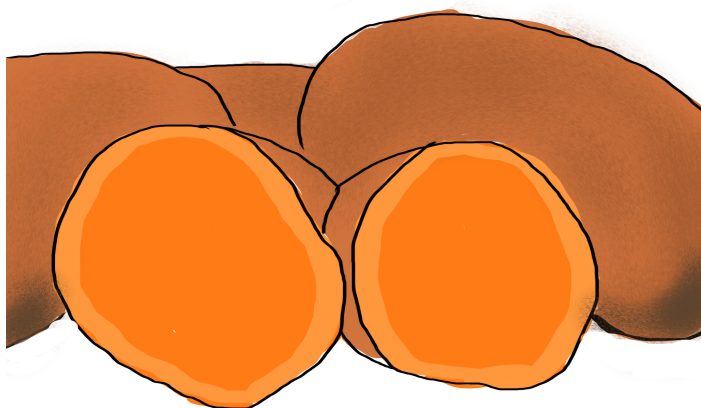
FLAXSEEDS



CABBAGE



SWEET POTATOES



TARO

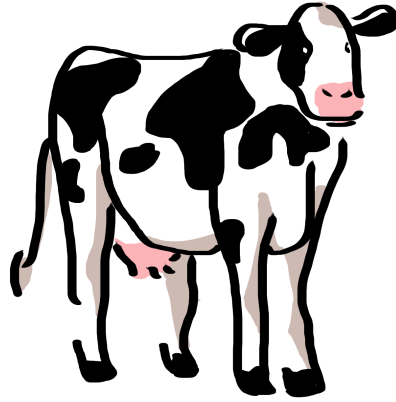




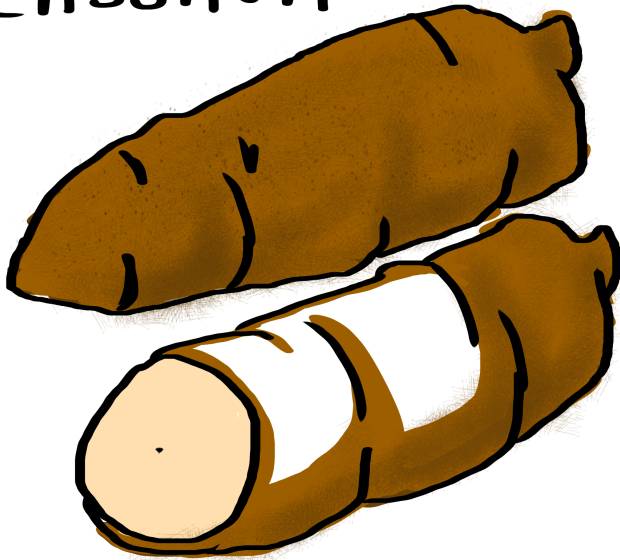
SESAME



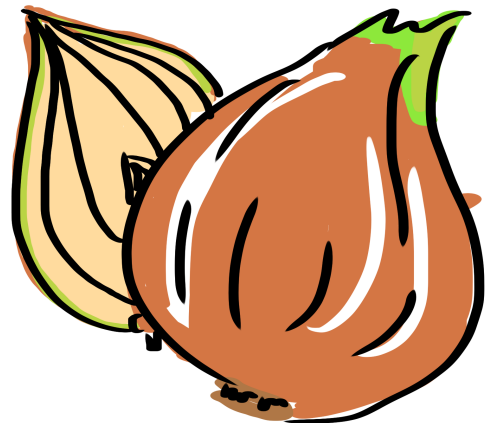
MILK



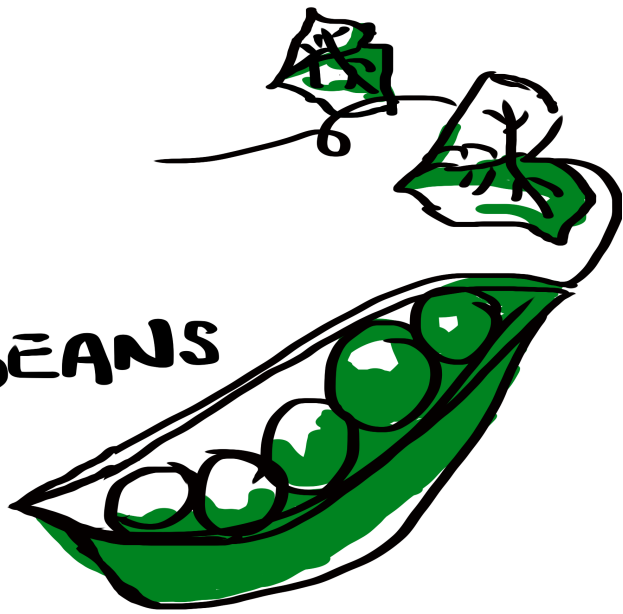
CASSAVA



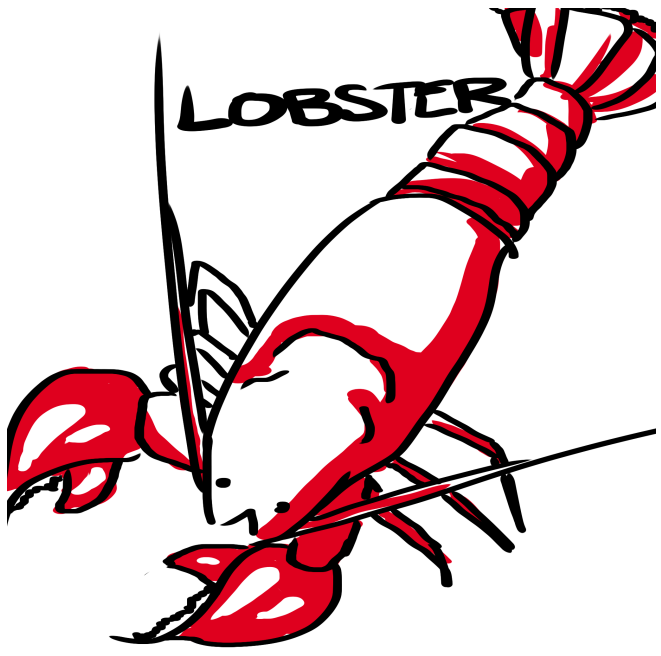
ONION



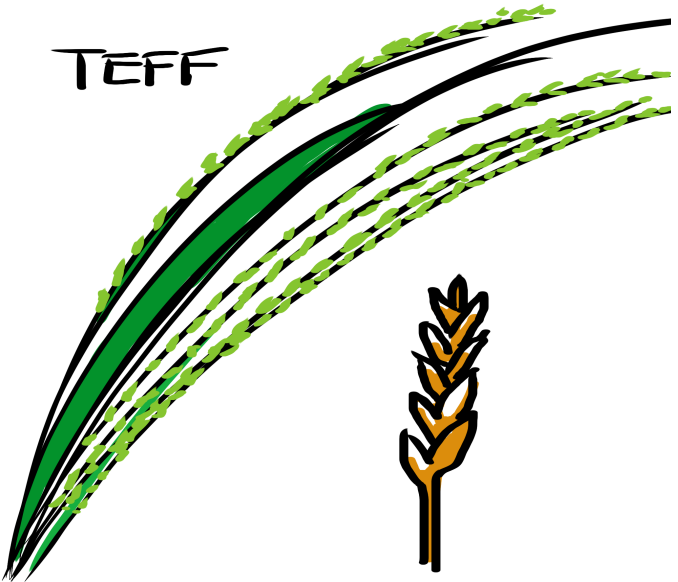
BEANS



LOBSTER

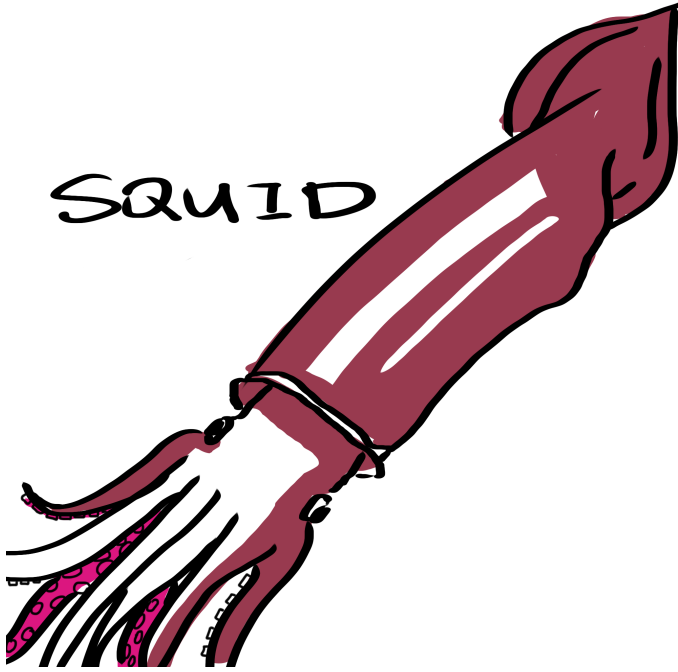


TEFF

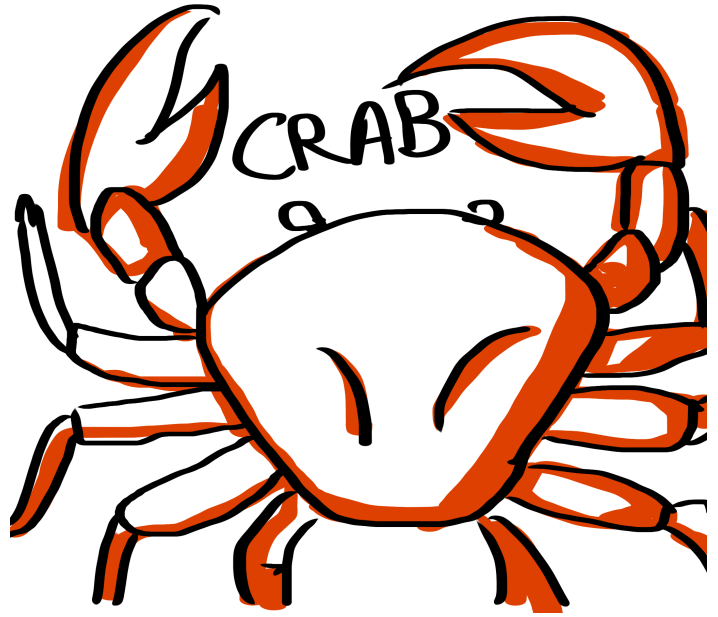


GARLIC





SQUID



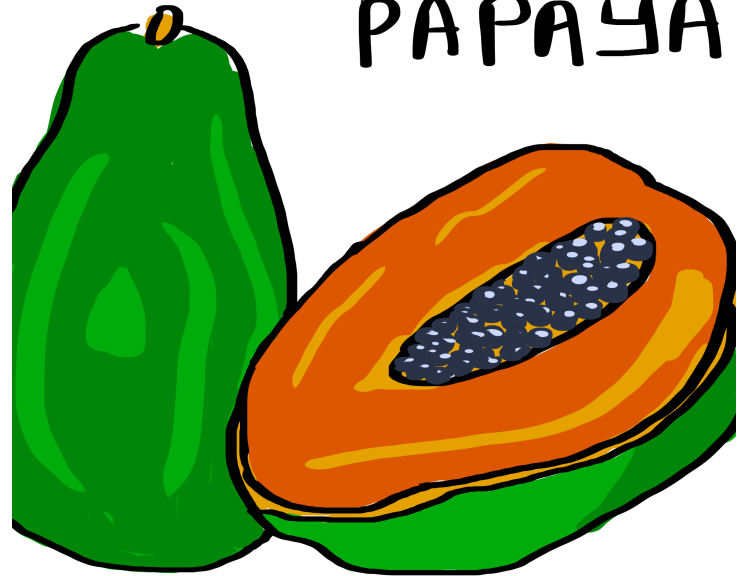
CRAB



SHRIMPS /



PRAWNS

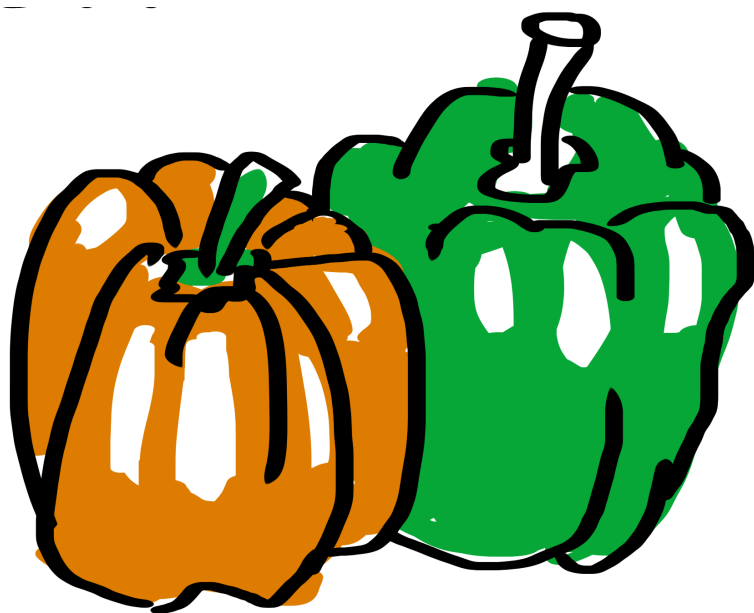


PAPAYA

COCONUTS



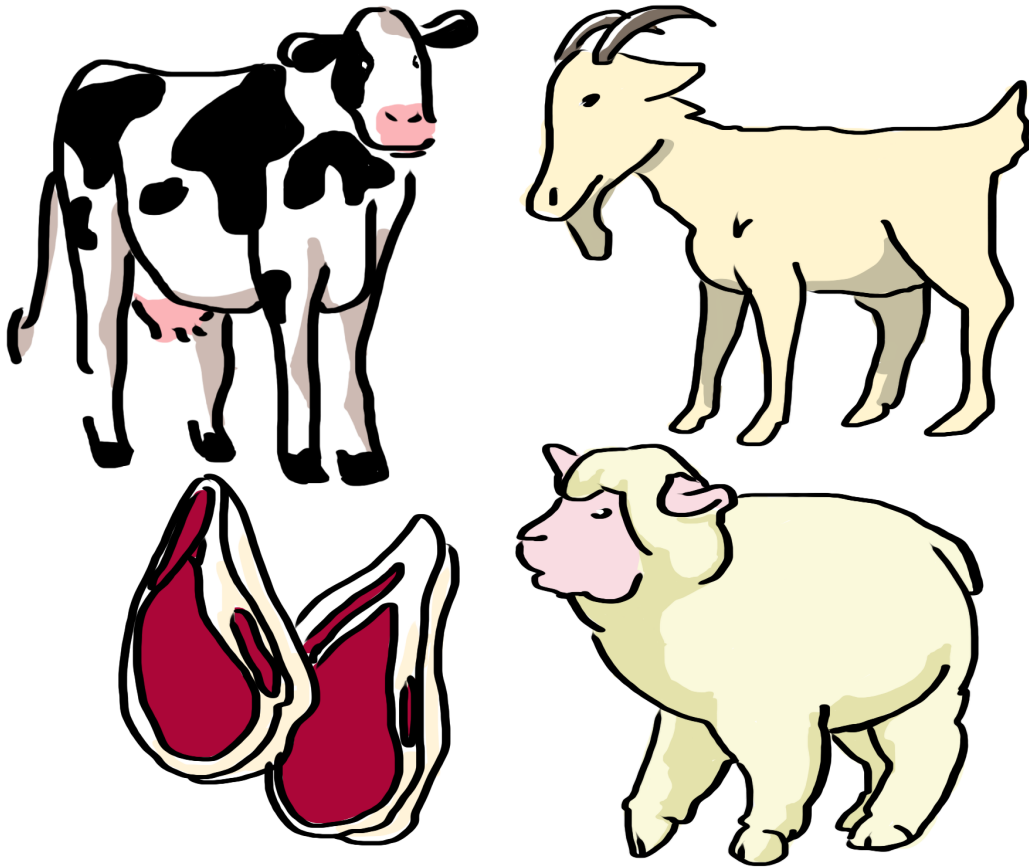
CASHEW
NUTS



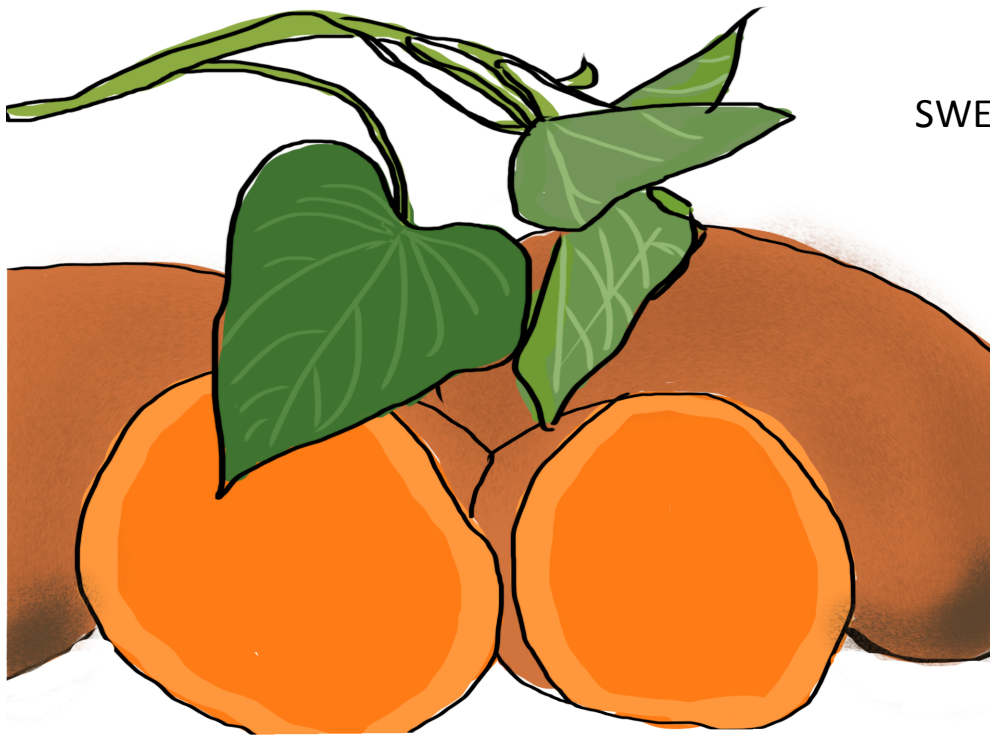
SWEET BELL PEPPER



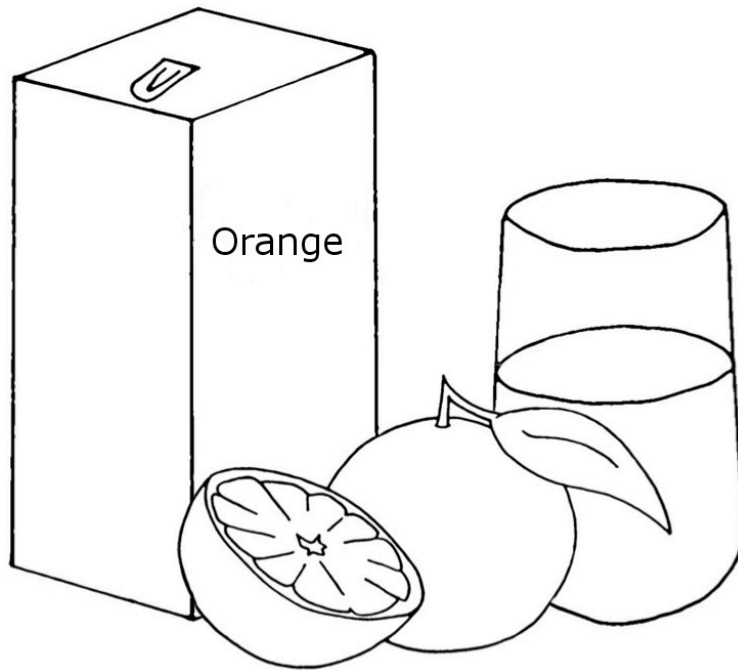
MORINGA



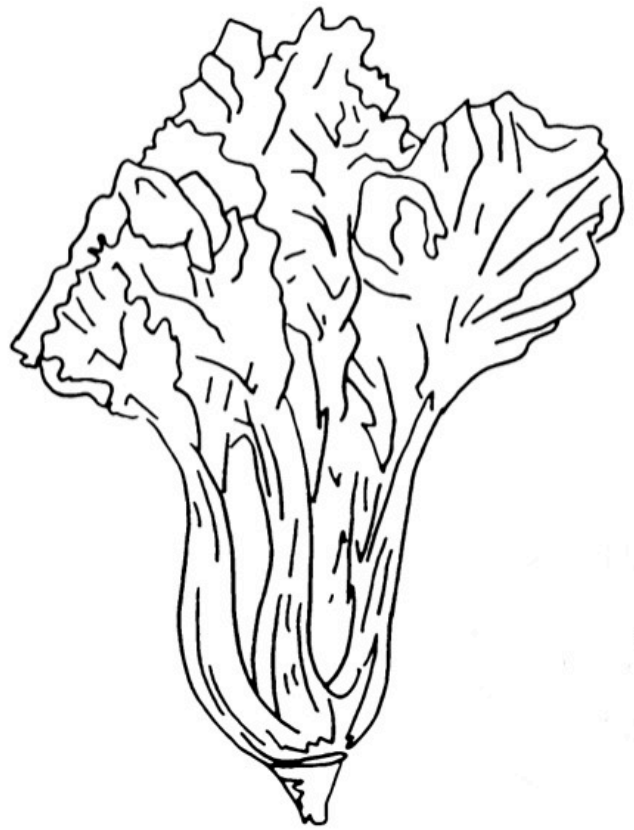
RED MEAT



SWEET POTATO
LEAVES



BEETS



LETTUCE



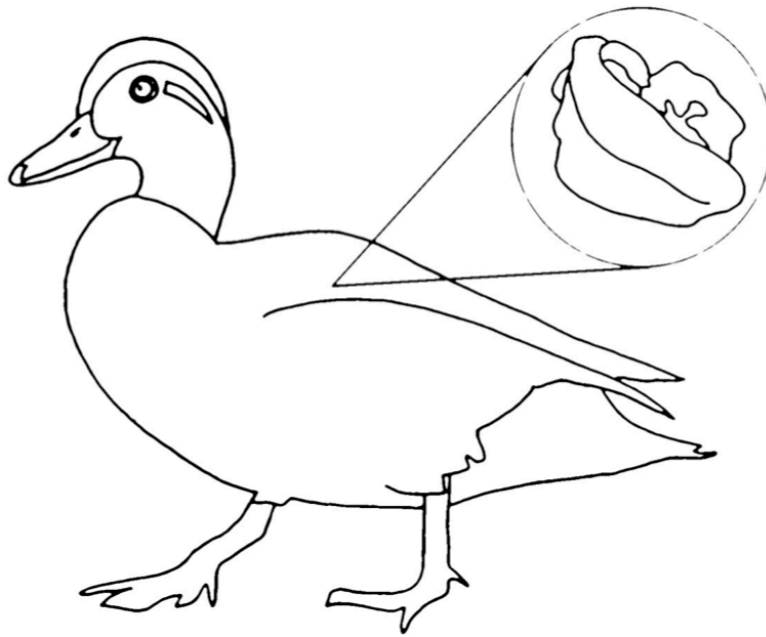
ASPARAGUS



OKRA

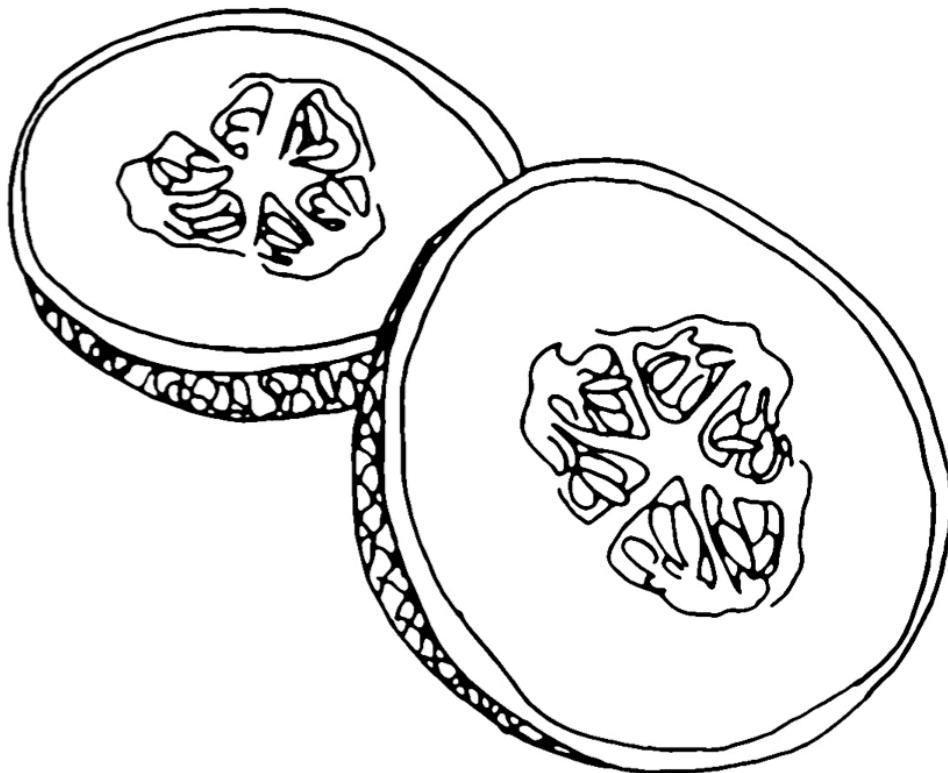
SPINACH



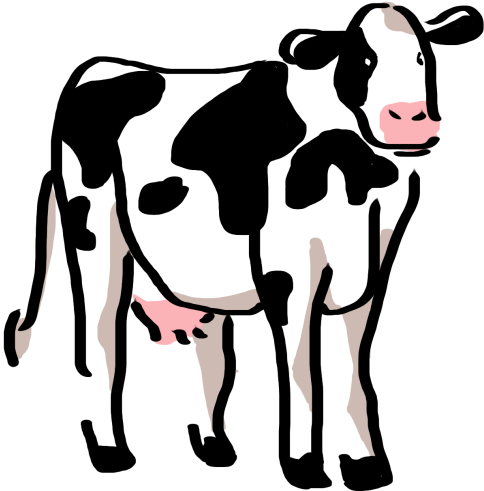


ANIMAL LIVER

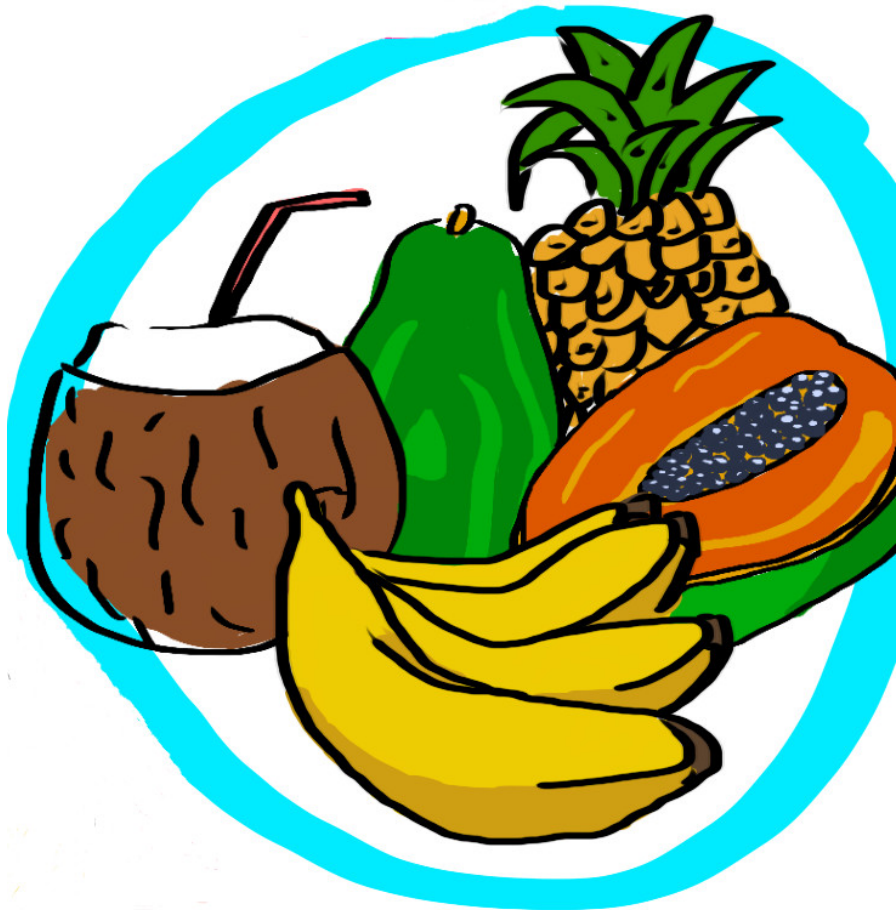
MELON/CANTALOUPE

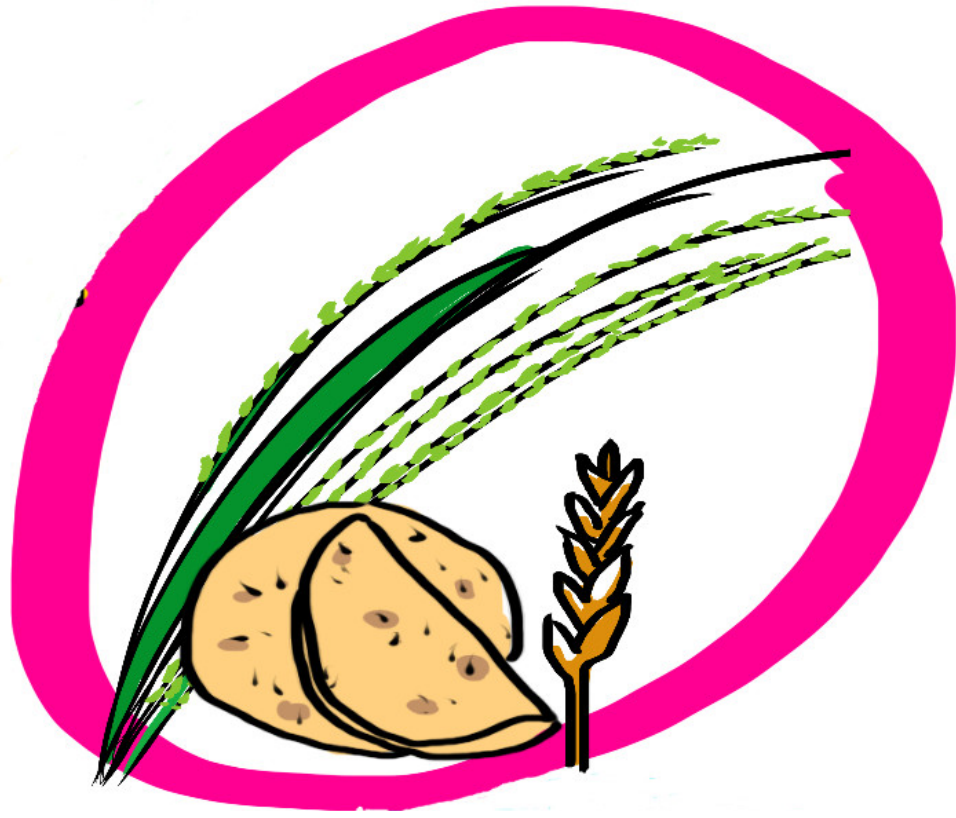


MILK











VEGETABLES

FRUIT

GRAINS

DAIRY

FATS

**MEATS/NUTS
/LEGUMBES**

