

BUDO JUNIOR SCHOOL

REMEDIAL WORK 2020 - SET THREE

PRIMARY FOUR

SCIENCE

THEME: HUMAN HEALTH

TOPIC: OUR FOOD

SUBTOPIC: CLASSES OF FOOD

What is food?

Food is something good to eat or drink.

NEW TERMS USED

Nutrients: these are useful components of food.

Nutrition: This is the supplying of nutrients to the body.

Malnutrition: This is a condition caused by lack of a balanced diet.

This condition results from eating a diet in which one or more nutrients are either not enough or are too much which causes health problems.

Deficiency diseases: These are diseases caused by lack of some food values or nutrients. They normally result from malnutrition.

Examples of food

- Rice
- water
- Meat
- Beans
- Peas
- Maize
- Greens

The major sources of food in our environment are:

- Plants
- Animals

Places where food is got:

- Markets
- Shops
- Supermarkets
- Water bodies
- Gardens
- Forests e.t.c

IMPORTANCE OF EATING FOOD(5Hs)

We eat food to be healthy

We eat food to show hospitality

We eat food because we are hungry

We eat food because it is a habit

We eat food because we are happy

We eat food to get energy

Classes of food

There are 3 major classes of food:

- Proteins
- Carbohydrates
- Vitamins

Proteins are body building foods.

Carbohydrates are energy giving foods

Vitamins are health giving foods

Other classes of food

- Fats and oils
- Mineral salts
- Roughages
- Water

PROTEINS

Proteins are body building foods

There are two kinds of proteins;

Proteins got from animals are called animal proteins.

Proteins got from plants are called plant proteins.

Animal proteins	Plant proteins
Meat	Beans
Milk	Soya beans
Eggs	Cow peas
Fish	Groundnuts

Importance of proteins in our diet

- ❖ proteins build new cells in our body.
- ❖ proteins repair damaged body tissues.

Note: proteins are very important during the pregnancy and growth of a baby to build new cells.

- ❖ Sick people need proteins to repair the damaged tissues and replace dead cells.

When someone lacks proteins they are most likely to suffer from kwashiorkor.

Kwashiorkor

Kwashiorkor is caused by lack of proteins in one's body.

- Kwashiorkor can be controlled or prevented by eating food rich in proteins.
- It can be prevented by eating a meal containing a balanced diet.

Signs and symptoms of kwashiorkor

- The hair is little and turns brownish or reddish.
- The person is miserable.
- The stomach swells/gets a pot belly.
- The legs and hands swell.
- The skin cracks and also becomes scaly.

CARBOHYDRATES

Carbohydrates are energy giving foods.

Carbohydrates provide the body with energy.

Sources of carbohydrates

- maize
- millet
- Rice
- matooke
- Irish potatoes
- Cassava
- Milk
- All foods with sugar

Note: excess carbohydrates are changed into fats by the body.

When someone lacks carbohydrates they are likely to get marasmus.

Marasmus is also called starvation.

Signs and symptoms of marasmus

- The person becomes weak.
- The face appears old.
- The person becomes thin and underweight.

VITAMINS

Vitamins are health giving foods.

There are many kinds of vitamins but the human body needs:

- Vitamin A
- Vitamin B complex
- Vitamin C
- Vitamin D
- Vitamin E
- Vitamin K

Vitamins	Vitamin source	Deficiency disease	Signs and symptoms
Vitamin A (Retinal)	Liver cheese Carrots eggs Milk margarine Butter red palm oil	Night blindness (poor night vision)	Poor night vision The cornea becomes dry and opaque
Vitamin B1 (thiamine)	Milk yeast Beans grain cereals Groundnuts meat	Beriberi	Muscles weakness Fast heart rate Mental confusion Loss of muscle coordination
Vitamin B3 (nicotinic or niacin)	Milk marmite Yeast liver	Pellagra	Peeling of the skin Sores of the mouth Dementia diarrhoea
Vitamin B12 (cobalemin)	Milk liver Meat fish Eggs	Anaemia	Shortage of red blood cells
Vitamin C (ascorbic acid)	Oranges tangerines Pineapples guavas Lemons yellowbananas Apples jackfruit paw paws milk	Scurvy	Swelling and bleeding of the gum. Mouth wounds take long to heal Bleeding beneath the skin around the joints
Vitamin D (calafiro)	Morning sunshine Milk Eggs Butter Fish liver oil	Rickets	Bending of the legs

Other vitamins include:

Vitamin B2 (riboflavin)

Vitamin E (tocopherol)

Vitamin K (phylloquinone)

They don't have a severe effect on our bodies if not in right amounts.

MINERAL SALTS

There are various mineral salts needed in our bodies namely;

Iron

Sources of iron

Meat	Liver
Spinach leaves	Groundnut leaves
Cocoa	Kidney

Egg yolk

Importance of iron

Iron enables the body to make red blood cells.

Lack of iron leads to anaemia

A person who lacks iron is always weak.

Note: iron is the only food value that is not found in milk.

Iodine

Sources of iodine

Iodized salts	milk
Sea food	sea water

Importance of iodine

helps the thyroid gland to function properly.

Lack of iodine leads to goiter.

A person with goiter has a swollen thyroid gland in the neck.

Calcium

Sources of calcium

milk	egg shells
fish	finger millet
beans	bread

Importance of calcium

Calcium strengthens bones and teeth

Calcium enables the formation of bones and teeth.

A person who lacks calcium has very weak bones and teeth.

Sodium

Sources of sodium

milk	meat
fish	table salt
eggs	butter
cheese	

Importance of sodium

- sodium helps in the proper functioning of body fluids
- Stimulates the nerves and makes muscles active.

Lack of sodium leads to hypertension and heart diseases

ROUGHAGES

Roughages are needed for the proper functioning of the digestive system.

Sources of roughages

- green leafy vegetables
- fresh fruits
- dried fruits
- unpolished cereals

lack of roughages leads to;

- constipation
- appendicitis
- bowel cancer

FATS AND OILS

Fats are solid at room temperature.

Oils are liquid at room temperature.

Sources of fats and oils

- Milk and its products
- Oil palm
- Olive oil
- Fish
- Groundnuts

Importance of fats and oils

- Fats and oils provide energy
- Fats and oils provide warmth to the body by generating heat.

Lack of fats and oils leads to;

Thinness

Dry skin

Coldness/feeling cold

Muscle wasting

Lack of energy.

Note: too much fats and oils lead to obesity.

They also lead to high blood pressure.

WATER

Sources of water

- Milk
- Tea
- Fruits
- Soup
- Blood

Importance of water in the body

- Water helps in the digesting of food in the body.
- Water helps in reducing body temperature through sweating
- Water reduces thirst
- Water is needed to remove wastes from the body.

Lack of water causes dehydration.

Food contamination

Food contamination is when germs get into food.

Ways in which food can get contaminated

- Serving food with dirty hands
- Serving food on dirty utensils
- Leaving food uncovered
- Eating food with dirty hands
- When flies fall on the cooked food
- Serving food from dirty places

How can we prevent food contamination?

- Covering cooked food
- Eating food with clean hands
- Serving food in clean utensils
- Washing hands before serving and eating food
- Ensure proper disposal of wastes and rubbish

Preparation of food

Different kinds of food are prepared in different ways.

Ways of preparing food

- Boiling
- Frying
- Roasting
- Baking
- Mingling
- Steaming

Food preservation

Food preservation is a way of keeping food from going bad over a period of time.

Ways in which food can be preserved

- Salting
- Sun drying
- Refrigerating/freezing
- Tinning/canning
- Smoking

EXERCISE 1.

1. What is food?
2. Mention two groups of people who need proteins most.
3. Name the deficiency disease caused by lack of:
 - a) Proteins
 - b) Carbohydrates
 - c) Vitamin C
 - d) Vitamin D
 - e) Iodine
4. Name two examples of food rich in;
 - i. Vitamin C
 - ii. Proteins
 - iii. Carbohydrates
5. Which deficiency disease affects the eyes?
6. What is malnutrition?
7. Which of the 5Hs is provided by vitamin foods?
8. Name the mineral salt that strengthens teeth and bones.
9. What vitamin is got from morning sunshine.
10. Give one reason why an adult is not advised to drink milk only as a source of food.
11. Mary lacks what to eat, what deficiency disease is she most likely to suffer from?
12. What are excess carbohydrates converted into by the body?
13. How can scurvy be prevented?
14. Mention any two sources of water in the body.
15. Of what importance is water in the body?

EXERCISE 2.

1. Name any two sources of food.
2. Apart from proteins, name any one class of food needed by the body.
3. Out line any one source of food rich in carbohydrates.
4. What is a balanced diet?
5. Which food value is one likely to get from eating ground nuts?
6. State any one reason why people eat food.
7. What causes Kwashiorkor?
8. How can the above disease be prevented?
9. Name any one sign on symptoms of Kwashiorkor.
10. Which food value helps to insulate the body against heat loss?
11. Write any one importance of roughages in one diet.
12. Which food value is absent in milk?
13. Identify the vitamin got from eating fresh fruits and vegetables?
14. Give any two ways one can use to prevent / control / rickets.
15. What causes marasmus?
16. How is Vitamin A useful to our body?
17. Which deficiency disease is causes bleeding of the gum.
18. How can the above disease be prevented?
19. Why is it important for one to add roughages to their diet?
20. Match correctly.

A	B
i. Vitamin B ₁	night blindness
ii. Vitamin B ₃	beri beri
iii. Vitamin D	pelbgra
iv. Vitamin A	rickets
21. Define the following.
 - i. Food contamination
 - ii. Food preservation
22. Mention any two ways through which food gets contaminated.
23. List any 4 methods of food preservation.

