



पुर्णमा International School

Shree Swaminarayan Gurukul, Zundal

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CHAPTER – 1

Food: Where Does it Come From?

Keywords

- Food: Nutritious substance that people or animals eat or drink, or that plants absorb. In order to maintain life and growth.
- food is essential for both plants and animals.

USES OF FOOD IN OUR BODY

- For energy
 - for growth
 - for body functions
 - for wounds healing
 - for good health
-

PLANT SOURCE OF FOOD

(A) parts of the plants as a source of food

1. plant roots .Ex. Carrot, Turnip, Radish, Beetroot.
 2. Plant stems : Ex. Potato, Coriander and sugarcane.
 3. plant leaves : Ex. spinach, cabbage, onion.
 4. Fruits used as vegetable : Brinjal, tomato, gourd, beans
 5. Seeds : Cereals (grains) and seeds : paddy (rice), maize (corn), wheat
-

(B) FOOD THAT COMES FROM ANIMALS

1. MILK;
2. EGGS
3. MEAT FROM ANIMALS
4. FISH, PRAWNS, CRABS

5. HONEY

VERY SHORT ANSWER QUESTIONS

1. Why do boiled seeds fail to sprout?

Ans. Boiling of seeds kills certain enzymes that are required for germination due to which they cannot germinate and hence fails to sprout.

2. Where do bees store honey?

Ans. Bees form honey by collecting nectar. They store this nectar in their beehives.

3. Name two ingredients in our food that are not obtained from plants or animals. Mention one source for each ingredient.

Ans. Ingredients of food that are not obtained from plants and animals are salt and water.

Salt is obtained after processing of sea water and rock. Whereas water is obtained from wells, rivers, lakes, ponds etc

SHORT ANSWER QUESTIONS

1. Why should we avoid wastage of food?

Ans. We should avoid wastage of food because:

- (i) Enough food is not available for all of us.
- (ii) Food is very costly and poor people cannot afford to buy.

2. Why do organisms need food? Write two reasons.

Ans. Food gives energy to do work, grow, repair damaged parts and protect the body against diseases.

3. Match the organisms given in Column I with their part/product in Column II that is used by human beings as food.

Column I	Column II
(a) Mustard plant	(i) meat
(b) Goat	(ii) fruits and vegetable
(c) Hen	(iii) seed
(d) Smoke	(iv) direction of air flow
(e) Wind	(v) present dust particles

Ans. a-(iii), b-(i), c-(iv), d-(v), e-(ii).

4. Label and colour the different parts of the plant given below in Fig. 1.2:

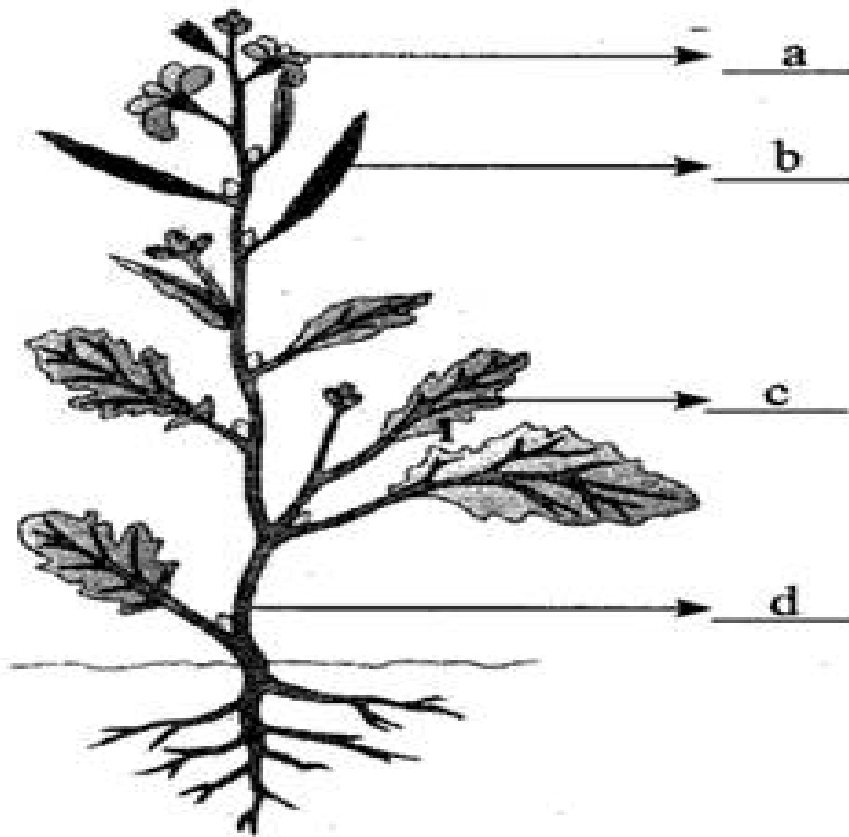


Fig. 1.2

Ans. a- Flower

b- Bud

c- Leaf

d- Stem

Textual Exercise:

Question 1. Do you find that all living beings need the same kind of food?

Answer: No, all living beings do not need the same kind of food. We know that different organisms eat different kind of food. This is because of the difference in their structure, requirements, habitats etc.,

Question 2. Name five plants and their parts that we eat.

Answer:

(a) Apple tree	Fruit
(b) Wheat plant	Seed
(c) Potato plant	Stem
(d) Beetroot plant	Root
(e) Spinach	Leaves

Question 3. Match the items given in column A with that in column B.

Column A	Column B
Milk, curd, paneer, ghee	Eat other animals
Spinach, cauliflower, carrot	Eat plants and plant products.
Lion and tiger	Are vegetables
Herbivores	Are all animal products.

Answer:

Column A	Column B
Milk, curd, paneer, ghee	Are all animal products.
Spinach, cauliflower, carrot	Are vegetables
Lion and tiger	Eat other animals
Herbivores	Eat plants and plant products.

Question 4. Fill up the blanks with the words given:

Herbivore, plant, milk, sugarcane, carnivore.

- (a) Tiger is a ----- because it eats only meat.
- (b) Deer eats only plants products and so, is called -----.
- (c) Parrot eats only ----- products.
- (d) The ----- that we drink, which comes from cows, buffaloes and goats is an animal

product.

(e) We get sugar from -----.

Answer: (a) Tiger is a **carnivore** because it eats only meat.

(b) Deer eats only plants products and so, is called **herbivores**.

(c) Parrot eats only **plant** products.

(d) The **milk** that we drink, which comes from cows, buffaloes and goats is an animal product.

(e) We get sugar from **sugarcane**.

CHAPTER – 2

Components of Food

KEYPOINTS:

- **Nutrients:** Food substances that provide nourishment to the body.
- The major nutrients in our food are carbohydrates, proteins, fats, vitamins and minerals. In addition, food also contains dietary fibres and water.
- Carbohydrates and fats mainly provide energy to our body.
- Carbohydrates : cellulose, starch and sugar.
- **Carbohydrates:** These are energy-giving compounds. There may be simple carbohydrates or complex carbohydrates.
- Sources of fats : animal fats and vegetable fats.
- **Fats:** These are very high energy-giving compounds. They produce greater amount of energy than carbohydrates.
- Carbohydrates and fats are Energy giving food.
- **Minerals:** These are elements required by the body in small amounts. It is essential for growth and development of bones, teeth and red blood cells.
- **Proteins:** These are body-building foods. They help in growth of the body.
- **Vitamins:** These are organic substances that protect the body from diseases.
- **Roughage:** It is the dietary fibre present in the food. It facilitates regular movement of the bowels and prevents constipation.

- Dietary fibre and water are not food.
- **Balanced diet:** It provides all the nutrients that our body needs, in right quantities, along with adequate amount of roughage and water.
- **Deficiency Diseases:** These are the diseases cause due to the lack of required nutrients for a long period in the diet.
- **malnutrition :** when a person eats enough of food but his diet is unbalanced, it is known as malnutrition.
- **Undernutrition :** A person not eating sufficient food to maintain good health is suffering from undernutrition.

Some Nutrients Deficiency Diseases are:

1. **Protein: Kwashiorkar** - Stunted growth, thinning of legs, protruding belly.
2. **Protein and Carbohydrates – Marasmus** – Complete/partial arrest of growth, lack of energy.
3. **Vitamin D and calcium : Rickets** – Bowed legs, bent spine, deformed bones are joints.
4. **Vitamin C: Scurvy** – Bleeding and swelling of gums, weakness.
5. **Iodine: Goitre** – Enlargement of thyroid gland, retarded growth.
6. **Iron – Anaemia** – Fatigue, loss of appetite, pale skin.
7. **Vitamin K : -Bleeding disease-** delay in blood clotting leads to excess bleeding.
8. **Beri-beri : - Vitamin B₁** . weakness in muscles, little energy to do work, paralysis
9. **Night blindness - Vitamin A** - No vision at night or in dim light.

VERY SHORT ANSWER QUESTIONS

1. Which of the food item does not provide dietary fibre?

Ans. Milk does not provide dietary fibres. It provides proteins and calcium.

2. Which of the following sources of protein is different from others?

- (a) Peas
- (b) Gram
- (c) Soyabeans
- (d) Cottage cheese (paneer)

Ans. Paneer also provides protein but it is different from other sources mentioned in the option because all others are pulses but paneer is a milk product.

3. Which of the nutrients is not present in milk?

Ans. Vitamin C is not present in milk.

4. Which of the food items are “energy giving foods”?

Ans. The food containing carbohydrates and fats are energy giving food items.

5. Read the following statements about diseases.

- (i) They are caused by germs.
- (ii) They are caused due to lack of nutrients in our diet.
- (iii) They can be passed on to another person through contact.
- (iv) They can be prevented by taking a balanced diet.

Which pair of statements best describe a deficiency disease?

- (a) (i) and (ii)
- (b) (ii) and (iii)

- (c) (ii) and (iv)
(d) (i) and (iii)

Ans. (c) Deficiency diseases are caused due to the lack of certain nutrients in body. Therefore, it is always recommended to consume balance diet.

SHORT ANSWER QUESTIONS

1. Tasty food is not always nutritious and nutritious food may not always be tasty to eat. Comment with examples.

Ans. Potato chips are tasty but they are not very nutritious.

Boiled vegetables are very nutritious but they may not be tasty.

2. While using iodine in the laboratory, some drops of iodine fell on Paheli's socks and some fell on her teacher's saree. The drops of iodine on the saree turned blue black while their colour did not change on the socks. What can be the possible reason?

Ans. The saree of Paheli's teacher might have been starched, and starch turns blue black with iodine solution. Paheli's socks did not have starch on it thereby showing no change.

3. Paheli and Boojho peeled some potatoes and cut them into small pieces. They washed and boiled them in water. They threw away the excess water and fried them in oil adding salt and spices. Although the potato dish tasted very good, its nutrient value was less. Suggest a method of cooking potatoes that will not lower the nutrients in them.

Ans. Wash, peel, cut and cook the potatoes. Cooking in a small amount of water and then frying in a small quantity of oil conserves the nutrients.

4. Paheli avoids eating vegetables but likes to eat biscuits, noodles and white bread. She frequently complains of stomachache and constipation. What are the food items that she should include in her diet to get rid of the problem? Give reason for your answer.

Ans. Paheli must include whole grains, whole pulses, fresh fruits and vegetables in her diet as she seems to lack roughage.

5. (a) List all those components of food that provide nutrients.

(b) Mention two components of food that do not provide nutrients.

Ans.(a) Components of food that provide nutrients are carbohydrates, proteins, fats, vitamins and minerals.

(b) Components of food that do not provide nutrients are water and roughage/dietary fibres.

LONG ANSWER QUESTIONS

1. 'Minerals and vitamins are needed in very small quantities by our body as compared to other components, yet, they are an important part of a balanced diet.' Explain the statement.

Ans. Vitamins and minerals are very important because they help in

(a) protecting our body against diseases.

(b) growth.

(c) maintaining good health

2. 'Water does not provide nutrients, yet it is an important component of food. 'Explain?

Ans. Water helps our body to absorb nutrients from food and also helps in removing wastes such as urine and sweat.

3. Given below are the steps to test the presence of proteins in a food item:

- (i) Take a small quantity of the food item in a test tube, add 10 drops of water to it and shake it.
- (ii) Make a paste or powder of food to be tested.
- (iii) Add 10 drops of caustic soda solution to the test tube and shake well.
- (iv) Add 2 drops of copper sulphate solution to it.

4. Which of the following food items does not provide any nutrient?

Milk, Water, Orange juice, Tomato Soup

Ans. Out of the options given orange juice and tomato soup provides citric acid. Milk provides proteins and calcium. But water does not provide any nutrient.

Textual Exercise:

Question 1. Name the major nutrients in our food.

Answer: The major nutrients in our food are carbohydrates, proteins, fats, vitamins, minerals, roughage and water are essential nutrients for our body.

Question 2. Name the following:

- (a) The nutrients which mainly give energy to our body.
- (b) The nutrients that are needed for the growth and maintenance of our body.
- (c) A vitamin required for maintaining good eyesight.
- (d) A mineral that is required for keeping our bones healthy.

Answer: (a) Carbohydrates and fats.

- (b) Proteins
- (c) Vitamin A
- (d) Calcium

Question 3. Name two foods each rich in:

- (a) Fats (b) Starch (c) Dietary fibre (d) Protein**

Answer: (a) Butter, Groundnut.

(b) Rice, Potato.

(c) All grains, Fresh fruits.

(d) Milk, Fish.

Question 4. Tick (✓) the statements that are correct.

(a) By eating rice alone, we can fulfill nutritional requirement of our body.

(b) Deficiency diseases can be prevented by eating a balanced diet.

(c) Balanced diet for the body should contain a variety of food items.

(d) Meat alone is sufficient to provide all nutrients to the body.

Answer: (a) By eating rice alone, we can fulfill nutritional requirement of our body. X

(b) Deficiency diseases can be prevented by eating a variety of food

items. ✓

(c) Balanced diet for the body should contain a variety of food items. ✓

(d) Meat alone is sufficient to provide all nutrients to the body. X

Question 5. Fill in the blanks.

(a) ----- is caused by deficiency of vitamin D.

(b) Deficiency of ----- causes a disease known as Beri-beri.

(c) Deficiency of vitamin C causes disease known as -----.

(d) Night blindness is caused due to deficiency of ----- in our food.

- Answer:** (a) **Rickets** is caused by deficiency of vitamin D.
(b) Deficiency of **vitamin B1** causes a disease known as Beri-beri.
(c) Deficiency of vitamin C causes disease known as **scurvy**.
(d) Night blindness is caused due to deficiency of **vitamin A** in our food.

PUNYA