



Class - VI Science Classwork Notes

1. Components of Food

I. Technical Words:

1. Anaemia - The deficiency disease caused by the deficiency of vitamin B12 or iron.
2. Beriberi - The deficiency disease caused by the deficiency of vitamin B1.
3. Cellulose - The type of carbohydrate found in plants that cannot be digested.
4. Goitre - The deficiency disease caused by the deficiency of iodine.
5. Night blindness - the deficiency disease caused by the deficiency of vitamin A.
6. Osteomalacia - The deficiency disease caused by the deficiency of vitamin D in adults.
7. Pellagra - The deficiency disease caused by the deficiency of vitamin B3.
8. Rickets - The deficiency disease caused by the deficiency of vitamin D in children.
9. Roughage - The part of food that cannot be digested and thus helps excrete waste.
10. Scurvy - The deficiency disease caused by the deficiency of vitamin C.

II. Very Short answer questions:

1. Complete the table.

Nutrient	Functions	Disease
Vitamin A	Helps vision; keeps skin healthy	Night blindness
Vitamin B3	Helps the body release energy from food; keeps nerves and skin healthy	Pellagra
Phosphorus	Maintains healthy skin and ears	Weak bones and teeth
Iron	Needed to make red blood cells	Anaemia
Iodine	Keeps the body healthy	Goitre

III. Short answer Questions:

1. Describe how you would test for the presence of fats in a food item?

To test for the presence of fat in food samples: Keep a small piece of the food sample between the folds of a folded sheet of paper. Crush the food sample. Let the paper dry. Hold it in front of a source of light. Appearance of a translucent area on the paper shows the presence of fat in the food sample.

2. Why is it essential to include foods rich in vitamin C and vitamin B complex in our daily diet?

Vitamin C helps to fight infections, maintains skin and bones and also helps in quick healing of wounds. Lack of vitamin C in the body may cause scurvy. Vitamin B complex

helps the body break down and release energy from food. It also keeps the skin, eyes and nerves healthy. Vitamin B12 is essential in the diet as it helps to make red blood cells. Lack of vitamin B may cause the skin to crack and lead to poor vision. Beriberi, pellagra and anaemia are also caused due to lack of vitamins B1, B3 and B12, respectively.

- List the minerals that we need to include in our meals.

We should include iron, calcium, phosphorus, sodium, potassium and iodine in daily meals to stay healthy.

- List the functions of water in the body.

The main functions of water in our body are: (i) Water is the main component of blood and thus the medium for transporting many substances through the body. It helps the body to absorb nutrients. (ii) It is needed to excrete wastes from the body. It carries the waste products to the kidneys, which excrete them in the form of urine. (iii) When water from the body is excreted as sweat, it helps the body to cool down and maintains the body temperature.

- State any two differences between marasmus and kwashiorkor.

Kwashiorkor	Marasmus
Caused due to the deficiency of mostly proteins.	Caused due to the deficiency of proteins and carbohydrates.
Causes the person to remain small, with thin limbs, pale and dry skin, and reddish hair. They also have a swollen abdomen.	Causes the person to remain thin, with prominent bones. They also have dry and loose skin due to loss of fat and muscle.

#### IV. Long Answer Questions:

- Describe the experiment used to test for the presence of starch in food.**

To test for the presence of starch in food: Crush the food sample and put it in a test tube. Add distilled water to the test tube and shake it. Add a few drops of iodine solution to the test tube. If the food item contains starch, the solution will turn blue-black in colour.

- Explain how you would prove that a given food sample contains sugar?**

To test if a given food sample contains sugar, the food sample is put in a test tube and mixed with distilled water. A few drops of Benedict's solution is added to the test tube. The test tube is kept in boiling water bath for 5 minutes. If the solution turns from light blue to green, yellow, orange or red, it shows that the food item contains sugar.

- Describe the experiment used to test a food sample for the presence of protein? What would you observe if the food sample is a piece of potato?**

To test for the presence of protein in the given food sample, the following experiment should be conducted.

**Aim:** To test for the presence of protein in food

**Materials required:** food items, sodium hydroxide solution, copper sulphate solution, mortar and pestle, test tubes, distilled water

**Method**

- Take a small amount of a food item, crush it in a mortar and pestle with some water. Pour the resulting solution into a test tube.

2. Add 10 drops of sodium hydroxide solution to the test tube and shake well.

3. Add the copper sulphate solution drop by drop carefully.

**Observation and conclusion:** If a violet or purple colour develops, the food item that is being tested contains protein. If the solution stays light blue in colour, the food item does not contain protein.

If the given food sample is a piece of potato, the solution will stay light blue in colour after adding copper sulphate solution as potato is rich

in carbohydrate. It does not contain protein.

**4. What is a balanced diet? How does eating a balanced diet help the body stay strong and healthy?**

A balanced diet has adequate amounts of nutrients that provide energy and nutrition to the body. It also helps the body to grow and repair itself and keep diseases at bay. The following food groups should be included in a balanced diet: (i) The milk group that includes milk and dairy products.

(ii) The protein group that includes eggs, meat, beans, nuts, peas, legumes and so on. (iii) The fruit and vegetable group that includes fruits like apple, mango, banana, orange and so on and vegetables like spinach, carrot, cucumber and so on. (iv) The grain group that includes rice, wheat and other cereals like oats, millets and so on. (v) Water and roughage.

**5. Draw the food plate and include which group we should eat more and which group should be eaten sparingly.**

(Diagram: Refer to the textbook) Our daily meal should contain food items in maximum quantity from the grain group and fruit and vegetable group than from the protein group and milk group. Foods rich in added sugars and fats should be eaten sparingly.

**V. Images - based question.**

**Name these fruits and Vegetables in your home language. Find out the nutrients that each of these is rich in. Who definitely need to add them in their diet, and who needs to definitely keep them out of their diet?**

1. guava    2. french beans    3. Okra    4. Mangosteen

Guava contains carbohydrates, vitamin C and fibre. Beans contain carbohydrates, proteins and fibre. Okra has vitamin K vitamin C and minerals like magnesium. Mangosteen is rich in vitamin C, carbohydrates, fibre, minerals like calcium and potassium.

Everyone needs to add vitamins and minerals in their diet for proper functioning of the body and protection from diseases. If a person has scurvy, they can include these vegetables and fruit in their diet.