

Nutrients and Balanced Diet

KS3 Biology · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

Name the seven parts of a balanced diet.

Step 1 · The big three (needed in large amounts)

Carbohydrates, lipids (fats and oils) and proteins.

Step 2 · Needed in small amounts

Vitamins and minerals.

Step 3 · Not nutrients for energy, but essential

Dietary fibre and water.

Answer: Carbohydrates, lipids, proteins, vitamins, minerals, fibre, water

Check: A balanced diet has all seven in the right amounts.

2. Now try one with the steps

Why does an athlete eat pasta the night before a marathon?

Step 1 · What is pasta rich in?

Step 2 · What is carbohydrate for?

Answer:

3. Practice

Show your working. The marks tell you how much is expected.

1. Which nutrient is the body's main source of energy? [1]

2. Which nutrient is needed for growth and repair of cells? [1]

3. Name ONE food that is rich in lipids (fats). [1]

4. What is the job of dietary fibre? [1]

5. Why do we need water in our diet? [1]

6. Which mineral is needed for strong bones and teeth? [1]

7. Which mineral is needed to make haemoglobin in red blood cells? [1]

8. Name the reagent used to test for protein and give the positive colour. [2]

9. What colour does Benedict's solution turn if a lot of sugar is present? [1]

10. Give TWO functions of lipids in the body. [2]

11. Vitamin C helps keep skin and gums healthy. Name ONE good source. [1]

12. Why is water used control in food tests? [2]

13. A 30 g bowl of cereal contains 21 g of carbohydrate. What percentage is carbohydrate? [2]

14. Hannah is vegan. Suggest TWO foods she could eat to get enough protein. [2]

4. Before you hand it in

"Fat is bad and should be cut out completely."

Lipids store energy, insulate and build cell membranes. Too much is unhealthy, but some is needed.

"Fibre gives us energy."

Fibre adds bulk so muscles in the gut can push food along. It provides almost no energy.

Forgetting to heat Benedict's solution.

Place the tube in a hot water bath (about 80 °C) for a few minutes. Never heat it directly in a flame.

Saying iodine turns 'black' with all foods.

Iodine stays orange-brown with no starch; it turns blue-black only when starch is present.