

Design Technology: Healthy Meals Challenge with Max and Bea

Learning objective: To understand the principles of a healthy, balanced diet and apply this knowledge to design nutritious meals.

Read each flashcard carefully. Try to answer the question before reading the answer provided. Use these cards to test your knowledge of food groups and meal planning.

What is meant by a 'balanced diet'?

A balanced diet means eating a variety of foods in the right proportions to provide the body with all the nutrients it needs to function correctly.

Max is looking at a plate of food. Which food group provides the main energy needed for his brain to solve maths puzzles?

Carbohydrates (such as bread, rice, pasta, or potatoes).

Bea the bee explains that protein is essential for growth. Can you name two sources of protein?

Examples include chicken, fish, eggs, beans, lentils, or nuts.

Why is it important to include 'five a day' of fruit and vegetables in our meals?

They provide essential vitamins, minerals, and fibre that help our bodies grow, stay healthy, and fight off illnesses.

What is the purpose of fibre in our digestive system?

Fibre helps to move food through our digestive system smoothly and helps us feel full for longer.

If a meal costs £3.50, how much change would you get from a £5.00 note if you bought two identical meals?

$£5.00 - (£3.50 + £3.50) = -£2.00$. You would not have enough money; you would need £2.00 more.

Why should we limit the amount of 'free sugars' (like those found in sweets and fizzy drinks) in our diet?

Consuming too much sugar can lead to tooth decay and provide 'empty calories' that do not offer the nutrients our bodies need.

Explain why hydration is just as important as the food we eat.

Water makes up a large part of our body weight and is needed for every cell to function, including regulating body temperature and transporting nutrients.

Compare and contrast a snack of an apple versus a packet of crisps. Which is the healthier choice and why?

The apple is healthier because it provides natural sugars, fibre, and vitamins, whereas crisps are often high in salt and saturated fats with fewer nutrients.

Justify why a professional athlete might need a different meal plan compared to someone who is mostly sedentary.

Athletes expend more energy and require more carbohydrates for fuel and protein for muscle repair, whereas sedentary individuals require fewer calories to avoid excess energy storage.

What might happen to our bodies if we excluded an entire food group, such as fats, from our diet?

Our bodies would struggle to absorb certain vitamins (A, D, E, and K) and lack protection for our organs, as healthy fats are necessary for brain health and energy storage.

Design a healthy, balanced lunch for a school picnic. List at least one item from each main food group.

A wholemeal sandwich (carbohydrate/protein), a side salad with carrots and cucumber (vegetables), a piece of fruit (vitamins), and a pot of natural yoghurt (calcium/protein).