

Design Technology Assessment: Designing Healthy Meals

Learning objective: To understand the principles of a healthy, balanced diet and apply design skills to create a nutritious meal plan.

Read each question carefully. Use your knowledge of the 'Eatwell Guide' and food preparation techniques to answer. Ensure your explanations are clear and use subject-specific vocabulary.

Max the monkey is planning a healthy lunch for a picnic with his friends. He wants to ensure his meal is packed with energy for climbing and nutrients for staying healthy. He has a budget of £5.00 to spend on fresh ingredients at the market. Max needs to consider food groups, preparation methods, and safety in the kitchen.

Word bank: carbohydrates · protein · nutrients · balanced · hygiene · preparation · fibre · vitamins

1. Identify two main food groups that should be included in a balanced meal and explain why the body needs them. (2 marks)

2. Max is preparing a salad. Why is it essential to wash vegetables thoroughly before preparation? Refer to kitchen hygiene in your answer. (2 marks)

3. If Max buys a loaf of bread for £1.20, a punnet of strawberries for £1.85, and a block of cheese for £1.45, how much change will he receive from his £5.00 budget? (3 marks)

4. Compare and contrast a meal high in processed sugar with a meal based on complex carbohydrates. Which provides more sustained energy for Max's climbing, and why? (4 marks)

5. Explain why it is important to store raw meat separately from ready-to-eat foods like salad leaves when preparing a meal. (3 marks)

6. Justify your choice of ingredients for a healthy, balanced school lunch. You must include at least three different food groups and explain the nutritional benefit of each chosen ingredient. (6 marks)

7. What might happen to the nutritional value of vegetables if they are boiled for too long? Suggest a better preparation method to preserve vitamins. (2 marks)

8. Extended Writing Task: Imagine you are a food technologist. Design a new 'Energy Snack' for children. Describe the ingredients, explain why they are healthy, and justify how this snack supports a busy afternoon of learning. (5 marks total) (3 marks)

Draw: In the space below, draw a cross-section of your 'Energy Snack'. Use labels to point out the different food groups present in your design.



Extension challenge: Total: /25. Greater Depth Challenge: Research and write a short paragraph explaining the term 'food provenance'. Why is it important for consumers to know where their food comes from when selecting ingredients for a healthy meal?