

Design Technology Assessment: Nutritional Balance and Culinary Design

Learning objective: To evaluate understanding of the eatwell guide, nutritional properties of food, and the design process involved in creating a balanced meal.

Read each question carefully. Use your knowledge of the eatwell guide and food groups to provide detailed answers. Ensure your explanations are clear and use subject-specific vocabulary.

Max the monkey is planning a healthy lunch for his friends. He wants to ensure that every meal he prepares provides the necessary energy for their afternoon adventures while following the principles of a healthy, balanced diet. He is considering using seasonal vegetables and locally sourced ingredients to reduce his environmental footprint.

Word bank: Carbohydrates · Protein · Nutrients · Balanced diet · Fibre · Seasonality · Sustainability · Food hygiene

1. Identify the two main food groups that should make up the largest portion of our daily intake according to the eatwell guide, and explain why they are essential for our bodies. (2 marks)

2. Max is choosing between a sugary snack and a piece of fruit. Compare and contrast the nutritional value of these two options in terms of energy release. (3 marks)

3. Explain why it is important to include a variety of colours on a plate when designing a meal. (2 marks)

4. What does the term 'seasonality' mean in the context of cooking, and how does choosing seasonal produce benefit the environment? (3 marks)

5. List three essential food hygiene rules one must follow when preparing food in a kitchen to prevent cross-contamination. (3 marks)

6. Justify why a diet consisting only of carbohydrates would be insufficient for a growing child, even though they provide energy. (4 marks)

7. Imagine you are designing a new school lunch menu. Create a balanced meal plan for one day. You must justify your choice of ingredients by linking them to specific nutrients and health benefits. (Total: 5 marks) (5 marks)

Draw: Sketch a diagram of a 'Perfect Balanced Plate'. Label the sections clearly, showing the correct proportions of carbohydrates, fruit and vegetables, protein, and dairy/alternatives.



Extension challenge: What might happen to a population's health if they relied solely on processed, pre-packaged foods rather than fresh, raw ingredients? Write a short, persuasive paragraph arguing for the importance of culinary skills in the modern world. Total: /25