

Max's Nutritional Discovery Lab

Learning objective: To identify the components of a healthy diet and explain how nutrients support the human body's growth and function.

Max the Monkey is on a mission to understand what fuels his adventures! Use this fact-file template to research and record the importance of different food groups. Think carefully about how these nutrients work together to keep the human body healthy and active. Fill in the boxes below based on your scientific research.

Word bank: carbohydrates · proteins · fats · vitamins · minerals · fibre · hydration · balanced · energy · nutrients

1. The Energy Source: Explain the primary function of carbohydrates in our diet and provide two examples of healthy sources. (2 marks)

2. Building Blocks: Justify why proteins are essential for a growing child. What might happen to a body that does not receive enough protein? (3 marks)

3. Micronutrient Mastery: Compare and contrast the roles of vitamins and minerals. Why are they required in smaller quantities than other nutrients? (3 marks)

4. The Balanced Plate: Describe what a balanced meal looks like. If you had to swap one ingredient for a healthier alternative, what would it be and why? (2 marks)

5. Scientific Analysis: Explain why 'hydration' is categorised as a vital part of nutrition, even though water does not contain calories. (2 marks)

6. Critical Thinking: Max is planning a long hike. Based on your knowledge of nutrition, create a meal plan for his lunch that provides sustained energy. Justify your choices. (4 marks)

Extension challenge: Design a 'Nutrient Investigation' experiment. If you wanted to test which foods contain the most starch or fat, how would you conduct a fair test? Write a short method for your experiment, including the variables you would keep the same to ensure your results are accurate.