Fueling Your Body: The Science of Nutrition

Learning objective: To identify the importance of a balanced diet and understand how nutrients provide energy and support growth.

Read the passage below carefully and answer the questions using full sentences. Refer back to the text to support your answers.

Bea the honeybee knows that to keep her colony buzzing, she needs the right fuel. Humans are exactly the same! A balanced diet is essential for providing the energy we need to grow, think, and play. Our bodies require a variety of nutrients to function correctly. Carbohydrates, found in foods like bread and potatoes, act as our primary energy source, helping us power through a busy school day. Proteins, such as beans, fish, and lentils, are the body's building blocks; they are vital for repairing tissues and growing strong muscles. Meanwhile, vitamins and minerals, which we get from colourful fruits and vegetables, keep our immune systems healthy and strong. It is not just about what we eat, but also what we drink. Water is crucial for every single cell in our bodies, helping to regulate our temperature and move nutrients around. When we eat a diverse range of foods, we ensure our bodies have all the tools they need to stay fit. Choosing a mix of these food groups is the secret to a healthy, happy life.

Word bank: nutrients · carbohydrates · protein · vitamins · minerals · balanced · energy · hydration

1. According to the text, what is the primary role of protein in the human body? (2 marks)

2. Name two types of food mentioned in the text that are good sources of carbohydrates. (2 marks)

3. Why does the author describe protein as the body's 'building blocks'? (3 marks)

4. Why might a person feel tired during the school day if they do not eat enough carbohydrates? (3 marks)

5. Why is it important to have a 'diverse range' of foods in your diet rather than just eating one type of food? Justify your answer using the text. (4 marks)

Draw: Draw a colourful 'healthy plate' showing a balance of protein, carbohydrates, and fruits/vegetables. Label each section with the nutrient type.

Extension challenge: Research the 'Eatwell Guide' used in the UK. Create a one-day menu that includes at least one serving from each of the main food groups.