

Year 5 Science Assessment: Nutrition and the Human Body

Learning objective: To identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat.

Read each question carefully. Use your scientific knowledge to provide clear and accurate answers. Ensure your explanations are detailed to achieve maximum marks.

Nova the owl has been observing the eating habits of different creatures in the forest. She has noticed that while some animals graze on grass, others hunt for different food sources. Nova knows that all living things require specific nutrients to maintain health, support growth, and provide the energy necessary for daily movement.

Word bank: nutrients · carbohydrates · protein · fats · vitamins · minerals · balanced diet · energy · growth · repair

1. Nova notes that humans need a 'balanced diet'. Define what is meant by a 'balanced diet' and explain why it is essential for a healthy lifestyle. (2 marks) (2 marks)

2. Identify two food groups that provide the body with energy. Explain how the body uses these specific nutrients. (4 marks) (4 marks)

3. Max the monkey is comparing two snacks: a banana costing £0.40 and a bag of crisps costing £0.80. Even though the crisps are more expensive, justify why a scientist might argue that the banana is a better nutritional choice for a growing child. (3 marks) (3 marks)

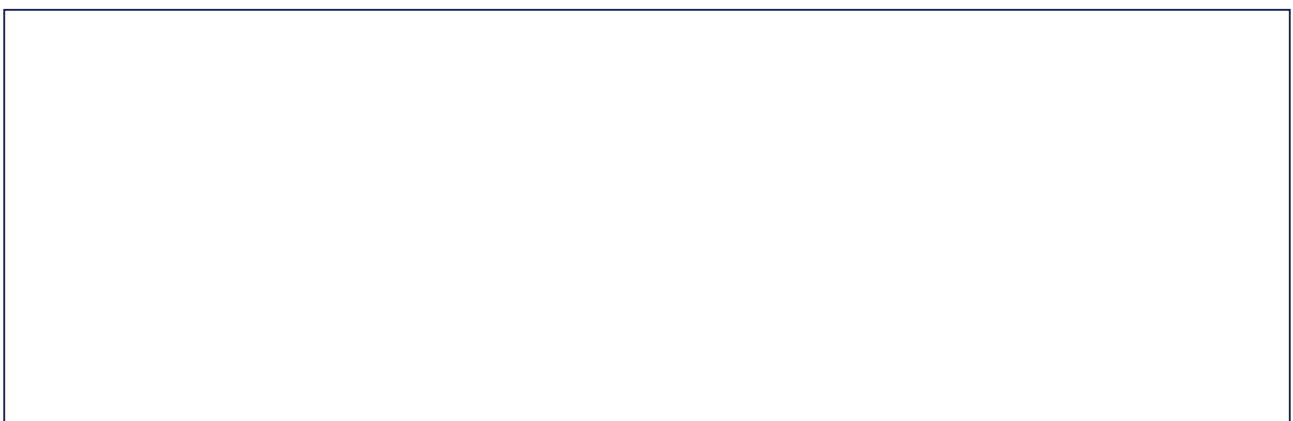
4. Explain the role of protein in the human body. What might happen to a person's physical health if their diet consistently lacked sufficient protein? (4 marks) (4 marks)

5. Compare and contrast the nutritional needs of a professional athlete compared to a person with a sedentary (very inactive) lifestyle. Why must their food intake differ? (4 marks) (4 marks)

6. Extended Response: Bea the honeybee explains that humans cannot make their own food like plants do. Describe the journey of nutrition from the source of food to how it supports the human body. Include references to growth, repair, and energy in your answer. (5 marks) (5 marks)

7. What might happen if a human diet consisted only of fats and sugars? Predict the long-term impact on the body's systems. (3 marks) (3 marks)

Draw: Draw and label a 'Healthy Plate' model. Show the correct proportions of fruit, vegetables, carbohydrates, and protein that a 10-year-old should consume in a meal.



Extension challenge: Total: /25. Challenge: Research a specific vitamin (e.g., Vitamin C or D). Write a short paragraph explaining its function in the body and identify two food sources where it can be found. Why is it dangerous to have a severe deficiency in these nutrients?