

Nova's Dental Discovery: Understanding Human Teeth

Learning objective: To identify and describe the functions of different types of human teeth and explain how to maintain good oral hygiene.

Read each question carefully. Use your scientific knowledge to explain the functions of the human dentition and apply your understanding of how diet affects dental health. Ensure your answers are clear and detailed to demonstrate a deeper understanding of biology.

Nova the owl has been observing how different animals eat to help her understand human biology. Humans are omnivores, meaning we have a variety of teeth designed to process both plant and animal matter. Understanding the structure and maintenance of these teeth is essential for our health and growth.

Word bank: incisor · canine · molar · premolar · enamel · dentine · plaque · digestion · carnivore · herbivore

1. Nova wants to know the specific roles of incisors and molars. Explain how their shapes are adapted for their unique functions during the process of digestion. (2 marks)

2. Compare and contrast the teeth of a strict herbivore with those of a human. Why is it advantageous for humans to have a combination of different tooth types? (3 marks)

3. Max the monkey suggests that eating sweets costing £2.50 might be less harmful than eating fruit costing £1.20 if you brush your teeth afterwards. Justify your scientific opinion on this claim. (2 marks)

4. What might happen to the digestive process if a person lost all of their molars? Explain your reasoning. (2 marks)

5. Enamel is the hardest substance in the human body. Explain why, despite its hardness, it is still vulnerable to damage from acidic drinks. (2 marks)

Draw: Draw a diagram of a human set of teeth. Label an incisor, a canine, and a molar. Use arrows to show the direction of force each tooth type applies when chewing a piece of crunchy apple.



Extension challenge: Design a 'Tooth-Friendly Menu' for a week. Your budget is £20.00. Write a short paragraph justifying your food choices based on sugar content and the mechanical benefits of the foods selected for cleaning teeth naturally.