

Nova's Dental Discovery: Year 4 Science Assessment

Learning objective: To identify and describe the functions of different human teeth and construct a food chain to show how teeth are adapted for different diets.

Read each question carefully. Use your scientific knowledge to provide detailed explanations. Remember to use accurate terminology.

Nova the barn owl has been observing different animals in the forest. She has noticed that the shape of an animal's teeth tells us a lot about what they eat and how they survive. Max the monkey is curious about how these teeth help with the first stage of digestion.

Word bank: incisors · canines · molars · premolars · herbivore · carnivore · omnivore · enamel · digestion

1. Identify the three main types of human teeth and describe the specific function of each type. (3 marks)

2. Max the monkey is an omnivore. Explain why having a variety of tooth shapes is an advantage for an omnivore. (2 marks)

3. Compare and contrast the teeth of a sheep (herbivore) and a lion (carnivore). Why are their teeth shaped differently? (4 marks)

4. What might happen to the process of digestion if a human did not have molars? Justify your answer. (3 marks)

5. Nova found a fossilised jawbone with long, sharp, pointed teeth. Based on the tooth shape, classify this animal's diet and explain your reasoning. (3 marks)

6. Explain why it is important for humans to maintain good dental hygiene to protect the enamel of their teeth. (3 marks)

7. Extended Writing Task: Imagine you are a scientist studying a newly discovered creature. The creature has flat, wide teeth at the back and sharp, pointed teeth at the front. Describe the creature's likely diet, explain how its teeth help it eat, and predict what would happen if the creature's environment changed so that only tough, fibrous plants were available to eat. Use scientific vocabulary throughout. (5 marks)

Draw: Draw a diagram of a human set of teeth. Clearly label the incisors, canines, and molars, using arrows to show where they are positioned in the mouth.



Extension challenge: Total: /25. Challenge: Research the dental formula of a different mammal. How does its number of incisors compared to a human's suggest a different evolutionary adaptation?