

Nova's Digestive System Investigation

Learning objective: To identify and describe the functions of the organs in the human digestive system.

Join Nova the owl on an adventure through the human body! Use your textbook or class notes to help you explain how food travels through the system. Think like a scientist and use clear, descriptive vocabulary to explain the role of each stage.

Word bank: oesophagus · stomach · small intestine · large intestine · absorption · nutrients · digestion · enzymes

1. The Journey Begins: Describe what happens to food inside the mouth and the role of the oesophagus in transporting it to the stomach. (3 marks)

2. The Stomach's Role: Explain how the stomach acts as a mixer. Why is it important that food is broken down into a liquid form here? (3 marks)

3. Absorption Station: Compare the functions of the small intestine and the large intestine. Why is the small intestine essential for our health? (4 marks)

4. Scientific Justification: Justify why the body needs to break down complex food into smaller molecules. What might happen if our digestive system could not absorb these nutrients? (4 marks)

5. Critical Thinking: Explain why the digestive system is often described as a 'tube within a tube'. How does this structure aid efficient digestion? (3 marks)

6. Predictive Science: If an individual had a problem with their small intestine, what impact would this have on the rest of their body's energy levels? Explain your reasoning. (5 marks)

Extension challenge: Imagine you are a tiny explorer travelling through the digestive tract. Write a creative diary entry describing the sensory experience of moving from the stomach to the intestines. Use scientific terminology to describe the environment you encounter.