

The Incredible Digestive Journey with Bea the Bee

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

Read each question carefully and apply your scientific knowledge of the digestive system to provide detailed, accurate explanations.

Bea the Bee has been observing how humans process their food. She knows that digestion is a complex process starting from the moment food enters the mouth and ending when the body has absorbed what it needs.

Word bank: Oesophagus · Stomach · Small intestine · Large intestine · Nutrients · Absorption · Saliva · Digestion

1. Explain the role of saliva in the mouth at the very beginning of the digestive process. Why is it essential for the food to be broken down before it reaches the stomach? (2 marks)

2. Compare and contrast the functions of the small intestine and the large intestine. Why is the small intestine significantly longer? (3 marks)

3. Describe the journey of food through the oesophagus. What type of movement helps the food travel down into the stomach? (2 marks)

4. Justify why the body needs to absorb nutrients from food. What might happen to a human if their small intestine was unable to absorb these nutrients effectively? (3 marks)

5. If you were to design an experiment to show how the stomach 'churns' food, what household items might you use to model this action and why? (2 marks)

Draw: Draw a labelled diagram of the human digestive system. Ensure you include the mouth, oesophagus, stomach, small intestine, and large intestine, using arrows to show the direction of travel.



Extension challenge: Nova the Owl suggests that we think about how diet affects the digestive system. Write a short paragraph explaining the importance of fibre in the diet for the large intestine. Then, propose a hypothesis: what might happen to the digestive process if a person only ate liquid food for a week?