

The Anatomy of a Healthy Smile: A Nova Science Task

Learning objective: To identify and describe the functions of different types of human teeth in the digestive system.

Use your knowledge of human biology to complete the scientific diagram below. Ensure your labels are clear and your drawings are anatomically representative.

Draw: Create a clear, scientific diagram style drawing. On the left side of the page, draw a detailed set of human teeth viewed from the front, showing the variety of shapes. On the right side, draw a large, zoomed-in cross-section of a single tooth showing the internal layers (enamel, dentine, pulp). Use neat, straight lines to connect labels from the word bank to the correct parts of your drawings.



Label words: Incisors · Canines · Premolars · Molars · Enamel · Dentine · Pulp · Gum

Steps:

1. Step 1: Draw a large, open mouth showing the full set of adult teeth. Label one incisor, one canine, and one molar.
2. Step 2: Draw a cross-section of a single tooth. Label the enamel, dentine, and the soft pulp in the centre.
3. Explain why humans have different shapes of teeth. How does the shape of a molar differ from an incisor, and why is this necessary for digestion?

4. Compare and contrast the teeth of a herbivore (like an elephant) and a carnivore (like a lion). Justify your answer based on their natural diets.
5. What might happen to the digestive process if a person lost all of their molars? Explain your reasoning.
6. Research Task: Nova the owl wants to know how sugar affects tooth enamel. Predict what happens to a tooth if it is left in a fizzy, sugary drink for one week.