

Scientific Error Spotting: Cell Organelles

Instructions

A student has drawn some diagrams of cell organelles for their Biology revision guide, but they have made several critical scientific errors.

Your task is to act as the teacher: **examine each diagram carefully, identify the mistakes, and write the corrections** based on your knowledge of mitochondria, plastids, and vacuoles.

Case 1: The 'Powerhouse' Diagram



1. Identify **two** structural or functional errors in the student's diagram of the mitochondrion. Explain why they are incorrect and how they should be drawn or labelled instead.

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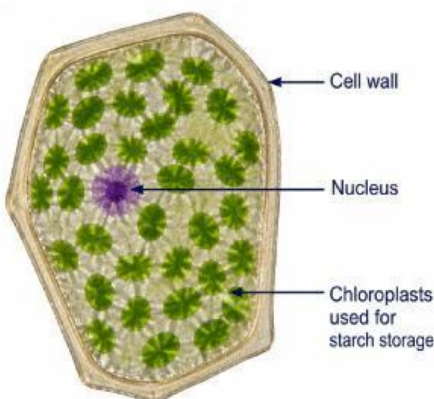
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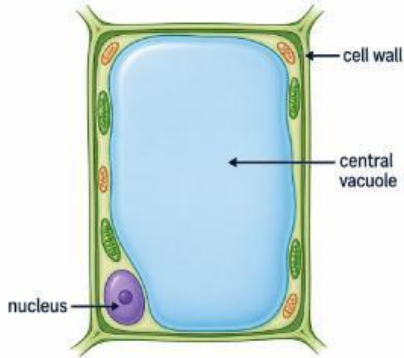
Case 2: The Potato Cell



2. This diagram shows a cell from a potato tuber (which grows underground in the soil). What is the major error regarding the **plastids** shown in this cell? State which plastid should be present and why.

Case 3: The Wilting Plant

Cell from a heavily wilted leaf



3. The title of this diagram states it is a cell from a 'heavily wilted leaf'. Explain why the drawing of the **central vacuole** completely contradicts the title.
