



SB6 Plant structures and their functions

Personal learning checklist | 1 of 2

GCSE Edexcel Separate Sciences | Biology Paper 2

Name _____ Class _____ Date _____

Tick one box for each statement. Red: need help. Amber: partly confident.
Green: can do independently.

I can	Red	Amber	Green
Photosynthesis and plant food			
Explain photosynthesis as an endothermic process producing glucose, oxygen and biomass.	☐	☐	☐
Write word and balanced symbol equations for photosynthesis and identify chlorophyll's role.	☐	☐	☐
Explain how plants use glucose for respiration, storage, transport and making cell materials.	☐	☐	☐
Leaf structure and limiting factors			
Link palisade and guard cell structures to photosynthesis, stomatal opening and gas exchange.	☐	☐	☐
Explain individual photosynthesis limiting factors and, for Higher, how they interact.	☐	☐	☐
Calculate relative light intensity using the inverse-square law and explain its limits (Higher).	☐	☐	☐
Photosynthesis investigation			
Plan a fair pondweed light-intensity investigation, controlling temperature and carbon dioxide.	☐	☐	☐
Compare bubble counting with gas-volume measurement and explain repeats and mean results.	☐	☐	☐
Calculate oxygen-production rates and interpret photosynthesis graphs.	☐	☐	☐
Root uptake and xylem			
Explain root hair adaptations, water uptake by osmosis and mineral uptake by active transport.	☐	☐	☐
Link dead, hollow, lignified xylem vessels to water and mineral transport.	☐	☐	☐
Explain evaporation, stomatal diffusion and the transpiration pull through xylem.	☐	☐	☐

My next revision priority _____



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Phloem and water balance			
Explain how light, temperature, wind and humidity affect water loss and wilting.	☐	☐	☐
Compare xylem with living phloem and explain sucrose translocation between sources and sinks.	☐	☐	☐
Water-uptake investigations			
Explain potometer measurements, setup controls and why water uptake only estimates transpiration.	☐	☐	☐
Calculate bubble movement and volume-uptake rates using capillary dimensions.	☐	☐	☐
Interpret repeated potometer results and compare environmental conditions fairly.	☐	☐	☐
Leaf adaptations			
Relate leaf tissues and air spaces to photosynthesis, transport and gas exchange.	☐	☐	☐
Explain dry and aquatic plant adaptations and their trade-offs.	☐	☐	☐
Plant hormones			
Explain shoot and root tropisms through auxin distribution and unequal elongation.	☐	☐	☐
Plan a controlled tropism investigation and interpret measured growth.	☐	☐	☐
Explain commercial uses of auxins, gibberellins and ethene (Higher).	☐	☐	☐

My next revision priority _____