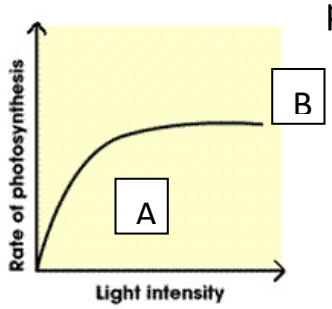
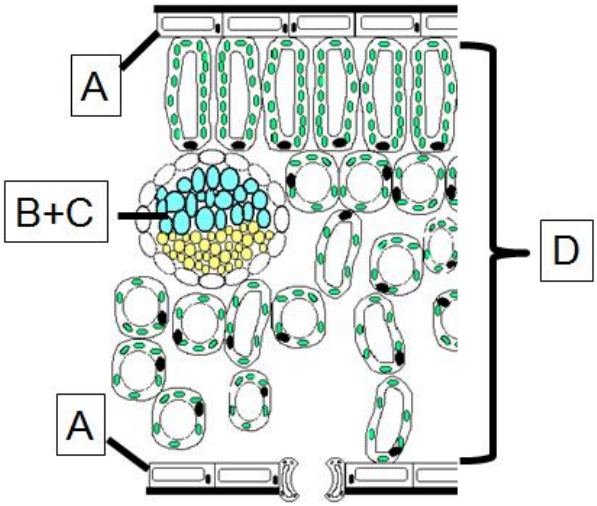
Year 9 B4 Plants Fact Sheet

Photosynthesis	
1. Write the word equation for photosynthesis.	**Carbon dioxide + water → Glucose + Oxygen**
2. Write the balanced symbol equation for photosynthesis	$6CO_2 + 6H_2O \rightarrow C_6H_{12}O_6 + 6O_2$
3. Name the organ in plants which does photosynthesis	**Leaf**
4. Where does the energy for photosynthesis come from?	**Light**
5. Is photosynthesis endothermic or exothermic? Why?	Endothermic, needs light energy in to work
6. Which part of the plant cell does photosynthesis?	**Chloroplast**
7. Name the green pigment which absorbs light	**Chlorophyll**
8. How does the plant get energy from glucose?	**Respiration**
9. Name 2 molecules the plant turns glucose into to store it	Starch, fat/ oil
10. What is glucose turned into to make cell walls	Cellulose
11. What do plants need to make amino acids?	Glucose and nitrates
12. When do plants do photosynthesis?	**When it's light**
13. When do plants do respiration?	All the time
Limiting factors	
14. List 3 factors that can limit the rate of photosynthesis	• **Light intensity** • **Carbon dioxide concentration** • **Temperature**
15. What is limiting the rate of photosynthesis at points A and B? 	A = Low light intensity B = Low carbon dioxide concentration or temperature

Plant tissues	
16. Name the tissues in the cross section of the leaf (4)  	**A = Epidermis** **B and C = Xylem (top) and Phloem (bottom)** **D = Mesophyll**
17. What does the epidermis do?	**Covers organs**
18. What does the mesophyll do?	**Photosynthesis**
19. What does the xylem do?	**Transport water**
20. What does the phloem do?	**Transport sugar**
21. Name the holes on the bottom of the leaf	**Stomata**
22. Which cells control the size of the stomata?	**Guard cells**
23. What do we call movement of water up the xylem?	Transpiration stream
24. What do we call movement of sugar solution in the phloem	Translocation
Plant cells	
25. Describe xylem cells	• Dead cells • Long thin cells • Lignin in their walls
26. Describe phloem cells	• Living cells • Long thin cells • Sieve plates between cells
27. What do root hair cells do?	**Absorb water and minerals from the soil**