C1.3 Photosynthesis

What the Cell · DP Biology · note-taking sheet · SL statements C1.3.1–8

Name _____ **Date** _____

How to use this sheet: go through the slides and videos with it, then close them and write from memory. Use your own words and add page numbers from the book (pp. 425–438) where you want more detail.

Guiding questions. How does photosynthesis capture and use the energy in sunlight? How do non-living factors affect photosynthesis?

C1.3.1–3 The process

Write the word equation. State the energy change, and where the hydrogen and the oxygen come from.

C1.3.4 Chromatography

Draw a finished strip with three spots, and show the distances that you would measure. Write the formula for Rf.

C1.3.5–6 Absorbing light

Explain what happens when a pigment absorbs a photon. Why is green light reflected?

	Absorption spectrum	**Action spectrum**
Vertical axis		
Shows		
Similarities		
Differences		

C1.3.7 Limiting factors

Sketch each graph, and label where the factor is limiting. How would you vary each factor in an experiment?

Light intensity	**CO_2 concentration**	**Temperature**

C1.3.8 CO 2 enrichment

	Greenhouse	**FACE**
Method		
Advantage		

Before you finish

Tick the ones you can explain without notes. Circle anything to ask about.

- ☐ The energy change
- ☐ Word equation
- ☐ Source of oxygen
- ☐ Chromatography and Rf
- ☐ Exciting electrons
- ☐ Both spectra
- ☐ Limiting factors
- ☐ Enrichment experiments