B2.2 Organelles and compartmentalization (HL)

What the Cell · DP Biology · note-taking sheet · HL statements B2.2.4–9

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. 248–255) where you want more detail.

Guiding questions. How does the structure of each organelle suit its function? Why is it useful for cells to have separate compartments?

B2.2.4–5 Mitochondria and chloroplasts

Draw and annotate a mitochondrion and a chloroplast. Beside each part, write how it helps the organelle work.

	Mitochondrion	Chloroplast
Membrane with ATP synthase		
Small space for protons		
Fluid with enzymes		

B2.2.6 The nuclear envelope

What passes through the pores, and in which direction? What happens to the envelope in mitosis, and why?

B2.2.7–9 Making and moving proteins

	Free ribosomes	**Rough ER**
Location		
Proteins made		

Draw a flow chart from the rough ER to secretion. Label what happens in the Golgi apparatus.

How does clathrin help a vesicle form? Give one use of receptor-mediated endocytosis.

Before you finish

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

- ☐ Cristae
- ☐ Intermembrane space
- ☐ Matrix
- ☐ Thylakoids
- ☐ Stroma
- ☐ Nuclear pores
- ☐ Envelope in mitosis
- ☐ Free ribosomes
- ☐ Rough ER
- ☐ Golgi apparatus
- ☐ Vesicles
- ☐ Clathrin