

Scheme of work for Chapter 2, *Cells*

Syllabus section	Content	Time required	Outline of lessons	Coursebook resources	Worksheets	Teacher's resources / Teaching ideas
2.1	Cell theory	3–4 lessons	<ul style="list-style-type: none"> Size and magnification using electron micrographs Identify cell organelles and their functions Cell theory and emergent properties Stem cells and their uses 	p12–20 Worked example p19 TOK p14 Short-answer Qs p16, p20 End-of-chapter Qs p37–39: Q4, Q7	Extension: Q1, Q3 Support: Q1	Practical activity: group exercise Link to TOK Link to Aspects of internationalism Exemplar exam question
2.2	Prokaryotic cells	1–2 lessons	<ul style="list-style-type: none"> Structure and organelles of <i>E. coli</i> Division by binary fission 	p20–22 End-of-chapter Qs p37–39: Q1	Extension: Q2 Support: Q2	
2.3	Eukaryotic cells	2–3 lessons	<ul style="list-style-type: none"> Draw the structure of liver cells and identify organelles Compare the structure of prokaryotic and eukaryotic cells; compare plant and animal cells 	p22–28 TOK p27 Short-answer Qs p27–28 End-of-chapter Qs p37–39: Q1	Extension: Q2 Support: Q2	Practical activity: group exercise
2.4	Membranes	3 lessons	<ul style="list-style-type: none"> Draw and explain membrane structure and components Explain methods of transport including diffusion, osmosis and active transport Vesicle formation and the fluid mosaic nature of the membrane 	p28–33 Short-answer Qs p33 End-of-chapter Qs p37–39: Q3, Q5, Q6	Extension: Q4 Support: Q3, Q4	Practical activities: opportunity for assessed practical on surface area : volume ratio; osmosis practical work Link to ICT: data logging
2.5	Cell division	2 lessons	<ul style="list-style-type: none"> The cell cycle, formation of tumours and events of interphase Details of mitosis and examination of cells (or photographs) during the stages of the process 	p34–37 Short-answer Qs p37 End-of-chapter Qs p37–39: Q2	Extension: Q5 Support: Q5	Exemplar exam question

Note: 1 lesson = approximately 40 minutes