SB2: **Cells and control** (Paper 1)

Lesson	Objectives Tracker Sheet	Date covered	I know this well	I need to do more work on this
SB2a Mitosis	B2.1 Describe mitosis as part of the cell cycle including the stages interphase, prophase, metaphase, anaphase and telophase and cytokinesis.			
	B2.2 Describe the importance of mitosis in growth, repair and asexual reproduction.			
	B2.3 Describe the division of a cell by mitosis as the production of two daughter cells, each with identical sets of chromosomes in the nucleus to the parent cell, and that this results in the formation of two genetically identical diploid body cells.			
	B2.4 Describe cancer as the result of changes in cells that lead to uncontrolled cell division.			
SB2b Growth in animals	B2.5 Describe growth in organisms including: (a) cell division and differentiation in animals.			
	B2.6 Explain the importance of cell differentiation in the development of specialised cells.			
	B2.7 Demonstrate an understanding of the use of percentile charts to monitor growth.			
SB2c Growth in plants	B2.5 Describe growth in organisms, including: (b) cell division, elongation and differentiation in plants.			
	B2.6 Explain the importance of cell differentiation in the development of specialised cells.			
SB2d Stem cells	B2.8 Describe the function of embryonic stem cells, stem cells in animals and meristems in plants.			
	B2.9 Discuss the potential benefits and risks associated with the use of stem cells in medicine.			

SB2e The brain	B2.10B Describe the structures and functions of the brain including the cerebellum, cerebral hemispheres and medulla oblongata.			
SB2f Brain and spinal cord problems	B2.11B **H** Explain how the difficulties of accessing brain tissue inside the skull can be overcome by using CT scanning and PET scanning to investigate brain function.			
	B2.12B **H** Explain some of the limitations in treating damage and disease in the brain and other parts of the nervous system, including spinal injuries and brain tumours.			
SB2g The nervous system	B2.13 Explain the structure and function of sensory receptors, sensory neurons, relay neurons in the CNS, motor neurons and synapses in the transmission of electrical impulses including the axon, dendron, myelin sheath and the role of neurotransmitters.			
SB2h The eye	B2.15B Explain the structure and function of the eye as a sensory receptor including the role of: · a the cornea and lens · b the iris · c rod and cone cells in the retina.			
	B2.16B Describe defects of the eye including cataracts, long-sightedness, short-sightedness and colour blindness.			
	B2.17B Explain how cataracts, long-sightedness and short-sightedness can be corrected.			
SB2i Neurotransmission speeds	B2.13 Explain the structure and function of motor neurones and synapses in the transmission of electrical impulses including the axon, dendron, myelin sheath and the role of neurotransmitters.			
	B2.14 Explain the structure and function of a reflex arc including sensory, relay and motor neurones.			