

# Key stage 4

	Term	Topic	Learning Outcomes	Assessment
Year 9	Term 3	SB1 Key Concepts in Biology (Paper 1 and Paper 2)	To know about:  ✓ SB1a - Microscopes ✓ SB1b - Plant and animal cells ✓ SB1b - Core practical: using microscopes ✓ SB1c - Specialised Cells ✓ SB1d - Inside bacteria & Standard Form [H] ✓ SB1e - Enzymes and nutrition ✓ SB1f - Testing Foods ✓ Sb1f - Core practical: Testing Foods ✓ SB1g - Enzyme action ✓ SB1h - Enzyme activity ✓ SB1h - Core practical: pH and enzymes ✓ SB1i - Transporting substances (diffusion, osmosis and active transport) ✓ SB1i - Core practical: Osmosis in potato slices	SB1 – End of topic test



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Term 1	SB2 Cells and Control (Paper 1)  SB3 Genetics (Paper 1)	To know about:  ✓ SB2a – Mitosis ✓ SB2b – Growth in animals ✓ SB2c – Growth in plants ✓ SB2d – Stem Cells ✓ SB2e – The brain ✓ SB2f – Brain and spinal cord problems [H] ✓ SB2g – The nervous system ✓ SB2h – The eye ✓ SB2i – Neurotransmission speed  ✓ SB2 – Revision activities  To know about:  ✓ SB3a - Sexual and asexual reproduction ✓ SB3b – Meiosis ✓ SB3ci – DNA ✓ SB3cii – DNA Extraction ✓ SB3d – Protein synthesis [H] ✓ SB3e – Genetic variants and phenotypes [H] ✓ SB3f – Mendel ✓ SB3g – Alleles ✓ SB3i – Multiple and missing alleles [H]	SC2 – End of topic test  SB3 – End of topic test
T	erm 1	SB3 Genetics	✓ SB2c – Growth in plants  ✓ SB2d – Stem Cells  ✓ SB2e – The brain  ✓ SB2f – Brain and spinal cord problems [H]  ✓ SB2g – The nervous system  ✓ SB2h – The eye  ✓ SB2i – Neurotransmission speed  ✓ SB2 – Revision activities  To know about:   SB3 Genetics (Paper 1)  ✓ SB3a - Sexual and asexual reproduction  ✓ SB3b – Meiosis  ✓ SB3ci – DNA  ✓ SB3cii – DNA Extraction  ✓ SB3d – Protein synthesis [H]  ✓ SB3e – Genetic variants and phenotypes [H]  ✓ SB3f – Mendel  ✓ SB3g – Alleles



	Term	Topic	Learning Outcomes	Assessment
Year 10		SB4 Natural Selection and Genetic Modification (Paper1)	To know about:  ✓ SB4a – Evidence of human evolution ✓ SB4b – Darwin's theory ✓ SB4c – Development of Darwin's theory ✓ SB4d – Classification ✓ SB4e – Breeds and varieties ✓ Sb4f – Tissue culture ✓ SB4g – Genes in agriculture and medicine [H] ✓ SB4h – GM and agriculture ✓ Sb4i – Fertiliser and biological control ✓ SB4 – Revision activities	SB4 – End of topic test
Yea	Term 2	SB5 Health, Disease and the Development of Medicines (Paper 1)	To know about:  ✓ SB5a – Health and disease ✓ SB5b – Non-Communicable diseases ✓ SB5c – Cardiovascular disease ✓ SB5d – Pathogens ✓ SB5e – Spreading pathogens ✓ SB5f – Virus life cycles ✓ SB5g – Plant defences ✓ SB5h – Plant diseases [H] ✓ SB5i – Physical and chemical barriers ✓ SB5j – The immune system ✓ SB5k – Antibiotics	SB5 – End of topic test

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	<ul> <li>✓ SB5k – Core practical: Antibiotics</li> <li>✓ SB5i – Monoclonal antibodies</li> </ul>	
	✓ SB5 – Revision activities	



## Key stage 4

	Term	Topic	Learning Outcomes	Assessment
Year 10	Term 3	SB6 Plant Structures and their Functions (Paper 2)	To know about:  ✓ SB6a – Photosynthesis ✓ SB6b – Factors that affect photosynthesis [H] ✓ SB6b – Core practical: Light intensity and photosynthesis ✓ SB6c – Absorbing water and mineral ions ✓ SB6d – Transpiration and translocation ✓ SB6e – Plant adaptations ✓ SB6f – Plant hormones ✓ SB6g – Uses of plant hormones [H]  ✓ SB6 – Revision activities	SB6 – End of topic test  End of Year 10 Exam

End of year assessment

This will include topics SB1-5

Misconceptions will be addressed as part of the end of year assessment review process



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	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 1	SB7 Animal Coordination, Control and Homeostasis (Paper 2)	To know about:  ✓ SB7a – Hormones  ✓ SB7b – Hormonal control of metabolic rate [H]  ✓ SB7c – The menstrual cycle  ✓ SB7d – Hormones and the menstrual cycle [H]  ✓ SB7e – Control of blood glucose [H]  ✓ SB7f – Type 2 diabetes  ✓ SB7g – Thermoregulation [H]  ✓ SB7h – Osmoregulation  ✓ SB7i – The kidneys [H]  ✓ SB7 – Revision activities  ✓ SB1-5 – Year 11 mock exam revision activities	SB6 – End of topic test  Year 11 Mock exam
			Vacuata Nacala avenue	

Year 11 Mock exams

This will include topics SB1-5

Misconceptions will be addressed as part of the end of year assessment review process



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	Term	Topic	Learning Outcomes	Assessment
		SB8 Exchange and Transport in Animals (Paper 2)	To know about:  ✓ SB8a – Efficient transport and exchange ✓ SB8b – Factors affecting diffusion ✓ SB8c – The circulatory system ✓ SB8d – The heart ✓ SB8e – Cellular respiration ✓ SB8e – Core practical: respiration rates ✓ SB8 – Revision activities	SB8 – End of topic test
			To know about:	
Year 11	Term 2	SB9 Ecosystems and Material Cycles (Paper 2)	<ul> <li>✓ SB9a – Ecosystems</li> <li>✓ SB9b – Energy transfer</li> <li>✓ SB9c – Abiotic factors and communities</li> <li>✓ SB9c – Core practical: Quadrats and transects</li> <li>✓ SB9d – Biotic factors and communities</li> <li>✓ SB9e – Assessing pollution [H]</li> <li>✓ SB9f – Parasitism and mutualism</li> <li>✓ SB9g – Biodiversity and humans</li> <li>✓ SB9h – Preserving biodiversity</li> <li>✓ SB9i – Food Security</li> <li>✓ SB9j – The water cycle</li> <li>✓ SB9k – The nitrogen cycle</li> <li>✓ SB9m – Rates of decomposition</li> <li>✓ SB9 – Revision activities</li> </ul>	SB9 – End of topic test

	Term	Topic	Learning Outcomes	Assessment
		Exam Preparation	<ul><li>✓ Exam techniques</li><li>✓ Past exam papers</li><li>✓ 6 mark questions</li></ul>	Paper 1 and Paper 2 Mock exam papers
Year 11	Term 3			

### **Exam dates:**

### Paper 1 exam dates:

Biology – 19<sup>th</sup> May 2021

Chemistry – 24<sup>th</sup> May 2021

Physics – 27<sup>th</sup> May 2021

### Paper 2 exam dates:

Biology – 14<sup>th</sup> June 2021

Chemistry – 17<sup>th</sup> June 2021

Physics – 22<sup>nd</sup> June 2021

