

	Term	Topic	Learning Outcomes	Assessment
Year 9	Term 3	CB1 Key Concepts in Biology <i>(Paper 1 and Paper 2)</i>	To know about: ✓ CB1a - Microscopes ✓ CB1b - Plant and animal cells ✓ CB1b – Core practical: using microscopes ✓ CB1c – Specialised Cells ✓ CB1d – Inside bacteria ✓ CB1e – Enzymes and nutrition ✓ CB1f – Enzyme action ✓ CB1g – Enzyme activity ✓ CB1g – Core practical: pH and enzymes ✓ CB1h – Transporting substances (diffusion, osmosis and active transport) ✓ CB1h – Core practical: Osmosis in potato slices CB1 – Revision activities	CB1 – End of topic test
		CC1 States of matter <i>(Paper 3)</i> CC2 Methods of Separating and Purifying substances <i>(Paper 3)</i>	To know about: ✓ CC1 a - The states of matter ✓ CC2a - Mixtures ✓ CC2b - Filtration and crystallisation ✓ CC2c - Paper chromatography ✓ CC2d - Distillation ✓ CC2d - Core practical: Investigating inks ✓ CC2e – Drinking water CC1-2 – Revision activities	CC1-2 – End of topic test

Year 9		CP1 Motion (Paper 5)	To know about: ✓ CP1a – Vectors and Scalars ✓ CP1b – Distance/time graphs ✓ CP1c – Acceleration ✓ CP1d – Velocity/time graphs CP1 – Revision activities	CP1 – End of topic test
	Term 3	CP2 Motion and Forces (Paper 5)	To know about: ✓ CP2a – Resultant forces ✓ CP2b – Newton's First Law ✓ CP2c – Mass and weight ✓ CP2d – Newton's Second Law ✓ CP2d – Core practical: Investigating acceleration ✓ CP2e – Newton's Third Law ✓ CP2f – Momentum ✓ CP2g – Stopping distances ✓ CP2i – Crash hazards CP2 – Revision activities	CP2 – End of topic test

	Term	Topic	Learning Outcomes	Assessment
Year 10	Term 1	<u>Our plan to bridge the gap</u> We will be recapping all of the topics covered in term 3 of Year 9 during the first half term.	15-20 Minutes per week will be spent in students Biology, Chemistry and Physics lessons revisiting the topic relevant to each Science. Homework tasks will be set to bridge the gaps in knowledge and understanding identified.	The Year 10 baseline assessments will be completed in class during the third week of the first half of the Autumn term.

Term 1	CB2 Cells and Control (Paper 1)	To know about: ✓ CB2a – Mitosis ✓ CB2b – Growth in animals ✓ CB2c – Growth in plants ✓ CB2d – Stem Cells ✓ CB2e – The nervous system ✓ CB2f – Neurotransmission speed CB2 – Revision activities	CB2 – End of topic test
	CC3 Atomic structure (Paper 2 and 5) CC4 The Periodic table (Paper 2 and 5)	To know about: ✓ CC3a - The structure of the atom ✓ CC3b – Atomic number and mass number ✓ CC3c – Isotopes ✓ CC4a – Elements and the periodic table ✓ CC4b – Atomic number and the periodic table ✓ CC4c – Electronic configurations and the periodic table CC3-4 – Revision activities	CC3-4 – End of topic test



CC5 Ionic bonding
(*Paper 2 and 5*)

CC6 Covalent bonding
(*Paper 2 and 5*)

CC7 Types of substances
(*Paper 2 and 5*)

To know about:

- ✓ CC5a – Ionic bonds
- ✓ CC5b – Ionic lattices
- ✓ CC5c – Properties of ionic compounds

- ✓ CC6a – Covalent bonds

- ✓ CC7a – Molecular compounds
- ✓ CC7b – Allotropes of carbon
- ✓ CC7c – Properties of metals
- ✓ CC7d – Bonding models

CC5-7 – Revision activities

CC5-7 – End of topic test

CP3 Conservation of
Energy
(*Paper 3*)

To know about:

- ✓ CP3a – Energy stores and transfers
- ✓ CP3b – Energy efficiency
- ✓ CP3c – Keeping warm
- ✓ CP3d – Stored energies
- ✓ CP3e – Non-renewable resources
- ✓ CP3f – Renewable resources

CP3 – Revision activities

CP3 – End of topic test



Year 10

Term 1

CP4 Waves
(Paper 3)

To know about:

- ✓ CP4a – Describing waves
- ✓ CP4b – Wave speeds
- ✓ CP4b – Core practical: Investigating waves
- ✓ CP4c – Refraction

- ✓ CP4 – Revision activities

CP4 – End of topic test

	Term	Topic	Learning Outcomes	Assessment
Year 10	Term 2	CC8 Acids and alkalis (Paper 2)	To know about: ✓ CC8a – Acids, alkalis and indicators ✓ CC8b – Looking at acids ✓ CC8c – Bases and salts ✓ CC8c – Core practical: Preparing copper sulfate ✓ CC8d – Alkalis and balancing equations ✓ CC8d – Core practical: Investigating neutralisation ✓ CC8e – Alkalis and neutralisation ✓ CC8f – Reactions of acids with metals and carbonates ✓ CC8g – Solubility CC8 – Revision activities	CC8 – End of topic test
		CP5 Light and the Electromagnetic Spectrum (Paper 3)	To know about: ✓ CP5a – Electromagnetic waves ✓ CP5a – Core practical – investigating refraction ✓ CP5b – The electromagnetic spectrum ✓ CP5c – Using the long wavelengths ✓ CP5d – Using the short wavelengths ✓ CP5e – EM radiation dangers CP5 – Revision activities	CP5 – End of topic test



CB3 Genetics
(Paper 1)

To know about:

- ✓ CB3a – Meiosis
- ✓ CB3bi – DNA
- ✓ CB3bii – DNA Extraction
- ✓ CB3c – Alleles
- ✓ CB3d – Inheritance
- ✓ CB3e – Gene mutation
- ✓ CB3f - Variation

CB3 – Revision activities

CB3 – End of topic test

	Term	Topic	Learning Outcomes	Assessment
Year 10				
	Term 3	CB4 Natural Selection and Genetic Modification <i>(Paper 1)</i>	To know about: ✓ CB4a – Evidence of human evolution ✓ CB4b – Darwin's theory ✓ CB4c – Classification ✓ CB4d – Breeds and varieties ✓ CB4e – Genes in agriculture and medicine [H] CB4 – Revision activities	CB4 – End of topic test

Year 10	Term 3	CC9 Calculations Involving Masses (Paper 2 & 5)	To know about: ✓ CC9a – Masses and empirical formulae ✓ CC9b – Conservation of mass ✓ CC9c – Moles ✓ CC10a – Electrolysis ✓ CC10a – Core practical: Electrolysis of copper sulfate ✓ CC10b – Products of electrolysis ✓ CC11a – Reactivity ✓ CC11b – Ores ✓ CC11c – Oxidation and reduction ✓ CC11d – Life cycle assessment and recycling ✓ CC12a – Dynamic equilibrium ✓ CC9-12 – Revision activities CC1-9 – Year 10 exam revision activities	CC9-12 – End of topic test End of Year 10 Exam
		CC10 Electrolytic processes (Paper 2)		
		CC11 Obtaining and using metals (Paper 2)		
		CC12 Reversible reactions and equilibria (Paper 2)		

Year 10	Term 3	CP6 Radioactivity <i>(Paper 3)</i>	To know about: ✓ CP6a – Atomic models ✓ CP6b – Inside atoms ✓ CP6c – Electrons and orbits ✓ CP6d – Background radiation ✓ CP6e – Types of radiation ✓ CP6f – Radioactive decay ✓ CP6g – half-life ✓ CP6h – Using radioactivity ✓ CP6i – Dangers of radioactivity CP6 – Revision activities CP1-6 – Year 10 exam revision activities	CP6 – End of topic test
				End of Year 10 Exam
		End of year assessment This will include topics CB1-4, CC1-9, CP1-6 Misconceptions will be addressed as part of the end of year assessment review process		

Term	Topic	Learning Outcomes	Assessment
	<u>Our plan to bridge the gap</u> Biology – CB3 Genetics, CB4 Natural Selection and Genetic Modification, Chemistry - CC9 Calculations Involving Masses, CC10 Electrolytic processes, CC11 Obtaining and using metals, CC12 Reversible reactions and equilibria Physics - CP5 Light and the Electromagnetic Spectrum, CP6 Radioactivity	15-20 Minutes per week will be spent in students Biology, Chemistry and Physics lessons revisiting the topic relevant to each Science. Homework tasks will be set to bridge the gaps in knowledge and understanding identified.	The Year 10 End of year assessments will be completed during the fifth week of the first half of the Autumn term. Each assessment will be completed in lessons and will cover: Biology - CB1-4, Chemistry - CC1-9, Physics - CP1-6.

Year 11	Term 1	CB5 Health, Disease and the Development of Medicines (Paper 1)	To know about: ✓ CB5a – Health and disease ✓ CB5b – Non-Communicable diseases ✓ CB5c – Cardiovascular disease ✓ CB5d – Pathogens ✓ CB5e – Spreading pathogens ✓ CB5g – Physical and chemical barriers ✓ CB5h – The immune system ✓ CB5i – Antibiotics ✓ CB5 – Revision activities	CB5 – End of topic test
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CB6 Plant Structures and
their Functions
(Paper 4)

To know about:

- ✓ CB6a – Photosynthesis
- ✓ CB6b – Factors that affect photosynthesis [H]
- ✓ CB6b – Core practical: Light intensity and photosynthesis
- ✓ CB6c – Absorbing water and mineral ions
- ✓ CB6d – Transpiration and translocation

- ✓ CB6 – Revision activities

CB1-4 – Year 10 exam revision activities

CB6 – End of topic test

End of Year 10 Exam

Year 11	Term 1	CB7 Animal Coordination, Control and Homeostasis (Paper 4)	To know about: ✓ CB7a – Hormones ✓ CB7b – Hormonal control of metabolic rate ✓ CB7c – The menstrual cycle ✓ CB7d – Hormones and the menstrual cycle ✓ CB7e – Control of blood glucose ✓ CB7f – Type 2 diabetes CB7 – Revision activities	CB6 – End of topic test
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Year 11	Term 1	CC13 Groups in the periodic table <i>(Paper 5)</i>	To know about: ✓ CC13a – Group 1 ✓ CC13b – Group 7 ✓ CC13c – Halogen reactivity ✓ CC13d – Group 0	CC13-15 – End of topic test
		CC14 Rates of reaction <i>(Paper 5)</i>		
		CC15 Heat energy changes in chemical reactions <i>(Paper 5)</i>	✓ CC14a - Rates of reaction ✓ CC14b - Factors affecting rates of reaction ✓ CC14b – Core practical: Investigating rates of reaction ✓ CC14c – Catalysts and rates of reaction ✓ CC15a – Exothermic and endothermic reactions ✓ CC15b – Energy changes in chemical reactions ✓ CC13-15 – Revision activities	
			CC1-12 – Year 11 mock exam revision activities	Year 11 Mock exam

Year 11	Term 1	CP7 Energy – Forces Doing Work (Paper 6)	To know about: ✓ CP7a – Work and power ✓ CP8a – Objects affecting each other ✓ CP8b – Vector diagrams ✓ CP7-8 – Revision activities	CP7-8 – End of topic test
		CP8 Forces and their Effects (Paper 6)		

Year 11	Term 1	CP9 Electricity and Circuits <i>(Paper 6)</i>	To know about: ✓ CP9a – Electrical circuits ✓ CP9b – Current and potential difference ✓ CP9c – Current, charge and energy ✓ CP9d – Resistance ✓ CP9e – More about resistance ✓ CP9e – Core practical: Investigating resistance ✓ CP9f – Transferring energy ✓ CP9g – Power ✓ CP9h – Transferring energy by electricity ✓ CP9i – Electrical safety CP1-6 – Year 11 mock exam revision activities	CP9 – End of topic test Year 11 Mock exam
Year 11 Mock exams This will include topics CB1-5, CC1-12, CP1-6 Misconceptions will be addressed as part of the mock review process				

	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 2	CB8 Exchange and Transport in Animals (Paper 4)	To know about: ✓ CB8a – Efficient transport and exchange ✓ CB8b – The circulatory system ✓ CB8c – The heart ✓ CB8d – Cellular respiration ✓ CB8d – Core practical: respiration rates ✓ CB8 – Revision activities ✓ CB1-5 – Year 11 mock exam revision activities	CB8 – End of topic test Year 11 Mock exam
		CB9 Ecosystems and Material Cycles (Paper 4)	To know about: ✓ CB9a – Ecosystems ✓ CB9b – Abiotic factors and communities ✓ CB9b – Core practical: Quadrats and transects ✓ CB9c – Biotic factors and communities ✓ CB9d – Parasitism and mutualism ✓ CB9e – Biodiversity and humans ✓ CB9f – Preserving biodiversity ✓ CB9g – The water cycle ✓ CB9h – The water cycle ✓ CB9i – The nitrogen cycle ✓ CB9 – Revision activities	CB9 – End of topic test

Term 2	CC16 Fuels (Paper 5)	To know about: ✓ CC16a – Hydrocarbons in crude oil and natural gas ✓ CC16b – Fractional distillation of crude oil ✓ CC16c – The alkane homologous series ✓ CC16d – Complete and incomplete combustion ✓ CC16e – Combustible fuels and pollution ✓ CC16f – Breaking down hydrocarbons	CC16-17 – End of topic test
	CC17 Earth and atmospheric science (Paper 5)		
		CC16-17 – Revision activities	
	CP10 Magnetism and the Motor Effect (Paper 6)	To know about: ✓ CP10a – Magnets and magnetic fields ✓ CP10b – Electromagnetism ✓ CP10c – Magnetic forces	CP10/11 – End of topic test
	CP11 Electromagnetic Induction (Paper 6)		
		✓ CP11a – Transformers ✓ CP11b – Transformers and energy ✓ CP10/11 – Revision activities	

Term 2

CP12 Particle Model
(Paper 6)

CP13 Forces and Matter
(Paper 6)

- ✓ CP12a – Particles and density
- ✓ CP12a – Core practical: Investigating densities
- ✓ CP12b – Energy and changes of state
- ✓ CP12c – Energy calculations
- ✓ CP12c – Core practical: Investigating water
- ✓ CP12d – Gas temperature and pressure

- ✓ CP13a – Bending and stretching
- ✓ CP13b – Core practical: Investigating springs
- ✓ CP13b - Extension and energy transfers

- ✓ CP12-13 – Revision activities

CP12-13 – End of topic test

	Term	Topic	Learning Outcomes	Assessment
Year 11	Term 3	Exam Preparation	✓ Exam techniques ✓ Past exam papers ✓ 6 mark questions	Paper 1 and Paper 2 Mock exam papers
<u>Exam dates:</u>				
<u>Paper 1 exam date:</u> Biology – 19 th May 2021 <u>Paper 2 exam date:</u> Chemistry – 24 th May 2021 <u>Paper 3 exam date:</u> Physics – 27 th May 2021			<u>Paper 4 exam date:</u> Biology – 14 th June 2021 <u>Paper 5 exam date:</u> Chemistry – 17 th June 2021 <u>Paper 6 exam date:</u> Physics – 22 nd June 2021	