

Autumn Term

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	HALF TERM
Topic	B6 Inheritance, Variation and Evolution and C7 Organic Chemistry				B6 Inheritance, Variation and Evolution and P6 Waves				
Challenge Objective and Content (for all learners)	B6 Compare asexual and sexual reproduction, with relation to number of chromosomes and explain how favoured characteristics can be selectively bred. -Understand the differences between mitosis and meiosis. -WS 1.2 Model behaviour of chromosomes during meiosis. -Describe the structure of DNA -Describe the importance of the human genome -Draw genetic diagrams to show the possible genotype and phenotype of offspring -MS 1c, 3a use direct proportion and simple ratios to express outcomes of genetic crosses. C7-Explain the importance of carbon compounds as organic compounds, in terms of structure and properties. -Recognise substances as alkanes given their formulae in these forms. -Recognise substances as alkenes given their formulae in these forms -Describe the process of fractional distillation				B6 Compare asexual and sexual reproduction, with relation to number of chromosomes and explain how favoured characteristics can be selectively bred. -Understand the differences between mitosis and meiosis. -WS 1.2 Model behaviour of chromosomes during meiosis. -Describe the structure of DNA -Describe the importance of the human genome -Draw genetic diagrams to show the possible genotype and phenotype of offspring -MS 1c, 3a use direct proportion and simple ratios to express outcomes of genetic crosses. P6 Show how changes in velocity, frequency and wavelength, in transmission of sound waves from one medium to another, are inter-related. -Provide examples of transfers of energy by electromagnetic waves. - Explain the uses and dangers of electromagnetic waves.				
Inspire Opportunities	B6 Consider and debate the ethical considerations of cloning C7 - Determine name and therefore properties from chemical formula.				B6 Consider and debate the ethical considerations of cloning P6 -Explain that a perfect black body is an object that absorbs all of the radiation that hits it. No radiation is reflected or transmitted.				
Assessment Opportunities	End of Topic Tests								

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	C
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Topic	C8 – Chemical Analysis and P7 Magnetism and Electromagnetism	Paper 1 Revision	Year 11 Mock Exams
Challenge Objective and Content (for all learners)	C8 Explain a variety of instrumental methods can be used to analyse substances -Use melting point and boiling point data to distinguish pure from impure substances. -Explain how paper chromatography separates mixtures and calculate retention factor -RP 6 Investigate how paper chromatography can be used to separate and tell the difference between coloured substances - Explain the tests for a variety of gases, including oxygen and chlorine P7-Explain how electromagnetic effects are used in a variety of devices -Describe the differences between permanent and induced magnetism Draw the magnetic field pattern of a bar magnet -Describe how the magnetic effect of a current can be demonstrated	Biology Paper 1 Revision B1 Cell Biology B2 Organisation B3 Infection and Response B4 Bioenergetics Chemistry Paper 1 Revision C1 Atomic Structure and the Periodic Table C2 Structure, Bonding and the Properties of Matter C3 Quantitative Chemistry C4 Chemical Changes C5 Energy Changes Physics Paper 1 Revision P1 Energy P2 Electricity P3 Particle Model of Matter P4 Atomic Structure	
Inspire Opportunities	C8 – Use chromatography to calculate Rf values. P7 - Show that Fleming’s left-hand rule represents the relative orientation of the force, the current in the conductor and the magnetic field	Grade 7-9 questions.	
Assessment Opportunities	End of Topic Tests and Year 11 Mock Exams		

	Week 1	Week 2	Week 3	Week 4	Week 5	EASTER
Topic	Physics Paper 1 Revision		Chemistry Paper 1 Revision		Physics Paper 1 Revision	
Challenge Objective and Content (for all learners)	P1 - Energy transfers & multistep calculations. P1 - Energy resources (link to national grid P2). P2 - Series & parallel P2 - VIR relationship P2 - IV RPs P2 - Mains safety		C1 - Atomic models & isotopes C1 - Periodic table development C2 – Ionic bonding C2 - Covalent and metallic bonding		P3 - Changes of state & SLH P3 - Specific heat capacity RP P3 - Density RP	
Inspire Opportunities	Grade 7-9 questions.					
Assessment Opportunities	Exam Questions					

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	SUMMER
Topic	GCSE Exams and Study Leave						
Challenge Objective and Content (for all learners)							
Inspire Opportunities							
Assessment Opportunities							