

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6	
<b>Year 13 Applied Science</b>	<b>Content delivered:</b> <b>Unit 2 Chemistry (Assignment A):</b> Assignment write up time <b>Unit 2 (Assignment D):</b> Risk assessments <b>Unit 3 Biology:</b> Protein structure Enzymes Factors affecting active sites Collision theory Energy profiles <b>Unit 3 Physics:</b> Electrical resistance Thermistors	<b>Content delivered:</b> <b>Unit 3 Biology:</b> Factors affecting rate of diffusion Brownian motion Factors affecting plant growth – biotic and abiotic factors Sampling techniques Plant sampling <b>Unit 3 Chemistry:</b> Fuels Combustion SHC <b>Unit 3 Physics:</b> Energy ratings Analysing electricity bills SHC	<b>Content delivered:</b> <b>Unit 3 Chemistry:</b> Energy in candle wax <b>Unit 16 Coursework (Assignment A):</b> Student write up time <b>Unit 16 Coursework (Assignment B):</b> Student write up time	<b>Content delivered:</b> <b>Unit 16 Coursework (Assignment B):</b> Student write up time <b>Unit 16 Coursework (Assignment C):</b> Student write up time	<b>Content delivered:</b> <b>Unit 1: Resit work</b> <b>Unit 3: Resit work</b> <b>Unit 16 Coursework (Assignment D):</b> Student write up time		
	<b>Key Words</b> Level 2 Level 3	<b>Biology</b> Peptide bond, condensation reaction, hydrolysis, amino acid, polypeptide, active site, denature, substrate, independent variable, dependent variable, control variable <b>Chemistry</b> Titration, Burette, pipette, concentration, moles per dm <sup>3</sup> , accuracy, precision, concordant, absorbance, transmission, calibration curve <b>Physics</b> Series, parallel, ammeter, voltmeter, resistor, ohm, diode, current, voltage, thermistor, filament bulb, SHC	<b>Biology</b> Diffusion, Brownian motion, concentration gradient, passive process, abundance, mean, median, mode, valid, representative sample, biotic, abiotic, quadrat, transect, Chi squared, independent variable, dependent variable, control variable <b>Chemistry</b> Combustion, incomplete, complete, carbon monoxide/dioxide, viscosity, flammability, particulates/soot, Joule, kilojoule, specific heat capacity <b>Physics</b> Series, parallel, ammeter, voltmeter, resistor, ohm, diode, current, voltage, thermistor, filament bulb, SHC	<b>Chemistry</b> Combustion, incomplete, complete, carbon monoxide/dioxide, viscosity, flammability, particulates/soot, Joule, kilojoule, specific heat capacity, thermal energy, calorific content <b>Unit 16</b> Corona, chromosphere, photosphere, nuclear fusion, prominences, flares, solar wind, parameters, radiative zone, Keplers law, Kuiper belt, Oort cloud, meteor shower, reflector, refractor, concave, aberration, ascension, declination, Celestial, Magellanic	<b>Unit 16</b> Reflector, refractor, concave, aberration, ascension, declination, Celestial, Magellanic, space tourism, geostationary	<b>Unit 16</b> Gravitational collapse, nebulae, Chandrasekhar limit, Supernovae, pulsar, Schwarzschild radius, magnitude, luminosity, spectra, Olbers paradox	
	<b>Where previous knowledge has occurred and future development</b> KS2 → KS3 → KS4 → <b>KS5</b>	KS2: Dissolving liquids in liquids & changes of state KS3: Year 7 Solutions KS3: Year 7 Electricity KS4: Year 10 Digestion and enzymes (B2) KS4: Year 11 Purity (C8) KS4: Year 10 Specific heat capacity KS5: Unit 3 investigative skills	KS2: How animals get nutrition KS3: Year 8 Enzymes KS3: Year 9 Combustion KS4: Year 10 diffusion KS4: Year 11 Ecology KS4: Year 11 Exo and endothermic reactions KS5: Unit 3 Investigative skills	KS2: Properties of substances KS2: The planets KS3: Year 9 Combustion KS3: Year 7 Space KS4: Year 11 Space KS4: Year 11 Fuel cells KS5: Unit 3 Investigative skills	KS2: Space and the solar system KS3: Year 7 Space KS3: Year 8 Forces KS4: Year 11 Space KS5: Unit 3 Investigative skills	KS2: Space and the solar system KS3: Year 7 Space KS3: Year 8 Forces KS4: Year 11 Space KS5: Unit 3 Investigative skills	
	<b>Common Misconceptions</b>	Confusing risk and hazard	Classifying biotic and abiotic features	Energy arrows	Unit conversions	Unit conversions	
	<b>Literacy</b>	Scientific writing (HSW): Enzyme activity Scientific writing (HSW): Electricity NHTW reviews as starter activities	Scientific writing (HSW): Ecology Scientific writing (HSW): Fuels NHTW reviews as starter activities	Scientific writing (HSW): Energy in candle wax Scientific writing (HSW): Coursework scientific report NHTW reviews as starter activities	Scientific writing (HSW): Coursework scientific report NHTW reviews as starter activities	Scientific writing (HSW): Coursework scientific report NHTW reviews as starter activities	
	<b>Numeracy</b>	Rearranging equations Calculating mean Converting units Drawing and interpreting graphs	Calculating mean Converting units Drawing and interpreting graphs	Calculating mean Converting units Drawing and interpreting graphs Calculating percentage error	Calculating mean Converting units Drawing and interpreting graphs Calculating percentage error Statistical analysis	Calculating mean Converting units Drawing and interpreting graphs Calculating percentage error Statistical analysis	
	<b>Homework</b>	Completion of Seneca and Carousel section quizzes	Completion of Seneca and Carousel section quizzes	Completion of Seneca and Carousel section quizzes	Completion of Seneca and Carousel section quizzes	Completion of Seneca and Carousel section quizzes	
	<b>Assessment this half-term</b>	6 mark in class questions NHTW grid vocab test	6 mark in class questions Unit 3 mock exam NHTW grid vocab test	Unit 3 exam 6 mark in class questions Assignment A draft NHTW grid vocab test	Assignment B & C draft 6 mark in class questions NHTW grid vocab test	Assignment D draft 6 mark in class questions NHTW grid vocab test	

<b>Career opportunities Employment Links</b>	LIFE SKILLS: Understanding how to devise and evaluate risk assessments EMPLOYMENT: Engineer	LIFE SKILLS: Understanding how disease spread EMPLOYMENT: Virologist	LIFE SKILLS: Understanding how different drugs work EMPLOYMENT: Biomedical scientist	LIFE SKILLS: Understanding how to set up circuits EMPLOYMENT: Electrical engineer	LIFE SKILLS: Understanding how to interpret electricity bills EMPLOYMENT: Environment Agency	
<b>Enrichment</b>		Space academy				
<b>Practical activities/HSW</b>	Enzyme activity Resistance	Burning fuels Diffusion Ecology SHC	Energy in candle wax			
<b>Employability Skills</b>	<b>Aiming high</b> Creativity Leadership Listening Presenting Problem solving <b>Literacy</b> Numeracy Independence Communication Teamwork <b>Staying positive</b>	<b>Aiming high</b> Creativity Leadership <b>Listening</b> <b>Presenting</b> Problem solving <b>Literacy</b> Numeracy Independence <b>Communication</b> Teamwork Staying positive	<b>Aiming high</b> Creativity Leadership Listening <b>Presenting</b> <b>Problem solving</b> <b>Literacy</b> Numeracy Independence Communication Teamwork Staying positive	<b>Aiming high</b> Creativity Leadership Listening <b>Presenting</b> Problem solving <b>Literacy</b> Numeracy Independence <b>Communication</b> Teamwork Staying positive	<b>Aiming high</b> Creativity Leadership Listening Presenting <b>Problem solving</b> <b>Literacy</b> Numeracy Independence Communication Teamwork <b>Staying positive</b>	
<b>IT Skills</b>	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	IT1 & IT2: Appropriate websites and research for homework as well as recall quizzes	
<b>Notes/developments /standardisation comments</b>						