

	Half term 1	Half term 2	Half term 3	Half term 4	Half term 5	Half term 6
Year 13 Applied Science	<p>Content delivered: Unit 2 Biology (Assignment C): Assignment write up time Unit 2 Chemistry (Assignment A): Assignment write up time Unit 2 Physics (Assignment B): Assignment write up time Unit 2 (Assignment D): Risk assessments Assignment write up time</p>	<p>Content delivered: Unit 3 Biology: Protein structure Enzymes Factors affecting active sites Collision theory Energy profiles Unit 3 Chemistry: Fuels Combustion SHC Unit 12 Coursework (Assignment A): Infectious and non-infectious disease Types of pathogen Genetic diseases Dietary diseases Degenerative diseases Environmental disease Student write up time Unit 12 Coursework (Assignment B): Controlling the spread of infection Transmission</p>	<p>Content delivered: Unit 3 Biology: Factors affecting rate of diffusion Brownian motion Unit 3 Chemistry: Fuels Combustion Unit 12 Coursework (Assignment B): Student write up time Unit 12 Coursework (Assignment C): Modes of action for drugs Student write up time</p>	<p>Content delivered: Unit 3 Biology: Factors affecting plant growth – biotic and abiotic factors Sampling techniques Unit 3 Chemistry: Energy in candle wax Unit 3 Physics: Electrical resistance Thermistors Unit 12 Coursework (Assignment C): Student write up time Unit 12 Coursework (Assignment D): Humoral response Cell mediated response Specific and non-specific defences Student write up time</p>	<p>Content delivered: Unit 3 Biology: Plant sampling Unit 3 Physics: Energy ratings Analysing electricity bills SHC Unit 12 Coursework (Assignment D): Student write up time</p>	
<p>Key Words Level 2 Level 3</p>	<p>Biology Chromatography, mobile, stationary, polarity, chlorophyll Chemistry Titration, Burette, pipette, concentration, moles per dm³, accuracy, precision, concordant, absorbance, transmission, calibration curve Physics Calorimetry</p>	<p>Biology Peptide bond, condensation reaction, hydrolysis, amino acid, polypeptide, active site, denature, substrate, independent variable, dependent variable, control variable Chemistry Combustion, incomplete, complete, carbon monoxide/dioxide, viscosity, flammability, particulates/soot, Joule, kilojoule, specific heat capacity Unit 12 Bacteria, virus, fungi, parasitic organism, protozoa, genetic, hereditary, degenerative, allergen, Alzheimers, ALS, pathogenic, pathogenesis, genotype, vaccination, pathogen, lymphocyte, phagocyte, prescription, infectious disease, causative organism</p>	<p>Biology Diffusion, Brownian motion, concentration gradient, passive process Chemistry Combustion, incomplete, complete, carbon monoxide/dioxide, viscosity, flammability, particulates/soot, Joule, kilojoule, specific heat capacity, thermal energy, calorific content Unit 12 Vaccination, pathogen, lymphocyte, phagocyte, prescription, infectious disease, causative organism, parasite, protozoa, antiviral, anti-retroviral, antibiotic, immunoglobulin, antimalarial, antifungal, anthelmintic, vaccination, intravenous, intramuscular</p>	<p>Biology Abundance, mean, median, mode, valid, representative sample, biotic, abiotic, quadrat, transect, Chi squared, independent variable, dependent variable, control variable Physics Series, parallel, ammeter, voltmeter, resistor, ohm, diode, current, voltage, thermistor, filament bulb, SHC Unit 12 Parasite, protozoa, antiviral, anti-retroviral, antibiotic, immunoglobulin, antimalarial, antifungal, anthelmintic, vaccination, intravenous, intramuscular, pathogen, lymphocyte, phagocyte, humoral response, cell mediated response, immunity, helper T cells, killer T cells, phagocytosis, antibody, antigen</p>	<p>Biology Abundance, mean, median, mode, valid, representative sample, biotic, abiotic, quadrat, transect, Chi squared, independent variable, dependent variable, control variable Physics Series, parallel, ammeter, voltmeter, resistor, ohm, diode, current, voltage, thermistor, filament bulb, SHC Unit 12 Pathogen, lymphocyte, phagocyte, humoral response, cell mediated response, immunity, helper T cells, killer T cells, phagocytosis, antibody, antigen</p>	
<p>Where previous knowledge has occurred and future development KS2 → KS3 → KS4 → KS5</p>	<p>KS2: Dissolving liquids in liquids & changes of state KS3: Year 7 Solutions KS4: Year 11 Purity (C8) KS4: Year 10 Specific heat capacity KS5: Unit 3 investigative skills</p>	<p>KS2: How animals get nutrition KS3: Year 8 Enzymes KS3: Year 9 Combustion KS4: Year 10 Digestion and enzymes (B2) KS4: Year 10 Infection and control (B3) KS4: Year 11 Exo and endothermic reactions KS5: Unit 3 Investigative skills</p>	<p>KS2: Dissolving substances KS3: Year 7 Diffusion KS3: Year 9 Combustion KS4: Year 10 Diffusion (B2) KS4: Year 11 Fuel cells KS5: Unit 3 Investigative skills</p>	<p>KS2: The role of flowers KS3: Year 7 Flowers and pollination KS3: Year 7 Circuits KS4: Year 10 Photosynthesis (B4) KS4: Year 11 Ecology (B7) KS4: Year 10 Electricity KS5: Unit 3 Investigative skills</p>	<p>KS2: Adaptations KS3: Year 8 Ecology KS3: Year 7 Energy resources KS4: Year 11 Ecology (B7) KS4: Year 10 Energy KS5: Unit 3 Investigative skills</p>	
<p>Common Misconceptions</p>	<p>Confusing risk and hazard</p>	<p>Vaccinations are quick to develop</p>	<p>Diffusion in plants</p>	<p>Differences between a cell and battery</p>	<p>Unit conversions</p>	
<p>Literacy</p>	<p>Scientific writing (HSW): Unit 2 write up NHTW reviews as starter activities</p>	<p>Scientific writing (HSW): Enzyme activity Scientific writing (HSW): Fuels NHTW reviews as starter activities</p>	<p>Scientific writing (HSW): Diffusion Scientific writing (HSW): Fuels NHTW reviews as starter activities</p>	<p>Scientific writing (HSW): Ecology Scientific writing (HSW): Candle wax NHTW reviews as starter activities</p>	<p>Scientific writing (HSW): Ecology Scientific writing (HSW): SHC NHTW reviews as starter activities</p>	
<p>Numeracy</p>	<p>Rearranging equations Calculating mean Converting units Drawing and interpreting graphs</p>	<p>Calculating mean Converting units Drawing and interpreting graphs</p>	<p>Calculating mean Converting units Drawing and interpreting graphs Calculating percentage error</p>	<p>Calculating mean Converting units Drawing and interpreting graphs Calculating percentage error Statistical analysis</p>	<p>Calculating mean Converting units Drawing and interpreting graphs Calculating percentage error Statistical analysis</p>	
<p>Homework</p>	<p>Completion of Everlearner/Doddle section quizzes</p>	<p>Completion of Everlearner/Doddle section quizzes</p>	<p>Completion of Everlearner/Doddle section quizzes</p>	<p>Completion of Everlearner/Doddle section quizzes</p>	<p>Completion of Everlearner/Doddle section quizzes</p>	
<p>Assessment this half-term</p>	<p>1st draft of Unit 2 write ups 6 mark in class questions NHTW grid vocab test</p>	<p>Assignment A draft 6 mark in class questions NHTW grid vocab test</p>	<p>Unit 3 mock exam Assignment B draft 6 mark in class questions</p>	<p>Assignment C draft 6 mark in class questions NHTW grid vocab test</p>	<p>Assignment D draft 6 mark in class questions NHTW grid vocab test</p>	

			NHTW grid vocab test			
Career opportunities Employment Links	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	
Enrichment						
Practical activities/HSW		Enzyme activity Burning fuels	Diffusion Burning fuels	Ecology Resistance	Ecology SHC	
Employability Skills	Aiming high Creativity Leadership Listening Presenting Problem solving Staying positive Literacy Numeracy Independence Communication Teamwork	Aiming high Creativity Leadership Listening Presenting Problem solving Staying positive Literacy Numeracy Independence Communication Teamwork	Aiming high Creativity Leadership Listening Presenting Problem solving Staying positive Literacy Numeracy Independence Communication Teamwork	Aiming high Creativity Leadership Listening Presenting Problem solving Staying positive Literacy Numeracy Independence Communication Teamwork	Aiming high Creativity Leadership Listening Presenting Problem solving Staying positive Literacy Numeracy Independence Communication Teamwork	
IT Skills	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	
Notes/developments /standardisation comments						