Applied Science Single Award KS5 Curriculum Intent, Implementation and Impact Overview

	Year: 12 Subject: Applied Science – Single Award IMPLEMENTATION					
INTENT (**OCR Cambridge Technicals Level 3 Applied Science specification coverage** key concepts and skills ('Big ideas')	**Half Term 1 (7)** **Context:** 1.3.1/2 Cell organisation and structures 2.1.1 Health and safety **Key Vocabulary:** Prokaryotic, eukaryotic, organelle, plasmid, Golgi apparatus, micrograph, endoplasmic reticulum, hazards, risk assessments, sampling, data collection, disposal **Prior Learning / LTM:** GCSE B1 Cell structure GCSE scientific method and safety **Cultural Capital:** Cell theory. Managing risk and the workplace.	**Half Term 2 (7)** **Context:** 1. 3.3 Tissue types and function 2.2.1 Separation techniques 1.1.1 Atomic structure **Key Vocabulary:** Tissue, epithelia, connective, specialised osteocytes, proton, neutron, isotope, repulsive, nucleon number, chromatography, paper chromatography, solution, TLC, electrophoresis, HPLC **Prior Learning / LTM:** GCSE B1 & B3 C1 Atomic structure C12 Chemical analysis Y12 Unit 4 & 7 **Cultural Capital:** Using chromatography for real world applications	**Half Term 3 (7)** **Context:** 1.1.2 The periodic table 1.1.3 Bonding 1.2.1 Reactions 2.3.1 Titrations **Key Vocabulary:** Covalent, ionic, dative, electron, energy level, period, group, alloy, colloid, calibration, mass spectrometer, titrations, indicators, concentration, pH **Prior Learning / LTM:** GCSE C4 Quantitative chemistry, C5 Chemical change, C3 Bonding **Cultural Capital:** Sheffield steel and its history	**Half Term 4 (6)** **Context:** 1.2.2 Reactions 1.2.3 Rates 2.4.1 Microscopy 2.5.1 Identifying ions **Key Vocabulary:** Redox, electrons, oxidation, reduction, radical, displacement, polymer, collision, activation, microscopes, calculations, observations, magnification, graticules, electron, x-ray, ultrasound **Prior Learning / LTM:** GCSE B1 Y12 Unit 8 GCSE C5, C6 , C8 and C10, C12 **Cultural Capital:** History of the microscope and studying biological drawings Applications of x-rays and ultrasound.	**Half Term 5 (5)** **Context:** 1.4.4 Carbon chemistry 2.6.1 Aseptic technique 1.5.1 Inorganic chemistry **Key Vocabulary:** Alkanes, alkenes , alkynes, carbon, allotrope, empirical, structural, ketone, isomer, ion, cations, anions, chromatography, aseptic, culture **Prior Learning / LTM:** GCSE C3 and C10, B6 Disease Y12 Unit 1 Chem, Unit 8 Cell biology **Cultural Capital:** Applications to virology. Useful polymers. Importance of ions for health	**Half Term 6 (6)** **Context:** 1.6.1 Properties of materials Unit 1 Science fundamentals -Revision and retention Unit 2 Laboratory techniques -Revision and retention **Exam question skills and application.**
All material in the Universe is made of very small particles	X	X	X	x	X	X
Objects can affect other objects at a distance		X	X	x	X	X
Changing the movement of an object requires a net force to be acting on it				x		X
The total amount of energy in the Universe is always the same		x	x	x	X	X
Organisms are organised on a cellular basis	x	x		X	X	X

Organisms require a supply of energy and materials	X	x		X	X	X
Genetic information is passed down from one generation of organisms to another	X				x	x
The diversity of organisms, living and extinct, is the result of evolution						
Apply knowledge and understanding to explain observations.	X	X	X	X	X	X
Use different types of scientific enquiry to answer scientific questions.	X	X	X	X	X	X
Use technical terminology with confidence accurately and precisely.	X	X	X	X	X	X
Apply mathematical knowledge to scientific understanding.	x	X	X	X	X	X
Awareness of some of the social and economic implications of science	X	X		X	x	x
IMPACT	Assessment: **Baseline assessment** Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: Unit 1 assessment Unit 2 assessment Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: Unit 1 assessment Unit 2 assessment Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: Unit 1 assessment Unit 2 assessment Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: Trial exams Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: **External exam May 2022** **Unit 1** **Unit 2** Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.

Cultural Capital is the body of knowledge a student needs so that they can flourish in the future and not be left behind. LTM = Long Term Memory.