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

	Year: 13 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:** 18.1 Classification and Identification of Microorganisms 18.2 Use of Microorganisms in Agriculture 6.1 Understand the types of hazards in a lab **Key Vocabulary:** Morphology, Aseptic, Agriculture, Bioherbicide, Biofertiliser, Fermentation, Yield, risk, hazard, virus, bacteria **Prior Learning / LTM:** GCSE: B1 cells Y12: Unit 8 Cell biology **Cultural Capital:** World food security The importance of microbial life to humans	**Half Term 2 (7)** **Context:** 18.3 Use of microbiology in food production 18.4 Use of antimicrobials 6.2 Using Health and safety procedures **Key Vocabulary:** Glycolysis, Pyruvate, Antimicrobial, Antibiotic, Antiviral, Antifungal, biohazard, bacteriophage, toxin, COSHH **Prior Learning / LTM:** GCSE: B6 preventing and treating disease B9 Anaerobic Respiration **Cultural Capital:** The dangers and importance of antibiotics Where our food comes from Health and Safety in the Lab- the importance of regulations	**Half Term 3 (7)** **Context:** 21.2 How product testing determines development of consumer products 6.3. Design a safe functioning lab to manage risks **Key Vocabulary:** In-vitro, In-vivo, Titration, Extraction, Separation, procedure, fume cupboard, disposal **Prior Learning / LTM:** Y12: Unit 2 laboratory techniques **Cultural Capital:** Why what we buy in shops works well and is safe Fire safety	**Half Term 4 (6)** **Context:** 21.3 Using quantitative titration techniques on consumer products 21.1 Regulatory bodies and consumer products **Key Vocabulary:** Analyte, Indicator, Titration, Standard, Complexometric, Redox, consumer, governing body, regulation **Prior Learning / LTM:** GCSE: C4 Chemical Calculations Y12: Unit 2 laboratory techniques **Cultural Capital:** Health and Safety in the Lab .	**Half Term 5 (5)** **Context:** 21.4 Use extraction and separation techniques **Key Vocabulary:** TLC, Chromatogram, solvent, Rf value, retention, extraction, solubility. **Prior Learning / LTM:** GCSE: C12 Chemical analysis Y12 Unit 2 laboratory techniques **Cultural Capital:** Applications for drug testing and food production	**Half Term 6 (6)** **Context:** **N/A**
All material in the Universe is made of very small particles			X	X	x	
Objects can affect other objects at a distance				x	x	
Changing the movement of an object requires a net force to be acting on it						
The total amount of energy in the Universe is always the same	x			x		
Organisms are organised on a cellular basis	X	X				

Organisms require a supply of energy and materials	X	X				
Genetic information is passed down from one generation of organisms to another	X					
The diversity of organisms, living and extinct, is the result of evolution	X	X				
Apply knowledge and understanding to explain observations.	X	X		X	X	
Use different types of scientific enquiry to answer scientific questions.	X	X	X	X	X	
Use technical terminology with confidence accurately and precisely.	X	X	X	X	X	
Apply mathematical knowledge to scientific understanding.		x		X	X	
Awareness of some of the social and economic implications of science	X	X	X	X	x	
IMPACT	Assessment: Coursework Progression to Post 18: Understanding of microbial identification techniques baseline for future work in a biolab.	Assessment: Coursework Progression to Post 18: Provides experience and understanding of various areas of the food production industry Understanding of different antibiotics and other antimicrobials in preparation for work in a healthcare setting.	Assessment: Coursework Progression to Post 18: Provides understanding of product development.	Assessment: Coursework Progression to Post 18: Provides experience of carrying out titrations and handling chemicals which will be useful in lab based work	Assessment: Coursework Progression to Post 18: Carrying out a range of separation techniques for further study or applying in a working lab.	

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.