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

	Year: 12 Subject: Applied Science – Double Award IMPLEMENTATION					
INTENT (**OCR Cambridge Technicals Level 3 Applied Science specification coverage** key concepts and skills ('Big ideas')	**Half Term 1 (7)** **Context:** 4 1.1 Digestive system 7.1.Human nutritional requirements 7.2 Calculate the nutritional requirements to maintain energy levels for different levels of activity 7 3.1 Variation in dietary needs **Key Vocabulary:** Biuret, iodine, ethanol, carbohydrate, lipid, qualitative, balance, Basal metabolic rate, energy **Prior Learning / LTM:** GCSE B3 Diet and digestive system Sport: Healthy diet **Cultural Capital:** Maintenance of good health, making Healthy choices .	**Half Term 2 (7)** **Context:** 7.2 Calculate the nutritional requirements 7.4.1 Nutritional information 8.1 The structure and function of the plasma membrane **Key Vocabulary:** Calorimetric, Phospholipid, bilayer, glycoprotein, cholesterol, exocytosis, endocytosis, passive, active **Prior Learning / LTM:** GCSE B1 – transport GCSE P3 - Energy Y12 Unit 1 **Cultural Capital:** History of the membrane and how theories are developed Exploring different diets and choices	**Half Term 3 (7)** **Context:** 8.1 The structure and function of the plasma membrane 8.2 Use cytological techniques 4.2 Musculoskeletal system, 4.3 Cardiovascular system **Key Vocabulary:** Stain, permanent, microscopy, resolution, bacteria, signal, receptor, Immunohistochemistry, Eosin **Prior Learning / LTM:** GCSE B1 Cells and transport,B4 Heart, B5 Disease, B10 Nervous system. B11 Endocrine system Y12 : Unit 1 **Cultural Capital:** Disease and new developments in treatments. The role of a pathologist and microbiologist.	**Half Term 4 (6)** **Context:** 8.2 Use cytological techniques 8.3 Cell cycle and importance of mitosis 4.4 Respiratory system **Key Vocabulary:** Confocal, oil immersion, Mitosis, cytokinesis, spindle, chromatid, centromere **Prior Learning / LTM:** GCSE B2 Cell division, B4 breathing system Y12 Unit 1 Y12 Unit 2 **Cultural Capital:** Uses of coulter counters and industry	**Half Term 5 (5)** **Context:** 8.3. Cell cycle and importance of mitosis 8.4 Understand the process and significance of differentiation 4.5 Homeostasis **Key Vocabulary:** Checkpoint, expression, cancer, mutation, uncontrolled, expression **Prior Learning / LTM:** GCSE B2 cell division and stem cells, B11 Y12 Unit 1 **Cultural Capital:** Development and advancement in cancer treatment Transplants	**Half Term 6 (6)** **Context:** 8.4 Understand the process and significance of differentiation 8.5 Understand the potential of stem cells in medical therapies 4.6 Immune system **Key Vocabulary:** Transcription, translation, regulator, gene, suppressor, therapy, somatic **Prior Learning / LTM:** GCSE B2 cell division and stem cells, B13 Reproduction Y12 Unit 1 **Cultural Capital:** Stem cell therapy – ethical implications COVID 19 and Immunity
All material in the Universe is made of very small particles	x	x	X	x		
Objects can affect other objects at a distance						
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	x		x	x

Organisms are organised on a cellular basis	x	x	x	x	x	X
Organisms require a supply of energy and materials	x	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	x
IMPACT	Assessment: **Baseline assessment Coursework unit** Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: **Coursework unit** Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: **Coursework unit** Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: **Coursework unit** Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: **Coursework unit** Progression to Post 18: Pathways to higher education for further science study, careers in sport, nutrition and healthcare.	Assessment: **Coursework unit assessment** 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.