Physics KS5 Curriculum Intent, Implementation and Impact Overview

	Year: 12 Subject: A level Physics year 1 IMPLEMENTATION					
INTENT (**OCR A level Physics specification coverage** key concepts and skills ('Big ideas')	**Half Term 1 (7)** **Context:** Module 2 Foundation of physics Module 3 Forces and motion Module 8 current and charge Module 9 Energy, power and resistance **Key Vocabulary:** Gravity, Kinematic, displacement, resolve, drift, Derivation, Watt, Coefficient. **Prior Learning / LTM:** Ks4 physics module P8-10, Ks4 physics module P1-5. **Cultural Capital:** Car stopping distances and their importance in road safety.	**Half Term 2 (7)** **Context:** Module 3 Forces and motion Module 4 Forces in action Module 9 Energy, power and resistance **Key Vocabulary:** Gravity, Kinematic, displacement, resolve, drift, Derivation, Watt, Coefficient. **Prior Learning / LTM:** Ks4 physics module P8-10, Ks4 physics module P1-5. **Cultural Capital:** Resistance, resistivity and their importance in energy distribution.	**Half Term 3 (7)** **Context:** Module 4 Forces in action Module 10 Electrical circuits **Key Vocabulary:** Density, equilibrium, couple, electromotive, Kirchhoff, resistance, potentiometer. **Prior Learning / LTM:** Ks4 physics module P8-10, Ks4 physics module P1-5. **Cultural Capital:** Moments and equilibrium and their importance in building/vehicle design	**Half Term 4 (6)** **Context:** Module 5 Work, energy and power Module 6 Materials Module 11 waves 1 **Key Vocabulary:** Polarisation, intensity, oscillation, creep, stress, strain, tensile, modulus, hysteresis, compressive, deformation. **Prior Learning / LTM:** Ks4 physics module P8-11, Ks4 physics module P1-5, Ks4 physics modules P12-14 **Cultural Capital:** Seismic waves and early earthquake detection.	**Half Term 5 (5)** **Context:** Module 6 Materials Module 7 Laws of Motion Module 12 waves 2 **Key Vocabulary:** Polarisation, intensity, oscillation, creep, stress, strain, tensile, modulus, hysteresis, compressive, deformation. **Prior Learning / LTM:** Ks4 physics module P8-11, Ks4 physics module P1-5, Ks4 physics modules P12-14 **Cultural Capital:** Liberty ships case study	**Half Term 6 (6)** **Context:** Module 7 Laws of Motion Module 13 Quantum physics **Key Vocabulary:** Photon, Plank, Quantum, electronvolt, subatomic, photoelectric, electroscope, crystallography **Prior Learning / LTM:** Ks4 physics module P1-P16 **Cultural Capital:** Wave particle duality and its impact on science as we know it.
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	X
Changing the movement of an object requires a net force to be acting on it	X	X	X	X	X	X
The total amount of energy in the Universe is always the same	X		X	X	X	X
Our solar system is a very small part of one of millions of galaxies in the Universe						
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: Y12 baseline assessment. Module diagnostic tests and weekly homework. Maths in physics skills assessment Progression to Post 18: Physics, maths and STEM further education courses and STEM careers	Assessment: Formal assessment 1 Module diagnostic tests and weekly homework. Maths in physics skills assessment Progression to post 18: Physics, maths and STEM further education courses and STEM careers	Assessment: Formal assessment 2 Module diagnostic tests and weekly homework. Practical skills assessment Progression to post 18: Physics, maths and STEM further education courses and STEM careers	Assessment: Formal assessment 3 Module diagnostic tests and weekly homework. Maths in physics skills assessment Progression to post 18: Physics, maths and STEM further education courses and STEM careers	Assessment: Module diagnostic tests and weekly homework. Practical skills assessment Progression to post 18: Physics, maths and STEM further education courses and STEM careers	Assessment: Formal assessment 4 Trial exams Module diagnostic tests and weekly homework. Progression to post 18: Physics, maths and STEM further education courses and STEM careers

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.