The Charter School East Dulwich

Year 12 Physics Curriculum Map						
Half Term	**Autumn 1**	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Big Themes	**Foundations of Physics** **Forces and Motion** Forces in Action **Electrons, Waves and Photons** Charge and Current Energy, Power and Resistance	**Forces and Motion** Forces in Action **Electrons, Waves and Photons** Energy, Power and Resistance ctd Electrical Circuits	**Forces and Motion** Work, Energy and Power **Electrons, Waves and Photons** Waves **Revision**	**Forces and Motion** Laws of Motion and Momentum **Electrons, Waves and Photons** Waves ctd	**Forces and Motion** Materials **Electrons, Waves and Photons** Quantum Physics	**Revision** **Astrophysics**
Knowledge and skills covered	**Electrons, Waves and Photons** Current and charge Kirchoff's first law Mean drift velocity Potential difference and EMF Resistance and resistivity **Forces and Motion** Force, mass, weight Free-body diagrams Measuring 'g'	**Electrons, Waves and Photons** Electrical energy and power Kirchoff's second law and analysing circuits Combining resistors Potential dividers Sensing circuits Internal resistance **Forces and Motion** Drag and terminal velocity Moments, couples, torque Triangle of forces Density and pressure	**Electrons, Waves and Photons** Progressive waves Diffraction Polarisation **Forces and Motion** Conservation of energy Kinetic and gravitational potential energy Power and efficiency	**Electrons, Waves and Photons** Reflection Refraction, refractive index and total internal reflection Superposition and interference Young's slits Stationary waves and harmonics **Forces and Motion** Newton's laws Momentum and impulse Collisions in 2D	**Electrons, Waves and Photons** The photon model The photoelectric effect Wave-particle duality **Forces and Motion** Hooke's law Elastic potential energy Deformation, stress and strain	**Astrophysics** Life cycle of stars Hertzsprung-Russel diagram Spectra Analysing starlight Astronomical distance Doppler effect Hubble's law Big band and evolution of the universe
More detailed topic resources can be found on all student Google Classrooms						

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