ANNUAL LESSON PLAN FOR PHYSICS, KEY STAGE 4, YEAR 11 (2021-2022)

	TOPICS	Key Concepts	
Term 1, September – December	Electricity. Magnets and Currents	• Electric charge • Electric Fields. Current in simple circuit • Potential difference. Resistance • Series and parallel circuits • Magnets • Magnetic field. Electromagnets • Electromagnetic induction • Motors and Generators • Coils and transformers	30
	Electrons and Electronics	• Electronic essentials • Electronic switching • Transistors • Logic gates • Electron beams	10
	Atoms and Radioactivity	• Inside atoms • Nuclear radiation • Radioactive decay • Nuclear energy • Fusion and fission reactions • Using radioactivity • Atoms and particles	20
Term 2, January – March	Revision: General Physics	• Past papers 2014-2015(summer/winter) • Measurements (micrometer vernier-calliper • SI units • Density, mass, volume • Forces • Energy, Energy transfer • Speed, velocity (graphs) • Acceleration/deceleration • Pressure • Momentum Impulse • Moment. Principle of moments	15
	Revision: Thermal physics	• Moving particles. Temperature • Expanding Solids • Heating gases • Thermal conduction, convection and radiation • Specific heat capacity and latent heat	15
	Revision: Waves, Light and Sound	• Transverse and longitudinal waves • Wave effects • Sound waves. Speed of sound .Echo • Ultrasound • Light rays and waves • Reflection, refraction and diffraction • Lenses • Electromagnetic waves	14
Term 3, April – June	Exam preparation: Working on past papers	• Past papers 2016-2019(summer/winter) • Calculations based on finding Latent heat, specific heat capacity and Thermal energy • Convection, Conduction and Radiation • Revise all the formulas • Read and understand the questions properly in order to answer the questions asked. • Use key terms in answers. • Organize time efficiently in each exam paper. • Organize the content of their answers in a logical order. • Use the marking schemes as a revision tool and as a way to achieve full marks.	52