St Andrew's
NIHIL SINE LABORE

Curriculum Map	Subject	Physics	Year	10

Unit	Summary	Skills	Assessment	British Values and SMSC	Career links	Cross-curricular links
P1 Conservation and dissipation of Energy	Introduction to energy stores, conservation of energy, efficiency and power.	Analysing evidence Balancing equations (HT) Practical skills – Calculating changes in energy stores, Hooke's Law, efficiency Substitution into an equation Rearranging equations Multi-step calculations	Low stakes testing 'Do Now' tasks 30min End of Unit test Optional Kerboodle Checkpoint quiz & Seneca.	Scientific community Work of Hooke and Newton	Engineering and physics	Links to C7 energetics, engineering core topics too.
P2 Energy Transfer by heating	Heat transfers by conduction, convection, radiation. Insulating homes, specific heat capacity RP *Infrared RP (triple)*	Analysing evidence Specific heat capacity RP *Infrared RP (links to paper 2)*	Low stakes testing 'Do Now' tasks 30min End of Unit test Optional Kerboodle Checkpoint quiz & Seneca.	Scientific community	Civil Engineering, housing energy certification surveyor	Links to Paper 2 Linked to geography and reducing global warming
P3 Energy Resources	Energy demands, renewable / non renewable energy resources, big energy issues	Linking observations to theory & uses Analysing / cost benefit analysis. Note taking and application of graph based tasks	Low stakes testing 'Do Now' tasks 30min End of Unit test Optional Kerboodle Checkpoint quiz & Seneca.	How we generate electricity in UK. How electricity was pioneered in UK	Power generation industry	Geography, STEM, Environmental science, Maths (data analysis)
P4 Electric Circuits	Current, PD, charge, component characteristics, resistance RP x2 *Static (TRIPLE)*	Substitution into an equation Rearranging equations Multi-step calculations Setting up circuits and testing for faults	Low stakes testing 'Do Now' tasks 30min End of Unit test Optional Kerboodle Checkpoint quiz & Seneca.	UK electrical standards and why we have a 3 pin plug. Why we have 230V vs USA 110V	Electrical and electronic engineering Electrician Physics Civil Engineering	Engineering / STEM History of development of electricity
P5 Electricity in the Home	AC /DC and explaining this, how homes are safe eg RCDs Plugs, fuses	Wiring a plug, calculating power and an appropriate fuse. Fault finding, reading an oscilloscope	Low stakes testing 'Do Now' tasks 30min End of Unit test Optional Kerboodle Checkpoint quiz & Seneca.	UK electrical standards and why we have a 3 pin plug. Why we have 230V vs USA 110V	Electrical and electronic engineering Electrician Physics Civil Engineering	Engineering / STEM History of development of electricity
P6 Molecules and Matter	Explaining internal energy, states of matter / changing state, density RP *(Triple) Gas Pressure and temperature/ volume*	SHC /SLH RP calculations, investigation of SHC calculating energy changes related to state of matter	Low stakes testing 'Do Now' tasks 30min End of Unit test Optional Kerboodle Checkpoint quiz & Seneca.	Scientific community	Physics and materials engineer.	Links to Chemistry C1 and 3 with states and density. Engineering for density and materials for SHC
P7 Radioactivity	Atoms and radiation, discovery of the nucleus, radioactive decay. *(Triple) Fission and fusion and nuclear medicine*	Scientific concept ie changing ideas of the atom responding to evidence, calculation of radiation and half lives, graph skills.	Low stakes testing 'Do Now' tasks 30min End of Unit test Optional Kerboodle Checkpoint quiz & Seneca.	Impact of our choices on others Scientific community	Nuclear power generation, radiography / radiologist. Medicine. Nuclear physicist.	Links to C1 history of the atom / Plumb Pudding model Geography case study of Chernobyl. History- atom vs hydrogen bomb.