St Andrew's
NIHIL SINE LABORE

Curriculum Map	Subject	Science	Year	7 Strand A

Unit	Summary	Skills	Assessment	British Values and SMSC	Career links	Cross-curricular links
Lab Safety	Essential lab skills and awareness of health and safety to work in a lab. Basic skill focused experiments	Safe practical skills to work in a lab	Low stakes testing 20 min End of Unit Retrieval Quiz Termly exam	Scientific community UK HASAWA 1974	Any job working in a lab	Health and safety applies to any practical subject.
States of matter	Explaining the states of matter and related to the particle model, calculating pressure and heating and cooling curves	Gathering data from temperature experiments, calculating pressure from a range of circumstances	Low stakes testing 20 min End of Unit Retrieval Quiz Termly exam	Scientific community	Engineering and physics / chemistry	Maths and DT
Atoms elements, mixtures and compounds	Describing chemical reactions, elements mixtures and compounds and types of reactions the Periodic Table	Carrying out different types of reactions, safely and accurately recording the results, naming compounds and basic equations	Low stakes testing 20 min End of Unit Retrieval Quiz Termly exam	Scientific community Contribution of British scientists to understanding of the Atom / Periodic Table	Chemist or chemical engineer	STEM, food tech
Light and its properties	Describing light, law of reflection and refraction, total internal reflection and colour.	Investigating light and accurately measuring angles of ray paths for different laws.	Low stakes testing 20 min End of Unit Retrieval Quiz Termly exam	Scientific community	Optometrist, medicine.	Photography and Art
Lenses	Describing the effects and uses of lense, comparing the eye and a camera	Investigating light and accurately measuring angles of ray paths for different lenses and pin hole camera	Low stakes testing 'Do Now' 20 min End of Unit Retrieval Quiz Termly exam	Scientific community	Optometrist, medicine, cinema projectionist, photographer	Photography and Art
Separating techniques	Describing a range of separation methods and relating these to the Particle Model	Safely carrying out chromatography, filtering, distillation and using solvents	Low stakes testing 'Do Now' 20 min End of Unit Retrieval Quiz Termly exam	Scientific community	Chemist, cleaner, environmental health, working in sewage / water treatment	DT.
Heat transfer	Heat transfers by conduction, convection, radiation. Insulating homes, defining heat vs temperature	Carrying out investigation into reducing heat loss / insulation.	Low stakes testing 'Do Now' 20 min End of Unit Retrieval Quiz Termly exam	Scientific community	Civil Engineering, housing energy certification surveyor	Linked to geography and reducing global warming
Electrical and circuits	Describing current and voltage and conventional flow. Drawing circuits and constructing series and parallel circuits	Setting up circuits, making accurate readings, fault finding, apply logical rules to scenarios to make predictions	Low stakes testing 'Do Now' 20 min End of Unit Retrieval Quiz Termly exam	Scientific community 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
Generating Electricity	Explaining how we generate electricity in the UK, how its is transported, renewable vs non-renewable means.	Linking observations to theory & uses Analysing / cost benefit analysis. Note taking and application of graph based tasks	Low stakes testing 'Do Now' 20 min End of Unit Retrieval Quiz Termly exam	How we generate electricity in UK. How electricity was pioneered in UK	Power generation industry	DT