



Key Learning Constructs to be developed over the academic year. – Core Knowledge	Scheme of Learning Autumn Term	Scheme of Learning Spring Term	Scheme of Learning Summer Term
<p>* the use of models, as in the particle model of matter or the wave models of light and of sound</p> <p>* the concept of cause and effect in explaining such links as those between force and acceleration, or between changes in atomic nuclei and radioactive emissions</p> <p>* the phenomena of 'action at a distance' and the related concept of the field as the key to analysing electrical, magnetic and gravitational effects</p> <p>* that differences, for example between pressures or temperatures or electrical potentials, are the drivers of change</p> <p>* that proportionality, for example between weight and mass of an object or between force and extension in a spring, is an important aspect of many models in science</p> <p>*that physical laws and models are expressed in mathematical form.</p>	<p>Part 1 National and Global Energy Resources Energy 1</p> <p>Part 2 Energy 2</p>	<p>Part 3 Electricity 1</p> <p>Part 4 Electricity 2</p>	<p>Part 5 Particle Model 1</p> <p>Part 6 Particle Model 2</p>
Hinterland Knowledge	Real examples of the APPLICATION of the content studied (eg Drax Power Station as a local example of electricity generation)	Real examples of the APPLICATION of the content studied (eg how specific electrical devices work)	Real examples of the APPLICATION of the content studied (eg density in everyday life)
Assessment: -Formative Techniques	Use of whiteboards, hinge questions, recall questions.		
-Summative Pieces	End of Topic Tests	End of Topic Tests	End of Topic Tests and End of Year Assessment
Key Vocabulary	Key scientific terminology appropriate to each topic studied	Key scientific terminology appropriate to each topic studied	Key scientific terminology appropriate to each topic studied

Key Skills	Working Scientifically, relevant mathematical techniques (percentages, mean, mode, median etc) Graph plotting skills. Understanding variables and anomalies and their causes and effects	Working Scientifically, relevant mathematical techniques (percentages, mean, mode, median etc) Graph plotting skills. Understanding variables and anomalies and their causes and effects	Working Scientifically, relevant mathematical techniques (percentages, mean, mode, median etc) Graph plotting skills. Understanding variables and anomalies and their causes and effects
Opportunities Outside the taught Curriculum.	Careers, STEAM enrichment activities, educational visits	Careers, STEAM enrichment activities, educational visits	Careers, STEAM enrichment activities, educational visits