

Calendar	Topic	Assessment	Sequencing and Coherence <i>concepts - themes - skills</i>	Literacy <i>reading - vocabulary - oracy - writing</i>
Autumn Term – HT1	P1 Conservation and Dissipation of Energy: Changes in energy stores, Conservation of energy, Energy and work, GPE stores, KE and elastic energy stores,	P1 Online quiz set on Educake – instantly marked and direct question feedback through Educake.	<p>Explain why this topic is being taught at this point. This could focus on the specific content knowledge being taught, subject themes within the topic or subject skills that weave through the curriculum.</p> <p>Conservation of energy is a cornerstone concept of Physics. Each topic within Physics will involve systems (an object or group of objects) in some regard, with most examples being closed systems where all energy transfers are accounted for. Math skills are embedded here which are crucial throughout the Physics specification including: rearranging equations, plotting graphs, converting units, standard form and significant figures.</p>	<p>Command words list given to gain understanding of specific examination command words.</p> <p>Glossary of keywords given to assist in disciplinary words used throughout energy topic.</p> <p>Science specific bilingual and picture dictionaries given for EAL pupils catered to their home language.</p>
Autumn Term – HT2	Energy dissipation, Energy and efficiency, Electrical Appliances, Energy and Power.	P1 End of topic test GCSE style questions FT and HT. P1 and working scientifically. Teacher marked, feedback through model answer mark scheme and follow up exam style questions on areas of weakness – personalised.	Building on concepts learnt, pupils start to look at the bigger picture of the conservation of energy and what happens after energy is used for a purpose. Looking at real life appliances we can calculate how much each one costs to run per year.	<p>Voice 21 roles used as part of plenaries for lessons.</p> <p>Instigate and challenge roles used after end of unit tests for students to gain insight into why other students have gained marks when they have dropped them.</p>

Spring Term – HT 3	P2 Energy Transfer by Heating: Conduction, SHC, Heating and insulating buildings.	P2 Online quiz set on Educake– instantly marked and direct question feedback through Educake.	Here we identify the three main ways which thermal energy can be transferred through all states of matter. An understanding of the particle model from KS3 is carried over here. Real life scenarios of how to insulate a building are covered and the way which we can calculate whether these steps to insulate the home are cost effective.	
Spring Term – HT 4	SHC Required Practical	P2 End of topic test GCSE style questions FT and HT. P2, working scientifically and synoptic content from P1. Teacher marked, feedback through model answer mark scheme and follow up exam style questions on areas of weakness – personalised.	This practical incorporates a whole host of working scientifically skills due to its complexity. Students must have a basic understanding of circuits from KS3 to be able to set up the apparatus correctly to collect valid data. Use of equations and good rearrangement skills are embedded here. Students must assess the validity of the method itself and see if they could improve it in anyway.	Comparison of answers of ranging mark values. Students given mark scheme and mark each answer. After this, students write their own perfect model answers.
Summer Term – HT 5	P3 Energy Resources: Energy demands, Wind and water,	P3 Online quiz set on Educake– instantly marked and direct question feedback through Educake.	In this unit we establish differences between renewable and non-renewable energy resources and give multiple examples of each. As well as this we discuss the benefits and drawbacks of them with regards to the impact on our environment, economy and local area.	Wind turbine health effects literature review – comprehension of literature review included.
Summer Term – HT 6	Power from the Sun and Earth, Energy and the environment, Big energy issues.	P3 End of topic test GCSE style questions FT and HT. P3, working scientifically and synoptic content from P1-P2. Teacher marked, feedback through model answer mark scheme and follow up exam style questions on areas of weakness – personalised.	Here we look at particular applications of renewable energy resources and how viable they are for particular locations and communities.	