The English Martyrs Catholic School and Sixth Form College

Physics Year 8	Module 1	Module 2	Module 3
Topic Theme and Intent	Students learn the fundamentals of **electricity** and **magnetism**. Starting with simple **series circuits** and **components**, then building up to **parallel circuits** and then linking electricity to magnetism, through the work on **electromagnetism**. Students learn about this so that they start to build an understanding of the links between electrical and magnetic phenomena.	Students learn about **energy resources**, **energy types** and **stores** and different ways in which energy can be **transferred** from one object to another or from one store to another. Students learn about this topic so that they can understand the role of energy in the wider world and universe.	Students learn about the **motion** of objects, linking this to **forces** and then moves onto looking at how **pressure** arises and is measured. Students learn about this so that they can explain how forces cause **acceleration** and cause **pressure** in everyday life.
Knowledge	• Circuits and current • Voltage and resistance • Magnets • Electromagnets	• Energy resources and stores • Heat vs temperature • Energy transfer • Work done and power	• Speed, distance and time • Distance time graphs • Pressure • Forces and motion
Skills	Students will develop skills of building electrical circuits and taking accurate reading of voltage and current.	Students will investigate ways to reduce heat loss by conduction, convection and radiation	Students will calculate the speed of moving objects through taking measurements.
Literacy Links	**Reading –** Students will read about uses of electricity. **Writing –** Students start to communicate scientific ideas and concepts through writing. **Oracy –** Students start to use scientific vocabulary in discussion and question and answering.	**Reading –** Students will read about the use of energy resources. **Writing –** Students practise communicating scientific ideas and concepts through writing. **Oracy –** Students practise the use scientific vocabulary in discussion and question and answering.	**Reading –** Students will read about the effects of forces. **Writing –** Students will communicate scientific ideas and concepts through writing. **Oracy –** Students use scientific vocabulary in discussion and question and answering.
Essential Vocabulary	Series, Parallel, Current, Voltage, Resistance, Static, Electromagnetism, Coil, Potential difference	Energy, Conduction, Convection, Radiation, Stores, Kinetic, Gravitational, Elastic, Potential, Insulation	Motion, Acceleration, Force, Atmospheric, Contact, Moment, Pivot, Newton, Lever, Density

Disciplinary Reading	Reading for Pleasure		
CGP Books – KS3 Science	R. Hammond - Car Science	Dr P. McCauley - Engineering for Teens	D. O'Briain – Beyond the Sky