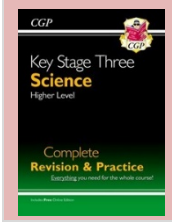
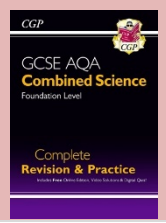
The English Martyrs Catholic School and Sixth Form College

Physics Year 9	Module 1	Module 2	Module 3
Topic Theme and Intent	Students learn about **energy**. They focus on **energy stores, energy transfers** and **specific heat capacity**. This topic is studied so that students can understand and appreciate the vital role of **energy** as a crucial part of the physical world	Students learn about the relationship between **energy** and **power**. They will consider **energy transfers** through methods of **conduction** and **convection**. They will look at ways to avoid unwanted energy transfers and increase **efficiency**.	Students learn about **energy resources**, and recognising **renewable** energy resources. They will look at **trends in energy usage** These topics are studied so that students understand and appreciate the importance of **green energy** and efficiency for the **environment** and **sustainability**.
Knowledge	• Potential energy stores and transfers • Kinetic energy stores • Specific Heat Capacity	• Power and Energy • Conduction and Convection • Reducing unwanted energy transfers • Efficiency.	• Energy Resources and their uses • Wind, Solar, Geothermal • Hydroelectric, Waves, Tidal • Biofuels and Non-renewables. • Trends in energy usage
Skills	Students will investigate measuring the specific heat capacity of a material.	Students will investigate how to reduce unwanted energy transfers.	Students will use research skills to identify advantages and disadvantages of using renewable energy resources.
Literacy Links	**Reading –** Students will read about energy within physical systems. **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 conduction and convection. **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 changing levels of energy supply. **Writing –** Students will communicate scientific ideas and concepts through writing. **Oracy –** Students use scientific vocabulary in discussion and question and answering.
Essential Vocabulary	Energy Stores, Energy Systems, transfers, Kinetic, Potential, Gravitational, Elastic, Specific Heat capacity.	Power, conduction, convection, energy transfer, efficiency, useful energy, wasted energy,	Energy resources, wind, solar, geothermal, hydroelectric, waves, tidal, correlation, cause, decline, energy security, climate change

Disciplinary Reading

CGP Books – KS3 Science & GCSE Combined Science, & Oxford Revise.





Reading for Pleasure

N. Arnold and T. De Saulles - Shocking Electricity

N. Arnold and T. De Saulles - Evil Inventions

M. L'Engle - A wrinkle in Time