The Fisher Way: Curriculum

The Fisher Way aims to educate and inspire with joy, faith and love because we are an inclusive Catholic community.

Successful and resilient learners who aspire to and achieve excellence

Confident individuals who can explore and communicate effectively

Responsible citizens who are active, loving and wise in all their endeavours

Subject	Physics
Year Group	Year 7
Intent	**Successful and resilient learners:** who are able to use their physics knowledge and their scientific skills to investigate the world around them and solve problems associated with the workings of the physical world. **Confident individuals:** who can apply their knowledge of forces, energy, waves and the particle model of matter to understand, interpret, challenge and articulate what happens in the wider world. **Responsible citizens:** who are able to distinguish between what we CAN do as scientists and what is morally right for us to do as human beings. Pupils should be able to suggest solutions to some of the world's problems such as global

	warming and pollution and should be able to evaluate and debate the issues around current global issues such as Power Generation and Energy Use. They should be able to use the skills of working scientifically and their understanding to help them make informed decisions in later life to benefit both themselves and the wider world.
Narrative	The P1 (forces, sound and light) and P2 (electricity and energy transfer) modules build on the work that learner's will have done during key stage 2. The P1 module is required learning for the P3 (Magnetism and Electromagnets) module studied in year 8, the P5 (waves) and P6 (Forces and Motion) modules studied in year 9. The P2 module is provides the foundation knowledge for the work done in the P4 (Energy Transfers) module in year 8 and the P7 (Electric Charge) module studied in year 9. All learners will be able to identify common forces and classify them as either contact or non-contact forces. The learners will know that forces are either a push, pull or a twist and the effect that a force has on an object. Learners will be introduced to the concepts of mass, weight and gravity. They will be able to differentiate between the term weight as a force and the way in which weight is used in everyday conversations. Learners will be able to construct a distance-time graph and interpret the data in the graph. They will be able to use the data in the graph to calculate the speed of an object and describe the motion of the object. All learners will know how a sound travels and the light and sound are examples of waves. Learners will understand that waves transfer energy. Learners will explore the interactions of light when it reaches a boundary and that it can either reflect or refract through practical investigations and demonstrations. They will begin to explore how we see colour and how a filter affects the colour of an object. This is built on further in year 8. All learners will be able to describe the terms resistance, current and potential difference. They will be able to describe a parallel and series circuit and know how current and potential difference behave in parallel and series circuits. Learners are introduced to the concepts of energy transfer and the conservation of energy which is built on in later years. Learners will discuss renewable and non-renewable electricity generation focussing on the benefits and impacts of the generation of electricity.

Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (topics studied)	P1 Light and Sound. Forces, Gravity and Calculating Speed	P1 Light and Sound. Forces, Gravity and Calculating Speed	P1 Light and Sound. Forces, Gravity and Calculating Speed	P2 Static Charge, Circuits and Introduction to Resistance. Energy and Energy Costs	P2 Static Charge, Circuits and Introduction to Resistance. Energy and Energy Costs	P2 Static Charge, Circuits and Introduction to Resistance. Energy and Energy Costs

Key skills	Using equations, identifying limits to practical methods, conclusions and evaluations based on methods and data. Drawing and interpreting graphs.	Using equations, identifying limits to practical methods, conclusions and evaluations based on methods and data. Drawing and interpreting graphs.	Using equations, identifying limits to practical methods, conclusions and evaluations based on methods and data. Drawing and interpreting graphs.	Using and rearranging equations, drawing circuit diagrams. Evaluating data and drawing conclusions. practical skills	Using and rearranging equations, drawing circuit diagrams. Evaluating data and drawing conclusions. practical skills	Using and rearranging equations, drawing circuit diagrams. Evaluating data and drawing conclusions. practical skills
Cultural capital	Light and sound as a wave, how eyes work.	Light and sound as a wave, how eyes work.	Light and sound as a wave, how eyes work.	Power generation and the impact of this on the environment and the effect on climate change. Introduction to the conflict between cost, political will and harm.	Power generation and the impact of this on the environment and the effect on climate change. Introduction to the conflict between cost, political will and harm.	Power generation and the impact of this on the environment and the effect on climate change. Introduction to the conflict between cost, political will and harm.
Assessment	End of Topic Test	End of Topic Test	End of Topic Test	End of Topic Test	End of Topic Test	End of Topic Test Y7 Assessment