The Fisher Way: Curriculum

The Fisher Way aims to educate and inspire with joy, faith an
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 10
Intent	Successful and resilient learners: who use physics knowledge and scientific skills to investigate and solve problems in the physical world. Confident individuals: who use models, mathematics and evidence to explain physical processes and communicate their reasoning clearly. Responsible citizens: who evaluate the benefits, risks and environmental implications of technologies and make informed decisions about energy and resources.

Narrative	Learners begin with electricity, including circuit behaviour and domestic electrical systems, before studying atomic structure and radioactivity. Forces and motion then develop the relationship between interactions, energy and changes in movement. This builds on Year 9 energy and particle models and earlier circuit work. Learners use circuit diagrams, graphs, equations and practical measurements to explain observations and solve problems. The sequence prepares learners for Year 11 waves, electromagnetism and, for Separate Science, space physics. Mathematical demand and additional content are matched to qualification and tier.					
Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (topics studied)	Electricity: charge, current, potential difference, resistance and circuit components.	Series and parallel circuits; resistance and I-V practicals; domestic electricity and the National Grid.	Atomic structure: models, isotopes, radiation, nuclear equations, half-life and radiation safety.	Forces: scalars and vectors, resultant forces, weight, work and elasticity; Separate Science extensions.	Motion: speed, velocity, acceleration, distance-time and velocity-time graphs.	Newton's laws, force and acceleration, stopping distances and momentum (Higher Tier); practical consolidation.
Key skills	Build and draw circuits; use meters safely; apply current, voltage and resistance equations.	Investigate resistance and I-V characteristics; explain power transfer and electrical safety.	Balance nuclear equations; interpret decay graphs; calculate half-life; compare risk and exposure.	Draw force diagrams; use equations; carry out the force-extension practical; evaluate measurements.	Plot and analyse motion graphs; calculate gradients; interpret changes in forces and motion.	Investigate force, mass and acceleration; apply laws and equations; evaluate stopping-distance evidence.

Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Cultural capital and careers	Electrical and electronic engineering; sensors and control systems.	Electricians and power distribution; safe and efficient use of electricity.	Medical imaging and radiotherapy; nuclear energy and radiation protection.	Mechanical and structural engineering; testing materials safely.	Transport design and road safety; measurement in sport and engineering.	Vehicle safety and biomechanics; using evidence to reduce injury.
Assessment	Topic checks; practical and exam questions.	Topic assessment; feedback and recovery.	Topic checks; calculations and data questions.	Topic assessment; practical feedback and recovery.	Cumulative assessment and targeted revision.	Year 10 assessment; question-level feedback and recovery.