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	Further Mathematics
Year Group	Year 13
Intent	**Successful and resilient learners** who have developed their fluency and curiosity in mathematics and can adapt their skills to the work around them. **Confident individuals** who can reason mathematically and use their math skills to solve problems in an eloquent way. **Responsible citizens** who are learned and realise the importance of maths in the world around them even when they may not be using it in their day to day lives.

Narrative	By the end of Year 13, learners will have gained knowledge and understanding on all topics for A level further maths and be on track to achieve their best possible grade. They will have developed their calculus skills to include parametric volumes of revolution, hyperbolic functions, Macluarin series and able to solve first and second order differential equations. This will equip learners with the knowledge to study maths or maths-related courses at University or beyond.					
Half term	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (topics studied)	Momentum and Impulse, Work/energy and power, elastic strings and springs Complex numbers, series and methods in calculus	Elastic collisions in one dimension. Elastic collisions in two dimensions. Polar coordinates, Volumes of Revolution.	Decision revision – linear programming simplex, critical path Mechanics revision Hyperbolic functions and Differential Equations	Decision revision – travelling salesman, route inspection, Djiksta's Differential equations and revision	Revision and Exam prep	
Key skills	Substitution into and rearranging of formulae. Resolving forces and trigonometric skills. Coordinate geometry skills, indices manipulation.	Resolving forces, substituting and rearranging into formulae. Integration and differentiation. Sketching skills	Interpreting and formulating expressions in real-life context. Integration and differentiation. Using trigonometric identities	Integration, algebraic manipulation. Solving equations		

	Integration and differentiation.					
Cultural capital and careers	Electrical engineering Special relativity / Rocket Science	GPS and triangulation Manufacturing -3D printing and design.	Architectural modelling	Simple harmonic motion and modelling to real-life situations - population for example. Becoming a scientist.		
Assessment	Unit Test CP2	Mock Mixed Core Pure exam Decision exam	Unit Test CP2 and Mechanics	Mocks – core pure papers and FM1 Papers	Practise Papers	