

Year 11 Mathematics 2022_2023	Subject Intent	Our aim is to deliver an appropriately ambitious curriculum that secures subject knowledge through depth, breadth, and ambition for <u>all</u> pupils. Our carefully chosen curriculum provides atomisation, careful sequencing, alignment of content, instruction, and assessment. Pupils learn to become fluent in the fundamentals of mathematics to access complex problems and develop conceptual understanding. Pupils apply their understanding to routine and non-routine problems with increasing sophistication. We fundamentally believe in mastering and building a foundation of Mathematics to allow more complex mathematics to be taught and learnt with fidelity, accuracy, and pace.
	KS3 Subject Narrative	Our KS3 curriculum is a sequence of interconnected mathematics concepts to allow pupils to develop connected mathematical ideas. Pupils are continuously assessed on prior knowledge when being taught new knowledge – which are vitally important for more complex mathematics. We sequence the curriculum by identifying high leverage topics which more complex mathematics is taught on e.g., place value, four operations, number theory.
	KS4 Subject Narrative	KS3 topics and knowledge are revisited in greater complexity in years 10 and 11. The Year 9 curriculum is an opportunity to revise and build more complex mathematical concepts committed to long term memory in Year 7 and 8. E.g., Place value & Number properties allows pupils to identify the procedural impact of \times/\div numbers by Powers of 10 and the impact of size on a number's place value. The Year 10 and 11 curriculum includes topics which are mixed concepts e.g., Linear graphs is the application of algebraic notation and linear equations in the context of coordinate geometry
	Routine Assessment Strategies	Year 10's use knowledge retrieval and procedural starters and have a fortnightly low stakes cumulative quiz which the later is marked by teachers and stored on a central spreadsheet to measure progress. Each fortnightly quiz is a SAR (Strength Action Response) task where pupils are given feedback before and after their low stake cumulative quiz.

Year 11 Mathematics 2022_2023	WHY THIS, WHY NOW?	Autumn Term – Introduction to coordinate geometry and the application of algebra in the context of graphs	Spring Term – Development of solving equations in the context of geometry	Summer Term – Introduction of geometry in the context of properties of shapes
	Key Subject Knowledge	<ul style="list-style-type: none"> Algebraic Proof Solving quadratics & further simultaneous equations Functions Iteration Quadratic Inequalities Bearings Circle Theorems Further Trigonometry & Trigonometric graphs Basic vectors 	<ul style="list-style-type: none"> Statistics (Further) Transformations Congruence Vectors Gradients (Further), and area under a graph Kinematics Graphical Transformations 	<ul style="list-style-type: none"> Revision
	Subject Competencies	<ul style="list-style-type: none"> Pupils learn top higher tier topics which are more fragmented from the curriculum e.g., Iterations is a topic which lends itself to substitution but is a stand-alone topic. Pupils learn non-right-angled trigonometry and the application of trigonometry in coordinate geometry 	<ul style="list-style-type: none"> Pupils learn fragmented topics where there is limited prior knowledge required e.g., transformations, vectors Pupils learn kinematics which builds upon their understanding of substitution and rearranging formulae. Pupils learn graphical transformations which combines their understanding of trigonometric and quadratic graphs and the topic of functions. 	<ul style="list-style-type: none"> Pupils have now completed the NC and will now be revising through the use of shadow papers
	Summative Assessments (high stakes assessments which test cumulative knowledge)	<ul style="list-style-type: none"> Weekly SAR task which is cumulative of taught concepts and topics throughout the academic year 	<ul style="list-style-type: none"> Mid-year test covering Y10 content to date – the test covers Autumn term and Year 7, 8 and 9's taught curriculum 	<ul style="list-style-type: none"> End of year test covering Y10 content to date – Autumn term, Spring term and a portion of summer term
How does this pave the way for future study?	<ul style="list-style-type: none"> Pupils are learning trigonometric graphs and functions which prepares pupils to learn graphical transformations 	<ul style="list-style-type: none"> Pupils learn the remaining topics in the NC before they are being their exam revision 	<ul style="list-style-type: none"> N/A 	