

STEM Curriculum and Assessment Overview

School Vision	Challenging all of our students supportively to become confident and curious, enhancing lives now and in the future.									
Faculty Intent	To engender a desire and passion to learn and be Inspired in STEM subjects, experiencing STEM outside the class - applying learning in unfamiliar situations.									
Subject Intent	Provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.									
	Y8 Term 1				Y8 Term 2			Y8 Term 3		
Maths Pathway 1	Number	Algebra	Geometry	Number	Geometry	Number	Geometry	Statistics	Geometry	Algebra
	Prime decomp	Expressions	Plans & elevations	Proportion	Reflect & translate	Recurring decimals	Accurate drawings	Probability	Maps and scales	Draw straight lines $Y=mx+c$
	Powers of 10	Expanding brackets Factorising	Surface area & volume Circles	Distance time graphs Rate of change	Rotation Enlargement	Percentages Percentage change	Construction Loci	Mutually exclusive Est probability	Bearings Scales and ratio	Parallel and perp
	Calc and Estimate	Substitution	Pythagoras	Misleading graphs	2D & 3D solids			Probability diagrams	Congruency	Inverse & non-linear
Intent										
How it links to intent	Links number	Building on Y7	3D views incorporates	builds on	More abstract view	Number patterns	incorporating	Intro to probability	multiplicative reason	Understanding the
	and algebra	algebra	prior learning and	multiplicative	on 2D geometry	in more depth	mult reasoning	exploring situations	and its application	role of graphical
				reasoning			and 2D geom	opportunities		representation
Sequencing										
Why this? Why now?	Reinforce	Preparing and	regroups geometry	Preparing and	New material	Understanding the role	Building	New vocabulary	Applying skills from	Crucial foundations
	numerical	consolidating in	and for new content	consolidating in	to prepare for GCSE	of mathematical	connections	incorp number	term 2 and building	for Y9 and beyond
	fluency at start	prep for st line		prep for nth term		notation and real	between branches		upon them	algebra, linking
	of term			and sequences		life application	of maths			algebra topics
Maths Pathway 2	Number	Geometry	Statistics	Algebra	Number	Geometry	Number	Algebra	Number	Probability
	Large integers	3D solids	Data collection	Expressions	Decimal + -	D & M angles	Powers & roots	Sequences	Fractions	Basic
	Negative numbers	Nets	Bar charts	Functions	Decimals x / Ordering	Vertically opposite Angles in triangles	Indices	Special sequences nth term	Frac of amount	Outcomes Calculations
	Ratio & proportion	Surface area	Pie charts	Equations	Rounding	Drawing triangles	LCM HCF		Fractions + - Percentages	Experimental
Assessment	Each lesson we offer starter questions to review learning from previous units, a range of AFL strategies are adopted to evaluate learning as a result of teaching. Following each unit of work, we consolidate, review learning, apply therapy and assess students on current unit. End of year assessment being revised to reflect the curriculum, revision list shared with parents with revision pack for classroom preparation. Revision is done in class and at home, students and parents receive a personal learning checklist and links to Mathswatch and Corbett maths to support home revision.									
Key concepts / Key words	Prime decomp	Expressions	Plans & elevations	Proportion	Reflect & translate	Recurring decimals	Accurate drawings	Probability	Maps and scales	Draw straight lines $Y=mx+c$
	Indices	Expanding brackets	Surface area & volume	Distance time graphs	Rotation	Percentages	Construction	Mutually exclusive	Bearings	Parallel and perp
	Powers of 10	Factorising	Circles	Rate of change	Enlargement	Percentage change	Loci	Est probability	Scales and ratio	Inverse & non-linear
	Calc and Estimate	Substitution	Pythagoras	Misleading graphs	2D & 3D solids			Probability diagrams	Congruency	
Learning Outside the Classroom										
Opportunities								UK Maths challenge		STEM Bath Fizzers
Homework										
Description	MW - Monday	MW - Monday	MW - Monday	MW - Monday	MW - Monday	MW - Monday	MW - Monday	MW - Monday	MW - Monday	MW - Monday
Assessment										
Type	Chapter test	Chapter test	Chapter test	Chapter test	Chapter test	Chapter test	Chapter test	Chapter test	EOY Assessment	
Why now?	Assess understanding and inform strengths and next steps formally	Assess understanding and inform strengths and next steps formally	Assess understanding and inform strengths and next steps formally	Assess understanding and inform strengths and next steps formally	Assess understanding and inform strengths and next steps formally	Assess understanding and inform strengths and next steps formally	Assess understanding and inform strengths and next steps formally	Assess understanding and inform strengths and next steps formally	Consolidate learning check on retention of knowledge and offer parental involvement	