



Mathematics is an interconnected subject in which students need to be able to move fluently between representations of mathematical ideas. The programme of study is organised into apparently distinct domains, but students should build on key stage 3 and connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge in science, geography, computing and other subjects.

The curriculum is taught through the mathematical strands of: Number and Ratio, Algebra, Geometry and Measures, Statistics and Probability

	Autumn 1a	Autumn 1b	Spring 2a	Spring 2b	Summer 3a	Summer 3b
CONTENT						
	Algebra:	Percentage Growth	Trigonometry and	3D Shape	Statistics	Geometry
Declarative / core /	Simultaneous	and Decay	Bearings			
powerful	Equations					
Knowledge – 'Know What'						
Intent	Algebra is the	Percentage growth	Trigonometry and	Students use the	Students extent	Students recap
	language of maths.	and decay	bearings appear	prior	their knowledge of	some of the more
	As the complexity	attributes itself to	together as, for	understanding of	averages to include	challenging areas
	of problems	other areas of	more able	area of shape to	situations when	of geometry such
	increase, as does	mathematics.	students, it allows	work with volumes	data is presented in	as trigonometry
	the knowledge of	Having a good	more complex	and surface areas.	a table.	first taught in
	algebra. This half	understanding of	questions to be			spring 2a this year.
	term is vital for	this allows chances	practiced which			Transformations
	manipulating	of incorporating	mix these two skills			and graphs are also
	algebra in more	into practice later	together.			reinforced and
	advanced settings.	in the year.				extended on from
						the KS3 curriculum
Skills	Students will be	Students will be	Students will be	Students will be	Students will be	Students will be
	able to:	able to:	able to:	able to:	able to:	able to:



St Mary's CE High School Curriculum Map 2023-24 Mathematics Year 10 foundation tier

Procedural	Solve complex	Revisit converting	Use trigonometry	Draw the net of a	Revisit finding	Apply the four
Knowledge – 'Know	linear equations	between fraction,	in 2D right angled	prism	averages from lists	transformations to
How'		decimals and	triangles			shapes
	Rearrange formula	percentages		Use the language	Find the average	
			Use trigonometry	of 3d shapes	from a frequency	Find missing angles
	Simplify the sum of	Recap manipulating	without the aid of a		table	or missing lengths
	algebraic fractions	fractions	calculator	Find the surface		using trigonometry
	in simple cases			area of prisms	Find the average	
		Recap finding	Solve problems		from a grouped	Interpret and
	Solve linear	percentages of	involving bearings	Find the surface	frequency table	answer questions
	simultaneous	amounts		area of simple non-		by reading from
	equations		Construct triangles	prisms	Extend	real life graphs
		Find the value after	using a pair of		trigonometry use	
		a percentage	compasses	Find the volume of	from earlier in the	Use speed distance
		in/decrease		prisms and	year	time graphs to
			Solve loci problems	cylinders		answer questions
		Find the original			Draw and interpret	
		value given a		Convert between	real life graphs	
		in/decreased value		units of area and		
				volume.		
Key Questions	How many	Can you use a	How is	How does drawing	Why can we not	What does a flat
	equations do you	diagram to show	trigonometry	the net of a shape	find the exact	line mean on a
	need to solve for 2	how to add	related to similar	aid finding the	mean average from	distance time
	unknown	fractions together?	shapes?	surface area of a	a grouped	graph? A speed
	variables?			shape?	frequency table?	time graph?
		Can you find				
	What is the	different ways to		Can you show why		What does a
	difference in	find percentage of		the volume of a		"upward" line
	solving an equation	amounts?		prism is the cross		mean on a distance
	and rearranging a			section area		time graph?
	formula?			multiplied by the		



St Mary's CE High School Curriculum Map 2023-24 Mathematics Year 10 foundation tier

				longth with the sid		
				length with the aid		
Accessor	Chudonto will be	Ct., donto will be	Ct., dontoill b.c	of a diagram?	Ct., doubleill be-	Ct., dontoill b.c
Assessment	Students will be	Students will be	Students will be	Students will be	Students will be	Students will be
	assessed on a	assessed on a	assessed on a	assessed on a	assessed on a	assessed on a
	Diagnostic quiz at	Diagnostic quiz at	Diagnostic quiz at	Diagnostic quiz at	Diagnostic quiz at	Diagnostic quiz at
	the end of each	the end of each	the end of each			
	unit and a retest to	unit and a retest to	unit and a retest to			
	improve any gaps	improve any gaps	improve any gaps	improve any gaps	improve any gaps	improve any gaps
	in learning.	in learning.	in learning.	in learning.	in learning.	in learning.
	A half termly	A half termly	A half termly	A half termly	A half termly	A half termly
	assessment will be	assessment will be	assessment will be	assessment will be	assessment will be	assessment will be
	completed in class	completed in class	completed in class	completed in class	completed in class	completed in class
	covering content	covering content	covering content	covering content	covering content	covering content
	covered this half	covered this half	covered this half	covered this half	covered this half	covered this half
	term, and previous	term, and previous	term, and previous	term, and previous	term, and previous	term, and previous
	topics covered at	topics covered at	topics covered at	topics covered at	topics covered at	topics covered at
	St. Mary's	St. Mary's	St. Mary's	St. Mary's	St. Mary's	St. Mary's
	,	·		·		,
Links to careers/wider		Interest rates	Astronomy	Planning involving capacity	Data analytics	Data analytics
world		Depreciation of	Orienteering		management	management
		value		e.g. car fuel tanks		
			Navigation			
		Find an original				
		price after a				
		discount/price				
		increase				



St Mary's CE High School Curriculum Map 2023-24 Mathematics Year 10 foundation tier