

MacIntyre Academies Quest Academy

Whole School Long Term Mathematics Plans 2022 – 2023

Long Term Planning Year 3									
Subject: Math	Subject: Maths Year Group: 3								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2			
Number of weeks	7	7	6	6	5	7.5			
National Curriculum	Number	Number	Number	Number	Number	Number			
Торіс	Geometry	Geometry and Measure	Algebra	Ratio rates of change	Statistics	Geometry and			
	Problem Solving	Problem Solving	Statistics	Geometry and Measure	Algebra	Measure			
	_	_		-	-	Ratio and Proportion			
						-			
Odyssey Strands	MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra NPV Number and place value; MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra MMD Mental multiplication and division; PRA Problem solving, reasoning and algebra PRA Problem solving, reasoning and algebra; MEA Measurement; GPS Geometry: properties of shapes; STA Statistics NPV Number and place value; MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra	MMD Mental multiplication and division; FRP Fractions, ratio and proportion; PRA Problem solving, reasoning and algebra MEA Measurement; PRA Problem solving, reasoning and algebra; MAS Mental addition and subtraction MEA Measurement; GPS Geometry: properties of shapes NPV Number and place value; MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra MMD Mental multiplication and division; PRA Problem solving, reasoning and algebra; MAS Mental addition and subtraction	NPV Number and place value; MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra MAS Mental addition and subtraction; MMD Mental multiplication and division; STA Statistics; PRA Problem solving, reasoning and algebra FRP Fractions, ratio and proportion; PRA Problem solving, reasoning and algebra GPS Geometry: properties of shapes; GPD Geometry: position and direction; MEA Measurement NPV Number and place value; MAS Mental addition and subtraction	NPV Number and place value; PRA Problem solving, reasoning and algebra; WAS Written addition and subtraction MAS Mental addition and subtraction; WAS Written addition and subtraction; PRA Problem solving, reasoning and algebra MEA Measurement NPV Number and place value; MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra MMD Mental multiplication and division; WMD Written multiplication and division; PRA Problem solving, reasoning and algebra	MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra; FRP Fractions, ratio and proportion MMD Mental multiplication and division; PRA Problem solving, reasoning and algebra; WMD Written multiplication and division MMD Mental multiplication and division; WMD Written multiplication and division; WMD Written multiplication and division STA Statistics; PRA Problem solving, reasoning and algebra; MEA Measurement MAS Mental addition and subtraction; WAS Written addition and subtraction; PRA Problem solving, reasoning and algebra	WAS Written addition and subtraction; MAS Mental addition and subtraction WAS Written addition and subtraction; MEA Measurement; MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra GPS Geometry: properties of shapes; MEA Measurement WMD Written multiplication and division; PRA Problem solving, reasoning and algebra; MMD Mental multiplication and division; FRP Fractions, ratio and proportion; DPE Decimals, percentages and their equivalence to fractions MAS Mental addition and subtraction; WAS Written addition and subtraction; PRA Problem solving, reasoning and algebra; WMD Written multiplication and division; MMD Mental multiplication and division; MMD Mental			

Key Curriculum Strands	Literacy Communication skills	Community contribution Effective contributor	Resilience Motivation Understanding emotions Self – expression	ICT Communication	Working with others Understanding laws	Rule of law Exercise, resilience
Criteria	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.			
	Enquiry based Learning Practical Problem solving.	Enquiry based Learning Shape investigation Active Maths	Enquiry based Learning Fraction investigation using practical resources.	Enquiry based Learning Practical measuring with units of measure through forest school.	Enquiry based Learning Analyse some basic real-life stats.	Enquiry based Learning Creating problems for peers make your own dominos Measure distance on treadmill / rowing machine.
	Cross Curricular English Science	Cross Curricular Art Science Life Skills	Cross Curricular Food Technology PE Science	Cross Curricular Computing Forest school	Cross Curricular English Science Life Skills	Cross Curricular Science Computing Life Skills English PE
	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High			

Long Term Planning Year 4								
Subject: Maths Year Group: 4								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
Number of weeks	7	7	6	6	5	7.5		
National Curriculum	Number	Number	Number	Number	Number	Number		
Торіс	FDP	Geometry and Measure	Algebra	Algebra	Geometry and Measure	Geometry and		
		Statistics	Geometry and Measure		Ratio and Proportion.	Measure		
		Algebra	-		_	Algebra		
						Ratio and proportion		

Odvssev Strands	MAS Mental addition and	MMD Mental	NPV Number	DPE Decimals.	NPV Number and place	MAS Mental addition
	subtraction; PRA	multiplication and	r and place value; PRA	percentages and their	value; PRA Problem	and subtraction; MMD
	Problem solving.	division: PRA Problem	Problem solving.	equivalence to fractions:	solving, reasoning and	Mental multiplication
	reasoning and algebra	solving, reasoning and	reasoning and algebra	NPV Number and place	algebra	and division; WMD
	NPV Number and place	algebra; FRP Fractions,	WAS Written addition	value; PRA Problem	MAS Mental addition	Written multiplication
	value; MAS Mental	ratio and proportion	and subtraction; MMD	solving, reasoning and	and subtraction; DPE	and division; PRA
	addition and subtraction	DPE Decimals,	Mental multiplication and	algebra; WAS Written	Decimals, percentages	Problem solving,
	MMD Mental	percentages and their	division; WMD Written	addition and subtraction	and their equivalence to	reasoning and algebra
	multiplication and	equivalence to fractions:	multiplication and	MAS Mental addition and	fractions	WAS Written addition
	division: PRA Problem	NPV Number and place	division: PRA Problem	subtraction: WAS Written	MMD Mental	and subtraction: PRA
	solving, reasoning and	value: WAS Written	solving, reasoning and	addition and subtraction:	multiplication and	Problem solving.
	algebra: WMD Written	addition and subtraction:	algebra: MEA	MEA Measurement: PRA	division: PRA Problem	reasoning and algebra:
	multiplication and	MAS Mental addition	Measurement	Problem solving.	solving, reasoning and	MAS Mental addition
	division; FRP Fractions,	and subtraction	MMD Mental	reasoning and algebra	algebra; NPV Number	and subtraction
	ratio and proportion	DPE Decimals,	multiplication and	MEA Measurement; PRA	and place value; WMD	GPD Geometry: position
	MEA Measurement: DPE	percentages and their	division: FRP Fractions.	Problem solving.	Written multiplication	and direction: STA
	Decimals, percentages	equivalence to fractions:	ratio and proportion:	reasoning and algebra	and division: MEA	Statistics
	and their equivalence to	MEA Measurement: STA	PRA Problem solving.	NPV Number and place	Measurement	WMD Written
	fractions	Statistics; PRA Problem	reasoning and algebra	value; WAS Written	NPV Number and place	multiplication and
	WAS Written addition	solving, reasoning and	GPS Geometry:	addition and subtraction:	value: MEA	division: PRA Problem
	and subtraction	algebra	properties of shapes:	MAS Mental addition and	Measurement: GPS	solving, reasoning and
		NPV Number and place	PRA Problem solving.	subtraction	Geometry: properties of	algebra: MMD Mental
		value: WAS Written	reasoning and algebra	WMD Written	shapes	multiplication and
		addition and subtraction:	MMD Mental	multiplication and	DPE Decimals.	division: FRP Fractions.
		MAS Mental addition	multiplication and	division: PRA Problem	percentages and their	ratio and proportion:
		and subtraction	division: WMD Written	solving, reasoning and	equivalence to fractions:	DPE Decimals.
		MMD Mental	multiplication and	algebra: MAS Mental	PRA Problem solving.	percentages and their
		multiplication and	division: MAS Mental	addition and subtraction:	reasoning and algebra:	equivalence to fractions
		division: WMD Written	addition and subtraction:	WAS Written addition	FRP Fractions, ratio and	MMD Mental
		multiplication and	PRA Problem solving.	and subtraction	proportion	multiplication and
		division: PRA Problem	reasoning and algebra			division: PRA Problem
		solving, reasoning and	· · · · · · · · · · · · · · · · · · ·			solving, reasoning and
		algebra				algebra: WMD Written
						multiplication and
						division: FRP Fractions.
						ratio and proportion
Kev Curriculum	Literacy	Community contribution	Resilience	ICT	Working with others	Rule of law
Strands	Communication skills	Effective contributor	Motivation	Communication	Linderstanding laws	Exercise resilience
	Communication skins	Enective contributor	Linderstanding emotions	Communication	onderstanding laws	Excretise, resilience
			Self – expression			
Criteria	Engagement Factors	Engagement Factors	Engagement Factors	Engagement Factors	Engagement Factors	Engagement Factors
	Interactive Media Board.	Interactive Media Board.	Interactive Media Board.	Interactive Media Board.	Interactive Media Board.	Interactive Media Board.
	Mathematical resources.	Mathematical resources.	Mathematical resources.	Mathematical resources.	Mathematical resources.	Mathematical resources.
	Active Maths.	Active Maths.	Active Maths.	Active Maths.	Active Maths.	Active Maths.

Enquiry based Learning How do we measure travel? Look at distances and multiplication.	Enquiry based Learning What are the relationships between Science and Maths using decimals?	Enquiry based Learning Create a collage using 'tessellating' shapes. Why do they tessellate?	Enquiry based Learning No pens problem solving in real life situations	Enquiry based Learning Make a cake and divide it and ingredient's into to set fractions	Enquiry based Learning Shape investigation, which artist used shape as their main pieces?
Cross Curricular English Science Geography	Cross Curricular Science English Food Technology PE	Cross Curricular Science Art	Cross Curricular English Science Life Skills	Cross Curricular English Science Food Technology PE	Cross Curricular Science Life Skills Art
Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High

Long Term Planning Year 5								
Subject: Maths Year Group: 5								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
Number of weeks	7	7	6	6	5	7.5		
National Curriculum	Number	Number	Number	Number	Number	Mental Arithmetic		
Торіс	Mental Arithmetic	Mental Arithmetic	Mental Arithmetic	Geometry Measure	Geometry and Measure	Algebra		
	Measure	Geometry and Measure	Geometry and Measure	Decimals, Fractions	Algebra	Statistics		
	Decimals, Fractions	-	Statistics.	and Percentage	Mental Arithmetic	Number		
	and Percentage			_		Decimals, Fractions		
						and Percentage		
Odyssey Strands	NPV Number and place value; WAS Written addition and subtraction; PRA Problem solving, reasoning and algebra MAS Mental addition and subtraction; NPV Number and place value DPE Decimals, percentages and their equivalence to fractions; PRA Problem solving, reasoning and algebra;	MMD Mental multiplication and division; FRP Fractions, ratio and proportion MMD Mental multiplication and division; WMD Written multiplication and division; PRA Problem solving, reasoning and algebra GPS Geometry: properties of shapes;	NPV Number and place value; DPE Decimals, percentages and their equivalence to fractions; PRA Problem solving, reasoning and algebra MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra; WAS Written addition and subtraction	WMD Written multiplication and division WMD Written multiplication and division; FRP Fractions, ratio and proportion GPS Geometry: properties of shapes; PRA Problem solving, reasoning and algebra; MEA Measurement	MAS Mental addition and subtraction; DPE Decimals, percentages and their equivalence to fractions; PRA Problem solving, reasoning and algebra FRP Fractions, ratio and proportion; PRA Problem solving, reasoning and algebra; WMD Written multiplication and division	MMD Mental multiplication and division; PRA Problem solving, reasoning and algebra; FRP Fractions, ratio and proportion WMD Written multiplication and division PRA Problem solving, reasoning and algebra; MEA Measurement		

	MMD Mental multiplication and division MEA Measurement WAS Written addition and subtraction; MAS Mental addition and subtraction	PRA Problem solving, reasoning and algebra NPV Number and place value; DPE Decimals, percentages and their equivalence to fractions; FRP Fractions, ratio and proportion MAS Mental addition and subtraction; WAS Written addition and subtraction; MMD Mental multiplication and division; WMD Written multiplication and division; PRA Problem solving, reasoning and algebra	MMD Mental multiplication and division; NPV Number and place value; PRA Problem solving, reasoning and algebra PRA Problem solving, reasoning and algebra; GPS Geometry: properties of shapes; MEA Measurement; STA Statistics WAS Written addition and subtraction; PRA Problem solving, reasoning and algebra; MEA Measurement	FRP Fractions, ratio and proportion; PRA Problem solving, reasoning and algebra WAS Written addition and subtraction; PRA Problem solving, reasoning and algebra	DPE Decimals, percentages and their equivalence to fractions; PRA Problem solving, reasoning and algebra; NPV Number and place value GPD Geometry: position and direction; PRA Problem solving, reasoning and algebra; GPS Geometry: properties of shapes WAS Written addition and subtraction; PRA Problem solving, reasoning and algebra	DPE Decimals, percentages and their equivalence to fractions; FRP Fractions, ratio and proportion; NPV Number and place value NPV Number and place value; STA Statistics; MEA Measurement; WMD Written multiplication and division; PRA Problem solving, reasoning and algebra; MMD Mental multiplication and division
Key Curriculum Strands	Literacy Communication skills	Community contribution Effective contributor	Resilience Motivation Understanding emotions Self – expression	ICT Communication	Working with others Understanding laws	Rule of law Exercise, resilience
Criteria	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.
	Learning Active maths outdoors looking at timings of events and decimals.	Learning Read and create personalised problems using written multiplication.	Learning Statistical investigation on real life issues I.e climate change.	Learning Practical fractions in food technology.	Learning Problem solving, map reading and art projects investigating shape	Learning Look at measure and travel and maps in forest schools
	Cross Curricular English Science Geography	Cross Curricular Science English Food Technology PE	Cross Curricular Science Art	Cross Curricular Food technology Science Life Skills	Cross Curricular Life Skills Resilience English reading	Cross Curricular Science PE Forest Schools

	Pupil led learning							
	Extension Tasks							
	Research	Research	Research	Research	Research	Research		
	Group activities							
	Manga High							

Long Term Planning Year 6								
Subject: Maths Year Group: 6								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
Number of weeks	7	7	6	6	5	7.5		
National Curriculum	Number	Number	Number	Number	Number	Number		
Торіс	Ratio and Proportion	Geometry and Measure	Algebra	Statistics	Ratio and proportion	Geometry and		
	Geometry and	Algebra	Geometry and Measure	Algebra	Algebra	Measure		
	Measure.	Ratio and Proportion	-	Geometry and	Geometry and measure	Statistics		
	Algebra			Measure.	-	Algebra		
	-					-		
Odyssey Strands	NPV Number and place	NPV Number and place	NPV Number and place	MAS Mental addition and	NPV Number and place	NPV Number and place		
	value; MMD Mental	value; PRA Problem	value; WAS Written	subtraction; WAS Written	value; DPE Decimals,	value; FRP Fractions,		
	division: DRE Desimole	solving, reasoning and	DRE Desimole	addition and subtraction;	percentages and their	ratio and proportion;		
	nercentages and their	ratio and proportion	DFL Decimals,	reasoning and algebra	NPV Number and place	GPS Geometry:		
	equivalence to fractions:	MEA Measurement	equivalence to fractions.	STA Statistics: DPF	value: MAS Mental	properties of shapes:		
	FRP Fractions, ratio and	GPS Geometry:	FRP Fractions, ratio and	Decimals, percentages	addition and subtraction:	MEA Measurement:		
	proportion	properties of shapes, co-	proportion	and their equivalence to	WAS Written addition	STA Statistics		
	MAS Mental addition and	ordinates and	MMD Mental	fractions	and subtraction; DPE	NPV Number and place		
	subtraction; NPV	translation.	multiplication and	GPD Geometry: position	Decimals, percentages	value; PRA Problem		
	Number and place value;	MMD Mental	division; WMD Written	and direction; NPV	and their equivalence to	solving, reasoning and		
	WAS Written addition	multiplication and	multiplication and	Number and place value;	fractions; FRP Fractions,	algebra; GPD		
	and subtraction; DPE	division; FRP Fractions,	division; PRA Problem	PRA Problem solving,	ratio and proportion;	Geometry: position and		
	Decimals, percentages	ratio and proportion;	solving, reasoning and	reasoning and algebra;	PRA Problem solving,	direction; www.bvvritten		
	fractions: DRA Problem	multiplication and	and place value	properties of shapes	GPS Geometry:	division		
	solving reasoning and	division: PRA Problem	GPS Geometry	WMD Written	properties of shapes	NPV Number and place		
	algebra	solving, reasoning and	properties of shapes:	multiplication and	MAS Mental addition	value: PRA Problem		
	PRA Problem solving,	algebra	PRA Problem solving,	division; PRA Problem	and subtraction; FRP	solving, reasoning and		
	reasoning and algebra;	FRP Fractions, ratio and	reasoning and algebra	solving, reasoning and	Fractions, ratio and	algebra; GPS Geometry:		
	MAS Mental addition and	proportion; PRA Problem	MAS Mental addition	algebra	proportion; WMD Written	properties of shapes.		
	subtraction	solving, reasoning and	and subtraction; NPV	PRA Problem solving,	multiplication and			
	MEA Measurement; PRA	algebra; DPE Decimals,	Number and place value;	reasoning and algebra;	division; MMD Mental			
	Problem solving,	percentages and their	VVAS Written addition	FRP Fractions, ratio and	multiplication and			
	NPV Number and place	ERP Fractions ratio and	Problem solving	ριοροπιοη	aivision; PRA Problem			
		proportion	reasoning and algebra		algebra: NPV Number			
	Value	proportion			and place value			

	MAS Mental addition and subtraction; WAS Written addition and subtraction; NPV Number and place value; PRA Problem solving, reasoning and algebra MMD Mental multiplication and division; WMD Written multiplication and division; MAS Mental addition and subtraction; PRA Problem solving, reasoning and algebra; NPV Number and place value		WMD Written multiplication and division; NPV Number and place value; PRA Problem solving, reasoning and algebra.		WMD Written multiplication and division; PRA Problem solving, reasoning and algebra; NPV Number and place value; STA Statistics; GPD Geometry: position and direction	
Key Curriculum Strands	Literacy Communication skills	Community contribution Effective contributor	Resilience Motivation Understanding emotions Self - expression	ICT Communication	Working with others Understanding laws	Rule of law Exercise, resilience
Criteria	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.
	Enquiry based Learning Using decimals and science look at radio waves and stations, add and subtract decimals.	Enquiry based Learning Relationship between science and maths using FDP	Enquiry based Learning Art based project exploring shape and abstract artists.	Enquiry based Learning Practical fractions through food technology.	Enquiry based Learning Climate change looking at position, direction and measure.	Enquiry based Learning Practical statistics project on a chosen topic.
	Cross Curricular Science PE Life Skills	Cross Curricular Science PE Art	Cross Curricular Science Art Life Skills English reading	Cross Curricular Food technology Science	Cross Curricular Science English reading Active maths PE	Cross Curricular Art Science
	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High

Long Term Planning Year 7								
Subject: Maths Year Group: 7								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
Number of weeks	7	7	6	6	5	7.5		
National	Number and the number	Checking	Assess and enrich	Proportional reasoning	Angle	Mathematical		
Curriculum	system	Counting and	Properties of shapes	Patterns	Calculating FDP cont'd	movement		
		comparing	Algebraic proficiency:	Measuring space	Solving equations	Presentation of data		
	Calculating	Visualising	tinkering		Calculating space	Measuring data		
			Exploring FDP			Assessment		
Odyssey Strands	Numbers and the number	Checking	Assess and enrich	Prop'l reasoning	Angles	Mathematical		
	system:	round numbers and		use ratio notation,	Apply the properties of	movement		
	Find prime numbers and test	measures to an	Properties of shapes	including reduction to	angles at a point, angles	work with coordinates in		
	numbers to see if they are	appropriate degree of	Identify properties of the	simplest form	at a point on a straight	all four quadrants		
	prime	accuracy (e.g. to a	faces, surfaces, edges	divide a given quantity	line, vertically opposite	understand and use		
	Find common factors of	specified number of	and vertices of: cubes,	into two parts in a given	angles	lines parallel to the		
	numbers	decimal places or	cuboids, prisms,	part: part or part: whole	Coloulating CDD contla	axes, $y = x$ and $y = -x$		
	factor of numbers in simple	significant ligures)	cylinders, pyramids,	ratio	calculating FDF cont d	solve geometrical		
	cases including co-prime	calculations using	Derive and apply the	Patterns	including formal written	aves		
	examples	approximation and	properties and	generate terms of a	methods to simple	identify describe and		
	Find common multiples of	estimation, including	definitions of: special	sequence from a term-to-	fractions (proper and	construct congruent		
	numbers	answers obtained using	types of quadrilaterals,	term rule	improper), and mixed	shapes including on		
	Recognise and solve	technology recognise	including square,		numbers	coordinate axes, by		
	problems involving the	and use relationships	rectangle, parallelogram,	Measuring space	interpret percentages	considering rotation,		
	lowest common multiple	between operations,	trapezium, kite and	Use standard units of	and percentage changes	reflection and translation		
	Use linear (arithmetic)	including inverse	rhombus; and triangles	measure and related	as a fraction or a	describe translations as		
	number patterns to solve	operations (e.g.	and other plane figures	concepts (length, area,	decimal, and interpret	2D vectors		
	problems	cancellation to simplify	using appropriate	volume/capacity, mass,	these multiplicatively			
	Recognise and use	calculations and	language	time, money, etc.)	compare two quantities	Presentation of data		
	Triangular numbers	expressions)	Algobraic proficionav:	use standard units of	using percentages	tables, charts and		
	and cube numbers	Counting and	tinkering	money and other	percentage change	diagrams including		
	Read, write and evaluate	comparing	express one quantity as	measures (including	including percentage	frequency tables, bar		
	powers	order positive and	a percentage of another	standard compound	increase/decrease	charts, pie charts and		
	Define and find square roots	negative integers,	understand and use the	measures) using decimal	Solving equations	pictograms for		
	(including using the $$	decimals and fractions	concepts and vocabulary	quantities where	recognise and use	categorical data, vertical		
	symbol)	use the symbols =, \neq , <,	of expressions,	appropriate	relationships between	line charts for		
	Define and find cube roots	>, ≤, ≥	equations, formulae and	change freely between	operations, including	ungrouped discrete		
	(including using the $\sqrt[3]{}$		terms	related standard units	inverse operations (e.g.	numerical data and		
	symbol), including the use of	Visualising	use and interpret	(e.g. time, length, area,	cancellation to simplify	know their appropriate		
	a scientific calculator	use conventional terms	algebraic notation,	volume/capacity, mass)	calculations and	use		
	Define and find other roots	and notations: points,	including: ab in place of	in numerical contexts	expressions)	Measuring data		
	(including using the $$	planes, vertices, edges,	$a \times b$, sy in place of y + y	and angles in geometric		interpret analyse and		
	symbol), including the use of a scientific calculator	perpendicular lines, right	of a \times a, a ³ in place of a	figures	algebraically	compare the		

	Calculating: Understand and use place value (e.g. when working with very large or very small numbers, and when calculating with decimals) Apply the four operations, including formal written methods, to integers and decimals Use conventional notation for priority of operations, including brackets Recognise and use relationships between operations, including inverse operations (e.g. cancellation to simplify calculations and expressions)	angles, polygons, regular polygons and polygons with reflection and/or rotation symmetries use the standard conventions for labelling and referring to the sides and angles of triangles draw diagrams from written description	× a × a, a/b in place of a ÷ b, brackets simplify and manipulate algebraic expressions by collecting like terms and multiplying a single term over a bracket where appropriate, interpret simple expressions as functions with inputs and outputs substitute numerical values into formulae and expressions use conventional notation for priority of operations, including brackets Exploring FDP express one quantity as a fraction of another, where the fraction is less than 1 or greater than 1 Define percentage as 'number of parts per hundred'		Calculating space use standard units of measure and related concepts (length, area, volume/capacity) calculate perimeters of 2D shapes know and apply formulae to calculate area of triangles, parallelograms, trapezia <i>calculate surface area of</i> <i>cuboids</i> know and apply formulae to calculate volume of cuboids understand and use standard mathematical formulae	distributions of data sets from univariate empirical distributions through appropriate measures of central tendency (median, mean and mode) and spread (range) Assessment
Key Curriculum Strands	Literacy Communication skills	Community contribution Effective contributor	Resilience Motivation Understanding emotions Self – expression	ICT Communication	Working with others Understanding laws	Rule of law Exercise Resilience
Criteria	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.
	Enquiry based Learning Maze making using Prime numbers. Relationships between food, can the process be inversed?	Enquiry based Learning Shape and rotation project (ART) Recognising symbols and map reading, forest schools.	Enquiry based Learning Investigation on input and output, look at factories.	Enquiry based Learning Design a bedroom or garden using shape and measure.	Enquiry based Learning Converting between FDP project and how we use these in real life i.e shopping.	Enquiry based Learning Data research project on area of interest.

Cross Curricular Science Cooking	Cross Curricular Science Art Forest schools Geography	Cross Curricular Science Life Skills Food Technology	Cross Curricular Life Skills Science Art-ratio	Cross Curricular Science Food Tech	Cross Curricular Life skills Science.
Pupil led learning	Pupil led learning	Pupil led learning	Pupil led learning	Pupil led learning	Pupil led learning
Extension Tasks	Extension Tasks	Extension Tasks	Extension Tasks	Extension Tasks	Extension Tasks
Research	Research	Research	Research	Research	Research
Group activities	Group activities	Group activities	Group activities	Group activities	Group activities
Manga High	Manga High	Manga High	Manga High	Manga High	Manga High

Long Term Planning Year 8								
Subject: Maths Year Group: 8								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
Number of weeks	7	7	6	6	5	7.5		
National Curriculum Topic	Numbers and the Number System. Calculating.	Visualising and constructing Understanding risk Algebraic Proficiency	Exploring FDP Proportional reasoning Patterns	Investigating Angles Calculating FDP Solving Equations	Calculating Space Algebra	Understanding risk Presenting data Measuring Data		
Odyssey Strands	 use the concepts and vocabulary of prime numbers, highest common factor, lowest common multiple, prime factorisation, including using product notation and the unique factorisation theorem round numbers and measures to an appropriate degree of accuracy (e.g. to a specified number of decimal places or significant figures) interpret standard form <i>A</i> × 10ⁿ, where 1 ≤ <i>A</i> < 10 and <i>n</i> is an integer. 	 measure line segments and angles in geometric figures, including interpreting maps and scale drawings and use of bearings identify, describe and construct similar shapes, including on coordinate axes, by considering enlargement interpret plans and elevations of 3D shapes use scale factors, scale diagrams and maps relate relative expected frequencies to theoretical probability, using 	 work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 or 3/8) express the division of a quantity into two parts as a ratio; apply ratio to real contexts and problems (such as those involving conversion, comparison, scaling, mixing, concentrations) identify and work with fractions in ratio problems 	 understand and use alternate and corresponding angles on parallel lines derive and use the sum of angles in a triangle (e.g. to deduce and use the angle sum in any polygon, and to derive properties of regular polygons) interpret fractions and percentages as operators work with percentages greater than 100% solve problems involving percentage change, including original value 	 compare lengths, areas and volumes using ratio notation calculate perimeters of 2D shapes, including circles identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference know the formulae: circle = 2πr = πd, area of a circle = πr² calculate areas of circles and composite shapes know and apply formulae to calculate 	 apply systematic listing strategies record describe and analyse the frequency of outcomes of probability experiments using frequency trees enumerate sets and combinations of sets systematically, using tables, grids and Venn diagrams construct theoretical possibility spaces for combined experiments with equally likely outcomes and use these to calculate 		

operations, including formal written methods, to integers, decimals and simple fractions (proper and improper), and mixed numbers – all both positive and negative use conventional notation for priority of operations, including brackets, powers, roots and reciprocals.	 and the 0 - 1 probability scale record describe and analyse the frequency of outcomes of probability experiments using tables construct theoretical possibility spaces for single experiments with equally likely outcomes and use these to calculate theoretical probabilities apply the property that the probabilities of an exhaustive set of outcomes sum to one use and interpret algebraic notation, including: a²b in place of a × a × b, coefficients written as fractions rather than as decimals understand and use the concepts and vocabulary of factors simplify and manipulate algebraic expressions by taking out common factors and simplifying expressions involving sums, products and powers, including the laws of indices substitute numerical values into scientific formulae to change the outbiatt 	 understand and use proportion as equality of ratios express a multiplicative relationship between two quantities as a ratio or a fraction use compound units (such as speed, rates of pay, unit pricing) change freely between compound units (e.g. speed, rates of pay, prices) in numerical contexts relate ratios to fractions and to linear functions generate terms of a sequence from either a term-to-term rule deduce expressions to calculate the nth term of linear sequences 	 interest including in financial mathematics calculate exactly with fractions solve linear equations with the unknown on both sides of the equation find approximate solutions to linear equations using a graph 	 (including cylinders) plot graphs of equations that correspond to straight-line graphs in the coordinate plane identify and interpret gradients and intercepts of linear functions graphically recognise, sketch and interpret graphs of linear functions and simple quadratic functions plot and interpret graphs and graphs of non- standard (<i>piece-wise</i> <i>linear</i>) functions in real contexts, to find approximate solutions to problems such as simple kinematic problems involving distance and speed 	 probabilities apply ideas of randomness, fairness and equally likely events to calculate expected outcomes of multiple future experiments interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate graphical representation involving discrete, continuous and grouped data use and interpret scatter graphs of bivariate data recognise correlation interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate measures of central tendency (median, mean, mode and modal class) and spread (range, including consideration of outliers) apply statistics to describe a population
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Key Curriculum Strands	Literacy Communication skills	Community contribution Effective contributor	Resilience Motivation Understanding emotions Self - expression	ICT Communication	Working with others Understanding laws	Rule of law Exercise, resilience
Criteria	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths. Gym work	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.			
	Enquiry based Learning Computer based interactive learning activities.	Enquiry based Learning Map reading Shape Investigation	Enquiry based Learning Practical food-based investigation. Active Maths	Enquiry based Learning Research project looking at % and how as consumers we use it.	Enquiry based Learning Circle investigation Active Maths	Enquiry based Learning Statistical research investigation on chosen topic. Practical Probability Investigation.
	Cross Curricular Science Life Skills	Cross Curricular Forest schools Art Science	Cross Curricular Science Food Technology Life Skills	Cross Curricular Life Skills Computing Science	Cross Curricular Art Science Forest Schools	Cross Curricular Life Skills Science
	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High	Pupil led learning Extension Tasks Research Group activities Manga High			

Long Term Planning Year 9								
Subject: Maths Year Group: 9								
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2		
Number of weeks	7	7	6	6	5	7.5		
National Curriculum	Calculating	Algebraic Proficiency	Patterns,	Conjecturing	Algebra continued	Understanding Risk		
Торіс	Visualising and constructing.	Proportional reasoning	Solving equations and equalities Calculating Space	Algebra	Solving equations and inequalities 2	Presentation of data		

Odyssey Strands	 calculate with roots, and with integer 	 understand and use the concepts and vocabulary of 	•	recognise and use Fibonacci type	use the basic congruence criteria for triangles (SSS_SAS)	recognise, sketch and interpret graphs of	•	calculate the probability of
	 calculate with standard form A × 	identities know the difference 		sequences, quadratic sequences understand and use	ASA, RHS)	and the reciprocal function $y = 1/x$ with $x \neq$		dependent and events, including
	10^{n} , where $1 \le A < 10$ and n is an integer	between an equation and an identity		the concepts and vocabulary of	congruence, similarity and properties of	0 • • plot and		using tree diagrams and other
	 use inequality notation to specify simple error intervals 	 simplify and manipulate algebraic expressions by 	•	solve linear inequalities in one	conjecture and derive results about angles and	(including reciprocal graphs) and graphs		know the underlying assumptions
	due to truncation or rounding apply and interpret limits	expanding products of two binomials and factorising quadratic	•	variable represent the solution set to an	sides, including Pythagoras' Theorem and the fact that the base	of non-standard functions in real contexts, to find	•	enumerate sets and combinations of sets systematically, using
	 use the standard ruler and compass constructions 	 expressions of the form x² + bx + c argue mathematically to show algebraic 	•	inequality on a number line identify and apply circle definitions and	angles of an isosceles triangle are equal, and use known results to obtain simple proofs.	approximate solutions to problems such as simple kinematic problems involving dictance		tree diagrams understand that empirical unbiased samples tend towards
	(perpendicular bisector of a line segment, constructing a	expressions are equivalent, and use algebra to support and construct	•	properties, including: tangent, arc, sector and segment calculate arc lengths,	interpret gradients and intercepts of linear functions algebraically	 speed and acceleration. solve, in simple 		distributions, with increasing sample size.
	 perpendicular to a given line from/at a given point, bisecting a given angle) use these to 	arguments translate simple situations or procedures into algebraic expressions or formulae	•	angles and areas of sectors of circles calculate surface area of right prisms (including cylinders)	 use the form y mx + c to identify parallel lines find the equation of the line 	cases, two linear simultaneous equations in two variables algebraically	•	interpret and construct tables, charts and diagrams, including tables and line graphs for time
	construct given figures and solve loci problems; know that the perpendicular	 solve problems involving direct and inverse proportion including graphical 	•	calculate exactly with multiples of π know the formulae for: Pythagoras'	through two given points, or through one point with a given gradient • interpret the	 derive an equation (or two simultaneous equations), solve the equation(s) and 	•	series data and know their appropriate use draw estimated lines of best fit; make
	distance from a point to a line is the shortest distance to the line	and algebraicrepresentationsapply the concepts of congruence and		theorem, $a^2 + b^2 = c^2$, and apply it to find lengths in right- angled triangles in	gradient of a straight-line graph as a rate of change • recognise,	 find approximate solutions to simultaneous 		predictions. Know correlation does not indicate causation; interpolate and
	construct plans and elevations of 3D shapes	similarity, including the relationships between lengths in similar figures		two dimensional figures	sketch and interpret graphs of quadratic functions	equations using a graph		extrapolate apparent trends whilst knowing the dangers of so doing.
		 change freely between compound units (e.g. density, pressure) in 						
		numerical and algebraic contexts use compound units						
		such as density and pressure						

Key Curriculum	Literacy	Community contribution	Resilience	ICT	Working with others	Rule of law
Strands	Communication skills	Effective contributor	Motivation	Communication	Understanding laws	Exercise, resilience
			Understanding emotions			
		-	Self - expression			
Criteria	Interactive Media Board	Engagement Factors	Interactive Media Board	Engagement Factors	Engagement Factors	Engagement Factors
	Mathematical resources.	Mathematical resources.	Mathematical resources.	Mathematical resources.	Mathematical resources.	Mathematical resources.
	Active Maths.	Active Maths.	Active Maths.	Active Maths.	Active Maths.	Active Maths.
	Enquiry based	Enquiry based	Enquiry based	Enquiry based	Enquiry based	Enquiry based
	Learning	Learning	Learning	Learning	Learning	Learning
	Explorative learning trial	Speed project in gym	Who was Fibonacci?	Interactive computing	Problem solving and	Research project on
	and error golf.	Measurement	Who was Pythagoras?	project.	setting.	blased and un blased
	Cross Curricular	Cross Curricular	Cross Curricular	Cross Curricular	Cross Curricular	Cross Curricular
	Science	PE	Art	Science	Science	Science
	Life Skills	Science	Science	Art	Life Skills	Computing
	PE	Life Skills	History.			Life Skills
	Pupil lod loarning	Pupil lod loorning	Pupil lod loorning	Pupil lod loorning	Bunil lod loorning	Pupil lod loorning
	Extension Tasks	Extension Tasks	Extension Tasks	Extension Tasks	Extension Tasks	Extension Tasks
	Research	Research	Research	Research	Research	Research
	Group activities	Group activities	Group activities	Group activities	Group activities	Group activities
	Manga High	Manga High	Manga High	Manga High	Manga High	Manga High

	Long Term Planning Year 10									
Subject: Maths Year Group: 9										
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2				
Number of weeks	7	7	6	6	5	7.5				
National Curriculum	Calculating	Algebraic Proficiency	Patterns	Conjecturing	Algebra continued	Understanding Risk				
Торіс	Visualising and	Proportional reasoning	Solving equations and	Algebra	Solving equations and	Presentation of data				
	constructing.		equalities		inequalities 2					
	_		Calculating Space							
Odyssey Strands	 calculate with roots, and with integer indices calculate with standard form A × 10ⁿ, where 1 ≤ A < 10 and n is an integer 	 understand and use the concepts and vocabulary of identities know the difference between an equation and an identity 	 recognise and use Fibonacci type sequences, quadratic sequences understand and use the concepts and vocabulary of inequalities 	 use the basic congruence criteria for triangles (SSS, SAS, ASA, RHS) apply angle facts, triangle congruence, similarity and properties of quadrilaterals to 	recognise, sketch and interpret graphs of simple cubic functions and the reciprocal function y = 1/x with x ≠ 0 • plot and interpret graphs (including	 calculate the probability of independent and dependent combined events, including using tree diagrams and other representations, and 				

Key Curriculum	 use inequality notation to specify simple error intervals due to truncation or rounding apply and interpret limits of accuracy use the standard ruler and compass constructions (perpendicular bisector of a line segment, constructing a perpendicular to a given line from/at a given point, bisecting a given angle) use these to construct given figures and solve loci problems; know that the perpendicular distance from a point to a line is the shortest distance to the line construct plans and elevations of 3D shapes 	 simplify and manipulate algebraic expressions by expanding products of two binomials and factorising quadratic expressions of the form x² + bx + c argue mathematically to show algebraic expressions are equivalent, and use algebra to support and construct arguments translate simple situations or procedures into algebraic expressions or formulae solve problems involving direct and inverse proportion including graphical and algebraic representations apply the concepts of congruence and similarity, including the relationships between lengths in similar figures change freely between compound units (e.g. density, pressure) in numerical and algebraic contexts use compound units such as density and pressure 	• • •	solve linear inequalities in one variable represent the solution set to an inequality on a number line identify and apply circle definitions and properties, including: tangent, arc, sector and segment calculate arc lengths, angles and areas of sectors of circles <i>calculate surface</i> <i>area of right prisms</i> <i>(including cylinders)</i> calculate exactly with multiples of π know the formulae for: Pythagoras' theorem, a ² + b ² = c ² , and apply it to find lengths in right- angled triangles in two dimensional figures	conjecture and derive results about angles and sides, including Pythagoras' Theorem and the fact that the base angles of an isosceles triangle are equal, and use known results to obtain simple proofs. • identify and interpret gradients and intercepts of linear functions algebraically • use the form y = mx + c to identify parallel lines • find the equation of the line through two given points, or through one point with a given gradient • interpret the gradient of a straight-line graph as a rate of change • recognise, sketch and interpret graphs of quadratic functions	 reciprocal graphs) and graphs of non- standard functions in real contexts, to find approximate solutions to problems such as simple kinematic problems involving distance, speed and acceleration. solve, in simple cases, two linear simultaneous equations in two variables algebraically derive an equation (or two simultaneous equations), solve the equation(s) and interpret the solution find approximate solutions to simultaneous equations using a graph 	 know the underlying assumptions enumerate sets and combinations of sets systematically, using tree diagrams understand that empirical unbiased samples tend towards theoretical probability distributions, with increasing sample size. interpret and construct tables, charts and diagrams, including tables and line graphs for time series data and know their appropriate use draw estimated lines of best fit; make predictions. Know correlation does not indicate causation; interpolate and extrapolate apparent trends whilst knowing the dangers of so doing.
Strands	Communication skills	Effective contributor	Me Ur Se	otivation nderstanding emotions elf - expression	Communication	Understanding laws	Exercise Resilience

Criteria	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.					
	Enquiry based Learning Explorative learning trial and error golf.	Enquiry based Learning Speed project in gym Measurement investigation	Enquiry based Learning Who was Fibonacci? Who was Pythagoras?	Enquiry based Learning Interactive computing project. Exploring triangles.	Enquiry based Learning Problem solving and setting.	Enquiry based Learning Research project on biased and un biased sources.
	Cross Curricular Science Life Skills PE	Cross Curricular PE Science Life Skills	Cross Curricular Art Science History	Cross Curricular Science Art	Cross Curricular Science Life Skills	Cross Curricular Science Computing Life Skills
	Pupil led learning Extension Tasks Research Group activities Manga High					

Long Term Planning Year 11										
Subject: Maths Year Group: 11										
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2				
Number of weeks	7	7	6	6	5	7.5				
National Curriculum Topic	AQA Entry Level Certificate. Assessment prep and assessment completion (X8)	Properties of Shape Calculating	Entry Level Functional Skills Mathematics (Level 1) Using numbers and the number system - whole numbers, fractions, decimals and percentages. Using common measures, shape and space.	Entry Level Functional Skills Mathematics (Level 1) Handling information and data. Common misconceptions.	Exam Preparation	Exam Preparation				

Odyssey Strands	Properties of Number	Enlargement	Multiply and divide	Represent discrete	Consolidation of	Consolidation of
ouyssey on and	The four operations.	Enlargement through the	whole numbers and	data in tables.	knowledge learnt and	knowledge learnt and
	Ratio	centre.	decimals by 10, 100.	diagrams and charts	preparation for exams.	preparation for exams.
	Money.	Trigonometry	1000	including pie charts.	proparation for example	propulation for example
	Calendar and time.	Scale factor.	Use multiplication	bar charts and line		
	Measures.	Estimate powers and	facts and make	graphs		
	Geometry.	roots of any given	connections with	Group discrete data		
	Statistics.	positive number	division facts	and represent grouped		
		Calculate with roots, and	Use simple formulae	data graphically		
		with integer and	expressed in words	Find the mean and		
		fractional indices	for one or two-step	range of a set of		
		Calculate exactly with	operations	quantities		
		surds	Calculate the squares	quantities		
		Apply and interpret limits	of one-digit and two-	Understand probability		
		of accuracy, including	digit numbers	on a scale from 0		
		upper and lower bounds.	Follow the order of	(impossible) to 1		
			precedence of	(certain) and use		
			operators	probabilities to		
			Dead write order and	compare the likelihood		
				or events		
			fractions and mixed	outcomes to find the		
			numbers	probabilities of simple		
			Find fractions of whole	events and express		
			number quantities or	them as fractions		
			measurements	Miscounting or		
				misunderstanding the		
			Read, write, order and	value the position of		
			to three decimals up	the numeral gives it		
				Misplacing the value a		
			Add subtract multiply	digit represents in		
			Add, Subtract, multiply	large numbers which		
			up to two docimal	have "0" in the middle,		
			nlacos	e.g. considering 10148		
			Approximate by	to be one thousand		
			rounding to a whole	one hundred and forty-		
			number or to one or	eight		
			two decimal places			
			Bood write order and			
			in whole numbers			
			Convert between			
			units of length			
			weight capacity			
			money and time in			
			the same system			

			Recognise and make use of simple scales on maps and drawings Calculate the area and perimeter of simple shapes including those that are made up of a combination of rectangles			
Key Curriculum Strands	Literacy Communication skills	Community contribution Effective contributor	Resilience Motivation Understanding emotions Self – expression	ICT Communication	Working with others Understanding laws	Rule of law Exercise, resilience
Criteria	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths. CGP Functional Skills study and test practice books.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths. CGP Functional Skills study and test practice books.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths. AQA foundation work and revision books.	Engagement Factors Interactive Media Board. Mathematical resources. Active Maths. AQA foundation work and revision books.
	Enquiry based Learning Explorative learning through Triangle Project. manga High	Enquiry based Learning Scale and map reading exercise.	Enquiry based Learning Active maths Interactive resources.	Enquiry based Learning Trig research project.	Enquiry based Learning Computer based research GCSE revision books	Enquiry based Learning Computer based research GCSE revision books
	Cross Curricular Science Life Skills Art	Cross Curricular Science Forest schools	Cross Curricular	Cross Curricular Science Art	Cross Curricular Life Skills	Cross Curricular Life Skills
	Pupil led learning Extension Tasks Research Group activities Manga High GCSE bite Size	Pupil led learning Extension Tasks Research Group activities Manga High GCSE bite Size	Pupil led learning Extension Tasks Research Group activities Manga High GCSE bite Size	Pupil led learning Extension Tasks Research Group activities Manga High GCSE bite Size	Pupil led learning Extension Tasks Research Group activities Manga High GCSE bite Size	Pupil led learning Extension Tasks Research Group activities Manga High GCSE bite Size