

Key Stage 3 Mathematics Curriculum Maps

	AUTUMN							SPRING						SUMMER						
	1	2	3	4	5	6	7	16	17	18	19	20	21	27	28	29	30	31	32	
YEAR 7	Topic – Numbers and the number system P - use the concepts and vocabulary of primes, factors, multiples, highest common factor and lowest common multiple P - use positive integer powers and associated real roots (square, cube and higher), recognise powers of 2, 3, 4, 5 S - recognise and use sequences of triangular, square and cube numbers, simple arithmetic progressions			Topic – Mathematical movement P - work with coordinates in all four quadrants P - understand and use lines parallel to the axes, $y = x$ and $y = -x$ Sk - solve geometrical problems on coordinate axes P - identify, describe and construct congruent shapes including on coordinate axes, by considering rotation, reflection and translation Sk - describe translations as 2D vectors			Topic - Checking P - Round a number to a specified number of decimal places P - Round a number to one significant figure Sk - Estimate calculations by rounding numbers to one significant figure	Topic - Measuring space Sk - Measure accurately P - Convert between measures P - Solve problems involving measurement P – convert between units of length, mass, volume, time and money.		Topic – Shape properties P – know the definitions faces, edges vertices P – use properties of triangles and quadrilaterals.		Topic - Algebraic proficiency S - Understand the vocabulary and notation of algebra P - Manipulate algebraic expressions P - Explore functions P - Evaluate algebraic statements		Topic – Proportional reasoning P - Know ratio notation P - Simplify ratios S - Divide into a ratio S - Solve problems with part ratio known	Topic - Patterns P - Recognise simple arithmetic progressions P - Use a term-to-term rule to generate a linear sequence P - Use a term-to-term rule to generate a non-linear sequence	Topic - Angles P - apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles	Topic - Calculating FDP P - apply the four operations, including formal written methods, to simple fractions (proper and improper), and mixed numbers P - interpret percentages and percentage changes as a fraction or a decimal, and interpret these multiplicatively P - compare two quantities using percentages Sk - solve problems involving percentage change, including percentage increase/decrease			
	8	9	10	11	12	13	14	15	22	23	24	25	26	33	34	35	36	37	38	39

YEAR 7	Topic – Calculating P - Exploring place value P - Exploring written methods of calculation P - Calculating with decimals P - Calculate with negative numbers, including using a scientific calculator S - Know and apply the correct order of operations	Topic - Counting and comparing P - order positive and negative integers, decimals and fractions P - use the symbols =, ≠, <, >, ≤, ≥	Topic - Algebraic proficiency See week 20	Topic - Visualising S - Identify line and rotational symmetry in polygons P - Understand and use labelling notation for lengths and angles Sk - Use ruler and protractor to construct triangles, and other shapes, from written descriptions Sk - Use ruler and compasses to construct triangles when all three sides known	Topic - Exploring FDP P - express one quantity as a fraction of another S - define percentage as ‘number of parts per hundred’ P - express one quantity as a percentage of another	Topic - Solving equations P - Explore way of solving equations P - Solve two-step equations P - Solve three-step equations S - Extend into inequalities	Topic - Calculating space P - Develop knowledge of area P- Investigate surface area P- Explore volume	Topic - Measure Data S - Explore types of data P - interpret, analyse and compare the distributions of data sets from univariate empirical distributions through appropriate measures of central tendency (median, mean and mode) and spread (range)
	Assessment- Y7 initial assessment wk 2 Half term assessments throughout the year with an end of year assessment in HT6.							

	AUTUMN							SPRING						SUMMER					
	1	2	3	4	5	6	7	16	17	18	19	20	21	27	28	29	30	31	32
Year 8	Topic – Presentation of data S - Explore types of data P - Construct and interpret graphs Sk - Select appropriate graphs and charts	Topic – Measuring data Sk - Investigate averages P - Explore ways of summarising data Sk - Analyse and compare sets of data	Topic – Numbers and the number system S/P - Identify and use the prime factorisation of a number S/P - Understand and use standard form	See wk. 8	Topic - Algebraic proficiency: tinkering S - use and interpret algebraic notation, including indices P - understand and use the concepts and vocabulary of factors P - simplify and manipulate algebraic expressions by taking out common factors and simplifying expressions involving sums, products and powers, including the laws of indices P - substitute numerical values into scientific formulae P - rearrange formulae to change the subject	Topic - Exploring FDP S - Identify if a fraction is terminating or recurring P - Recall some decimal and fraction equivalents (e.g. tenths, fifths, eighths, thirds, quarters, etc.) Sk - Write a terminating decimal as a fraction Sk - Write a fraction in its lowest terms by cancelling common factors S - Use a calculator to change any fraction to a decimal	Topic - Investigating angles P - understand and use alternate and corresponding angles on parallel lines P - derive and use the sum of angles in a triangle	Topic - Calculating FDP S - interpret fractions and percentages as operators P - work with percentages greater than 100% Sk - solve problems involving percentage change P - calculate exactly with fractions	Topic - Solving equations P - solve linear equations with the unknown on both sides of the equation Sk - find approximate solutions to linear equations using a graph										

	8	9	10	11	12	13	14	15	22	23	24	25	26	33	34	35	36	37	38	39
Year 8	Topic - Calculating P - Calculate with negative numbers, including using a scientific calculator P - Apply the correct order of operations	Topic - Visualising and constructing P - Use the centre and scale factor to carry out an enlargement with a positive integer scale factor S - Find the centre of enlargement S - Find the scale factor of an enlargement P - Use scale diagrams, including maps	Topic - Understanding risk I S - Know and use the vocabulary of probability P - Understand the use of the 0-1 scale to measure probability P - List all the outcomes for an experiment, including the use of tables	Topic - Proportional reasoning Sk - Explore the uses of ratio P - Investigate the connection between ratio and proportion P - Solve problems involving proportional reasoning P - Solve problems involving compound units	Topic - Pattern sniffing P - generate terms of a sequence from either a term-to-term or a position-to-term rule Sk - deduce expressions to calculate the nth term of linear sequences	Topic - Calculating space P - Investigate circles S - Discover pi P - Solve problems involving circles P - Explore prisms and cylinders	Topic - Algebraic proficiency: visualising P - plot graphs of equations that correspond to straight-line graphs in the coordinate plane P - identify and interpret gradients and intercepts of linear functions graphically Sk - recognise, sketch and interpret graphs of linear	Topic - Understanding risk II Sk - Explore experiments and outcomes P - Develop understanding of probability Sk - Use probability to make predictions												

		P - Use the concept of scaling in diagrams Sk - Interpret plans and elevations P - Understand and use bearings	P - Work out theoretical probabilities for events with equally likely outcomes P - Know that the sum of probabilities for all outcomes is 1 Sk - Apply the fact that the sum of probabilities for all outcomes is 1				functions and simple quadratic functions	
	Assessment- Y8 half term tests throughout year with end of year assessment in HT6							

	AUTUMN							SPRING							SUMMER						
	1	2	3	4	5	6	7	16	17	18	19	20	21	22	27	28	29	30	31	32	

