YEAR 5 COVERAGE

Expectations

- Teachers should plan to cover all objectives in a year
- Some objectives may need longer than others based on teacher assessment of children's understanding
- Teachers should plan to teach objectives so children acquire the knowledge needed to be successful, but all children should also be developing their problem-solving skills across the different areas of Maths
- Activities should be context driven – money, measures, real life – where possible

At the end of each half term (minimum) please highlight objectives which have been taught. This will help you monitor your coverage throughout the year. If you are returning to an objective, highlight over it in a different colour or add an asterisk. Note: this is not an assessment document.

REASONING AND PROBLEM SOLVING

Developed Throughout Key Stage Two

- Use mathematics as an integral part of classroom activities, including in other areas of the curriculum
- Be able to recall and apply knowledge rapidly and accurately
- Conjecture relationships and generalisations
- Develop an argument, justification and/or proof using mathematical language
- Explain why an answer is correct
- Estimate solutions and know when an answer cannot be correct
- Try different approaches and find ways of overcoming difficulties when solving problems
- Apply mathematics to routine and non-routine problems
- Break down problems into a series of smaller steps
- Persevere in seeking solutions
- Follow a line of enquiry
- Collate, organise and compare information
- Present information and results in a clear and organised way
- Read and spell mathematical vocabulary accurately
- Organise work, check results and explain thinking

NUMBER

YEAR	NUMBER & PLACE VALUE	ADDITION & SUBTRACTION	MULTIPLICATION & DIVISION	MONEY & DECIMALS	FRACTIONS & PERCENTAGES	STATISTICS
5	**5NV1** Recognise/describe linear number sequences involving fractions and decimals [3, 3 ½ , 4…]	**5AS1** Add/subtract whole numbers with more than 4 digits using formal written methods (columnar)	**5MD1** Multiply numbers up to 4 digits by a one-digit number using a formal written method	**5MY1(D)** Round decimals with 2 decimal places to the nearest whole number	**5FP1** Use fractions including bridging zero on a number line. Recognise mixed numbers/improper fractions	**5ST1** Solve comparison problems using information presented in a line graph
	5NV2 Interpret negative numbers in context. Count forwards/backwards positive/negative numbers through 0	**5AS2** Use rounding to check answers to calculations and, in the context of a problem, levels of accuracy	**5MD2** Identify multiples and factors. Use to construct equivalence statements [e.g. 4x35 = 2x2x35]	**5MY2(D)** Round decimals with 2 decimal places to 1 decimal place	**5FP2** Compare and order fractions whose denominators are all multiples of the same number	**5ST2** Solve sum and difference problems using information presented in a line graph
	5NV3 Find the term-to-term rule in words [e.g. add ½]	**5AS3** Add/subtract numbers mentally with increasingly large numbers	**5MD3** Know/use the vocabulary of prime/composite [non-prime]numbers	**5MY3(D)** Read and write numbers with up to 3 decimal places	**5FP3** Count forwards and backwards in simple fractions	**5ST3** Read and interpret information in tables, including timetables
	5NV4 Read/write/order/compare numbers to at least 1,000,000 and determine the value of each digit	**5AS4** Solve + and - multi-step problems in contexts, deciding which operations/methods to use and why	**5MD4** Multiply and divide numbers mentally, drawing upon known facts to make larger calculations	**5MY4(D)** Order and compare numbers with up to 3 decimal places	**5FP4** Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100'	**5ST4** Complete information in tables, including timetables
	5NV5 Count forwards or backwards in steps of powers of 10 for any given number up to 1,000,000		**5MD5** Use/explain equals sign to indicate equivalence, including in missing number problems	**5MY5(D)** Solve problems which require knowing percentage and decimal equivalents of ½ and ¼.	**5FP5** Add and subtract fractions with the same denominator	
	5NV6 Round any number up to 1,000,000 to nearest 10/100/1,000		**5MD6** Find common factors of 2 numbers	**5MY6(D)** Use decimals including bridging zero on a number line	**5FP6** Find fractions of numbers/quantities	
	5NV7 Round any number up to 1,000,000 to nearest 10,000/100,000		**5MD7** Find all factor pairs of a number	**5MY7** Solve money problems using decimal notation [four operations]	**5FP7** Read/write decimal numbers as fractions [e.g. 0.71 = 71/100]	
	5NV8 Read Roman numerals to 1,000 (M). Recognise years written in Roman numerals		**5MD8** Know and use the vocabulary of prime factors	**5MY8(D)** Know that percentages, decimals and fractions express proportions	**5FP8** Mentally add/subtract tenths	
			5MD9 Establish whether a number up to 100 is prime	**5MY9(D)** Solve problems which require knowing percentage and decimal equivalents of 1/5, 2/5, 4/5	**5FP9** Write percentages as a fraction with denominator 100	
			5MD10 Recall prime numbers up to 19	**5MY10(D)** Write percentages as a decimal	**5FP10** Mentally add/subtract one-digit whole numbers and tenths	
			5MD11 Multiply numbers to 4 digits by a two-digit number using formal written method [long multiplication]	**5MY11(D)** Relate thousandths to decimal equivalents	**5FP11** Add and subtract fractions with denominators that are multiples of the same number	
			5MD12 Divide numbers to 4 digits by a one-digit number using the formal written method [short division]	**5MY12 (D)** Solve problems which require knowing percentage/decimal equivalents of those fractions with a denominator of a multiple of 10 or 25	**5FP12** Identify/name/write equivalent fractions of a given fraction, represented visually, including tenths and hundredths	
			5MD13 Interpret remainders for context including fractions, decimals, rounding [e.g. 98 ÷ 4 = 98/4 = 24 r 2 = 24 ½ = 24.5 ≈ 25]		**5FP13** Convert from one form to another and write mathematical statements > 1 as a mixed number [e.g. 2/5 + 4/5 = 6/5 = 1 1/5]	
			5MD14 Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000		**5FP14** Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	
			5MD15 Recognise/use square numbers and notation for squared (²).		**5FP15** Connect multiplication by a fraction to using fractions as operators [fractions of] and to division	
			5MD16 Express distributivity as a(b+c) = ab + ac		**5FP16** Recognise/use thousandths and relate them to tenths/hundredths	

MEASUREMENT					GEOMETRY	
YEAR	LENGTH	MASS	CAPACITY/VOLUME	TIME	SHAPE	POSITION
5	5LG1 Convert between different units of metric measure (kilometre/metre) using knowledge of place value, multiplication and division	5MS1 Convert between different units of metric measure (kilogram/gram) using knowledge of place value, multiplication and division	5CV1 Convert between different units of metric measure (litre/millilitre) using knowledge of place value, multiplication and division	5TM1 Solve problems involving converting between units of time [e.g. days to weeks, expressing the answer as weeks and days]	5SH1 Identify 3D shapes, including cubes and other cuboids, from 2D representations	5PS1 Identify/describe the position of a shape following a reflection using appropriate language; know the shape has not changed
	5LG2 Convert between different units of metric measure [metre/centimetre] using knowledge of place value, multiplication and division	5MS2 Understand/use equivalences between metric units and common imperial units (e.g. pounds)	5CV2 Understand and use equivalences between metric units and common imperial units [e.g. pints]		5SH2 Know angles are measured in degrees. Draw given angles, and measure them in degrees (°)	5PS2 Represent the position of a shape following a reflection using appropriate language; know the shape has not changed
	5LG3 Convert between different units of metric measure [centimetre/ millimetre] using knowledge of place value, multiplication and division	5MS3 Use all four operations to solve problems [e.g. mass using decimal notation, including scaling]	5CV3 Estimate volume [e.g. using 1 cm³ blocks to build cuboids (including cubes)] and capacity [e.g. using water]		5SH3 Estimate/compare acute, obtuse and reflex angles	5PS3 Identify/describe the position of a shape following a translation, using appropriate language; know the shape has not changed
	5LG4 Understand/use equivalences between metric units and common imperial units (e.g. inches)		5CV4 Use all four operations to solve problems involving measure [e.g. volume using decimal notation, including scaling]		5SH4 Use the properties of rectangles to deduce related facts and find missing lengths and angles. Express algebraically [e.g. 4 + 2b = 20 for a rectangles of edges 2cm and b cm and perimeter of 20]	5PS4 Represent the position of a shape following a translation, using appropriate language; know the shape has not changed
	5LG5 Use all four operations to solve problems [e.g. length using decimal notation, including scaling]				5SH5 Identify angles at a point and 1 whole turn [total 360°]	
					5SH6 Identify angles at a point on a straight line and half a turn [total 180°]	
					5SH7 Identify other multiples of 90°	
					5SH8 Measure/calculate the perimeter of composite rectilinear shapes in centimetres and metres	
					5SH9 Distinguish between regular and irregular polygons based on reasoning about equal edges and angles	
					5SH9 Estimate the area of irregular shapes	
					5SH10 Calculate/compare the area of rectangles (including squares), using standard units, square centimetres (cm²) and square metres (m²)	
					5SH11 Calculate the area from scale drawings using given measurements	
					5SH12 Calculate the perimeter of rectangles including using the relations of perimeter and area to find unknown lengths	
					5SH13 Calculate the perimeter of composite shapes, including using the relations of perimeter and area to find unknown lengths	
					5SH14 Use conventional markings for parallel lines and right angles	