YEAR 4 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
4	**4NV1** Count in multiples of 25 and 1000	**4AS1** Estimate and use inverse operations to check answers to a calculation	**4MD1** Recall multiplication and division facts for multiplication tables up to 12x12	**4MY1** Estimate, compare and calculate money in pounds and pence using decimal notation to record	**4FP1** Know that decimals and fractions are different ways of expressing numbers and proportions	**4ST1** Solve comparison problems using information presented in tables
	4NV2 Find 1000 more or less than a given number	**4AS1** Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	**4MD2** Recognise and use factor pairs and commutativity in mental calculations	**4MY2** Recognise/write decimal equivalents of any number of tenths/hundredths. Use decimal notation and associated language	**4FP2** Add and subtract fractions with the same denominator	**4ST2** Solve sum and difference problems using information presented in tables
	4NV3 Recognise the place value of each digit in a four-digit number	**4AS3** Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	**4MD3** Combine knowledge of number facts and rules of arithmetic to solve mental and written calculations [e.g. 2x6x5 = 10x6 = 60]	**4MY3(D)** Recognise and write decimal equivalents to ¼; ½; ¾	**4FP3** Extend the use of the number line to connect fractions & numbers. Practise counting simple fractions and decimals forwards /backwards	**4ST3** Interpret and present discrete and continuous data using appropriate graphical method, (bar charts)
	4NV4 Count in multiples of 9		**4MD4** Use place value, known and derived facts to x and ÷ mentally, including multiplying by 0 and 1 and dividing by 1	**4MY4(D)** Compare numbers with the same number of decimal places up to two decimal places	**4FP4** Recognise and show, using diagram, families of common equivalent fractions	**4ST4** Solve comparison problems using information presented in bar charts, pictograms and other graphs
	4NV5 Count in multiples of 6,7,8		**4MD5** Use place value, known and derived facts to multiply and divide mentally, multiplying together three numbers	**4MY5** Solve simple money problems involving fractions and decimals to two decimal places	**4FP5** Count up/down in hundredths; recognise that hundredths arise when dividing an object by a hundred and dividing tenths by ten. Connect hundredths to tenths and place value	**4ST5** Solve sum and difference problems using information presented in bar charts, pictograms and other graphs
	4NV6 Count backwards through zero to include negative numbers		**4MD6** Multiply two-digit and three-digit numbers by a one-digit number using formal written layout [short multiplication]	**4MY6(D)** Round decimals with one decimal place to the nearest whole number	**4FP6** Solve problems involving increasingly harder fractions to calculate quantities	**4ST6** Interpret/present discrete/continuous data using appropriate graphical method [time graphs]
	4NV7 Order and compare numbers beyond 1000		**4MD7** Solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit		**4FP7** Solve problems involving increasingly harder fractions to calculate fractions to divide quantities, including non-unit fractions where the answer is a whole number	**4ST7** Relate graphical representation of data to recording change over time
	4NV8 Round any number to the nearest 10,100 or 1000		**4MD8** Write statements about the equality of expressions [e.g. use distributive law 39x7=30x7+9x7]		**4FP8** Find the effect of dividing one-digit numbers by 10 and 100, identify the value of the digits in the answer as units, tenths and hundredths	
	4NV9 Identify, represent and estimate numbers using different representations		**4MD9** Write statements about the equality of expressions [e.g. use associative law [(2x3)x4=2x(3x4)]		**4FP9** Find the effect of dividing two-digit numbers by 10 and 100, identify the value of the digits in the answer as units, tenths and hundredths	
	4NV10 Solve number and practical problems with increasingly large positive numbers		**4MD10** Use mental methods with three-digit numbers to derive facts [e.g. 600 ÷ 3 = 200 can be derived from 2x3=6]			
	4NV11 Read Roman numerals to 100 (I to c) and know that over time, the numeral system changed to include the concept of zero and place value		**4MD11** Solve problems involving multiplying and adding, including integer scaling problems			
			4MD12 Solve problems involving **x** and adding, including harder correspondence problems such as *n* objects and connected to *m* objects			

MEASUREMENT					GEOMETRY	
YEAR	**LENGTH**	**MASS**	**CAPACITY/VOLUME**	**TIME**	**SHAPE**	**POSITION**
4	**4LG1** Convert between different units of measure [kilometre to metre]	**4MS1** Convert between different units of measure [kilogram to gram]	**4CV1** Convert between different units of measure	**4TM1** Convert between different units of measure (hour to minute)	**4SH1** Identify acute and obtuse angles and compare and order angles up to 180°	**4PS1** Draw a pair of axes in one quadrant with equal scales and integer labels
	4LG2 Estimate, compare and calculate length	**4MS2** Estimate, compare and calculate mass	**4CV2** Estimate, compare and calculate capacity	**4TM2** Read, write and convert time between analogue and digital 12- and 24- hour clocks	**4SH2** Identify lines of symmetry in 2D shapes presented in different orientations	**4PS2** Read/write/use pairs of co-ordinates [e.g. (2,5)]
	4LG3 Build on understanding of place value and decimal notation to record metric measures	**4MS3** Build on understanding of place value and decimal notation to record metric measures	**4CV3** Estimate, compare and calculate volume	**4TM3** Solve problems involving converting from years to months	**4SH3** Measure and calculate the perimeter of rectilinear figure in cm and m	**4PS3** Use co-ordinate plotting ICT tools
	4LG4 Solve simple length problems involving fractions and decimals to two decimal places	**4MS4** Solve simple mass problems involving fractions and decimals to two decimal places	**4CV4** Build on understanding of place value and decimal notation to record metric measures	**4TM4** Solve problems involving converting from weeks to days	**4SH4** Express perimeter algebraically as *2(a+b)* where a and b are the dimensions in same unit	**4PS4** Describe positions on a 2D grid as co-ordinates in the first quadrant
	4LG5 Connect estimation and rounding numbers to the use of measuring instruments	**4MS5** Connect estimation and rounding numbers to the use of measuring instruments	**4CV5** Solve simple capacity problems involving fractions and decimals to two decimal places	**4TM5** Solve problems involving converting from hours to minutes	**4SH5** Find the area of rectilinear shapes by counting squares	**4PS5** Plot specified points and draw sides to complete a given polygon
	4LG6 Make connections between fractions of a length	**4MS6** Make connections between fractions of a mass	**4CV6** Make connections between fractions of capacity	**4TM6** Solve problems involving converting from minutes to seconds	**4SH6** Relate area to arrays and multiplication	**4PS6** Describe movements between positions as translations of a given unit to the left/right and up/down
			4CV7 Connect estimation and rounding numbers to the use of measuring instruments		**4SH7** Make connections between fractions of a shape	
			4CV8 Solve simple volume problems involving fractions and decimals to two decimal places		**4SH8** Compare and classify geometric shapes, including quadrilaterals [parallelogram, rhombus, trapezium] based on their properties and sizes [e.g. compare lengths and angles to decide if a polygon is regular or irregular]	
			4CV9 Make connections between fractions of volume		**4SH9** Compare and classify geometric shapes, including triangles [isosceles, equilateral, scalene], based on their properties and sizes	
					4SH10 Complete a simple symmetric figure with respect to s specific line of symmetry	
					4SH11 Recognise line symmetry in a variety of diagrams, including where the line of symmetry does not dissect the original shape	