Year 2 Expectations - Maths

Emerging (85% should be here in Novemebr)	Met- (85% should be here in February)	Met (expected for end of Year 2) (85% should be here in June)	Met +	Deep
Count on and back in ones from any small number to and across 100 Count in 10s to and across 100, forwards and backwards, starting at any number	Read and write numbers to at least 100 in numerals with digits consistently placed correctly i.e. seventy three = 73 not 37 Count in multiples of 3 to at least 30	Count in steps of 2, 3 and 5 from 0, forwards and backwards Read and write numbers to at least 100 in numerals and words	Demonstrate fluency and reasoning in counting forwards and backwards in steps of 2, 5 and 10 from different starting points and using numbers beyond 100	• **Categorise numbers in a set as multiples of 2s, 3s, 5s and 10s and explain why some sit in more than one category.** • **Explain how a set of objects can be represented in different ways, but the total remains the same.** • **Compare and contrast a set of 2-digit numbers, reasoning similarities and differences.** • **Reason that = means 'balance'.** • **Explain how estimating can help when problem solving.** • **Making some choices between mental and written methods.** • **Use columnar (expanded) addition and subtraction appropriately and accurately in a range of real life context and role play.** • **Explain patterns in number facts to 100, how they can help us solve other calculations.** • **Explain how partitioning numbers helps when adding and subtracting. Explain the links between a related addition and subtraction calculations (e.g. 5+6=11 so 11-6=5).** • **Relate commutativity and associativity of addition to the concept of 'balance'.** • **Rearrange the order in a missing number problem (e.g. 7+___=10 and 10=7+ ___)** • **Explain links between other multiples based on 2s, 5s, 10s (e.g. 100s and 50s).** • **Justify why a statement may incorrect written using their knowledge of multiplication and division.** • **Explain why multiplication is commutative and division is not.** • **Evaluate their approach to a multiplication or division problem and conclude whether it was efficient or not and suggesting improvements.** • **Use the terms numerator and denominator when discussing fractions.** • **Order 1/3, ½ , ¼ and ¾ on an empty number line and justify their position.** • **Based on their understanding of halves and quarters, being to generalise about other equivalent fractions.** • **Justify their thinking when comparing and ordering measures, including linking to fractions (e.g., this is half the length of that).** • **Calculate differences between different measures**
Partition numbers into tens and units in different ways e.g. 34 = 30+4, 20+14 Be aware of the significance of the tens numbers	Use place value to compare and order numbers from 0 to 100 using <, > and = signs Recognize zero as a place holder	Use knowledge of place value and quickly-recalled number facts to solve problems and apply to investigations Consolidate use of <, > and = signs	Demonstrate reasoning about place value and number facts to solve more complex problems	
Explain which digit changes and why when adding/subtracting 1 or 10 to any number within 100	Explain use of 100 square to add/subtract tens and ones	Identify and represent numbers using different representations	Identify and represent numbers using different representations including more complex number lines	
Recognise and use number facts to 20 in simple problems and explain their working out	Recall and use addition and subtraction number facts to 20 with increasing fluency Relate number facts to 10 to adding and subtracting multiples of 10 within 100	Recall and use number facts to 20 fluently Use known addition and subtraction number facts to 20 to generate new facts to 100	Recall and use number facts to 20 fluently Derive and use related facts to 100 and beyond	
Recognise and use halving and doubling facts in simple problems and explain working out	Make connections between multiplication and division by 2 and doubling and halving	Reason about problems and calculations involving halving and doubling	Derive and use new facts from known doubles	
Add 2-digit numbers by using an unstructured number line to support thinking. Use knowledge of counting on in ones or tens from any 2-digit number to support calculation	Apply an increasing knowledge of mental and written methods to add a 2-digit number and a multiple of 10 add 2 2-digit numbers Recognise and show that addition can be done in any order	Solve simple two-step problems with addition and subtraction	Use addition and subtraction facts to solve more complex problems such as 3-step problems Solve missing number problems involving a wider range of numbers	
Subtract 2-digit numbers by using an unstructured number line to support thinking. Use knowledge of counting back in ones or tens from any 2-digit number to support calculation	Apply an increasing knowledge of mental and written methods to subtract a multiple of 10 from a 2-digit number subtract a 2-digit number from a 2-digit number Recognise and show that subtraction cannot be done in any order		Solve missing number problems involving a wider range of numbers	
Begin to be aware of the reasonableness of the answer	Recognize and use the inverse relationship between addition and subtraction to check the reasonableness of an answer	Recognize and use the inverse to check the reasonableness of an answer and to solve missing number problems involving a 2-digit number and ones or tens	Consistently use <, = and > signs correctly when comparing numbers and expressions	
Explain how to add 2 or 3 sets of numbers together and begin to use an unstructured number line. Use the correct language for explaining calculations		Solve simple two-step problems with addition and subtraction using numbers, quantities and measures	Add numbers using objects, pictorial representations and the written columnar method including several 2-digit numbers, a 2-digit number to a 3-digit number, and several 3-digit numbers Subtract numbers using objects, pictorial representations and the written columnar method including 2-digit numbers	

Know a range of mental calculating strategies and begin to select a suitable strategy for a calculation	Add and subtract numbers mentally including a 2-digit number and ones a 2-digit number and tens 2 simple 2-digit numbers that do not involve bridging ten	Add and subtract numbers mentally including a 2-digit number and ones a 2-digit number and tens 2 2-digit numbers adding 3 single-digit numbers	Add 2 2-digit numbers mentally using appropriate strategies Add several single-digit numbers mentally using appropriate strategies Subtract 2 2-digit numbers mentally using appropriate strategies Subtract several single-digit numbers mentally using appropriate strategies	**where the unit is the same.** • **Explain relationships between rising denominations and the reducing number of coins needed to make the same amount (e.g. 4 x 2p= vs 8 x 1p or 10 x 2p vs 4 x 5p)** • **Justify why some amounts cannot be made with certain coins (e.g. 17p using 10ps and 5ps).** • **Explain how a money problem has been solved,** • **Calculate differences between events that are on the hour and half past the hour (e.g. 8.30 and 10.00 = 1 and ½ hours).** • **Explain the relationship between 5s, 15s and 30s within time, linking with ¼ past, ½ past and ¼ to).** • **Compare and contrast across a number of range of 2-D and 3-D shapes using technical mathematical language to describe similarities and differences.** • **Sort and re-sort shapes according to different criterion and explain why some shapes moved groups while others stayed together.** • **Justify their thinking when solving and creating sequence puzzles.** • **Generalise about patterns, explaining how they know what the nth in a pattern will be (e.g. Using the first 5 shown I know the 10th will be…..)** • **Solve and create maze puzzles involving quarter, half and three-quarter turns.** • **Rationalise their choices as to recording and presenting data (e.g. why a pictogram was more effective than presenting the data in a table).** • **Explain their method when solving problems involving categorical data.**

Multiplication and Division	**Multiplication and Division**	**Multiplication and Division**	**Multiplication and Division**	
Count forwards and back in 2s, 5s and 10s and begin to relate to multiplication and division	Recall multiplication and division facts for 2, 5 and 10 times tables Count in multiples of 3 to at least 30	Recall and use multiplication and division facts for 2, 5 and 10 times tables	Count in 3s to solve multiplication and division problems for the 3 times table Demonstrate fluency and reasoning in counting forwards and backwards in steps of 2, 5 and 10 from different starting points and using numbers beyond 100	
Begin to solve multiplication and division problems without the support of an adult (using concrete objects, pictorial representations and arrays) Explain repeating numerical patterns	Solve problems involving multiplication and division (using arrays, repeated addition, number lines and mental methods) Recognise odd and even numbers to at least 100	Write mathematical statements using x, ÷ and = signs Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in meaningful contexts Show that multiplication can be done in any order Explain how they know that a particular number is odd or even	Rapidly recall and use multiplication and division facts for 2, 5 and 10 times tables Make connections between place value and multiplication/division by 10 Use known multiplication and division facts to derive other facts Solve more complex problems involving multiplication and division in a range of contexts including measures	

Fractions	Fractions	Fractions	Fractions	
Find three quarters of a set of objects Understand the non-unit fractions ¾ and 2/4 Recognize the equivalence of ½ and two quarters of a set of objects or quantity	Recognize, find and name a half, quarter or third of a set of objects or quantity	Recognize, find, name and write fractions, ½ ¼, 2/4, and ¾ of a set of objects or quantity Express simple problems using fraction notation and solve them	Count in fractions up to 10, starting from any number Place known fractions on a number line Express more complex problems using fraction notation and solve them	
Find three quarters of a shape Understand the non-unit fractions ¾ and 2/4 Recognize the equivalence of ½ and two quarters of a shape	Recognize, find and name a half, quarter or third of a shape	Recognize, find, name and write fractions ⅓, ¼, 2/4, and ¾ of a length or shape		
Measures	**Measures**	**Measures**	**Measures**	
Use the different denominations of the coins to make a given value Recognise and use symbols for pounds (£) and pence (p) to record the amount	Solve simple problems in a practical context involving addition and subtraction of money of the same unit Find different combinations of coins that equal the same value	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change	Find all possible combinations of coins to equal a given amount Make a given amount using the fewest possible coins Solve more complex problems involving money	
Compare two lengths, masses or capacities by direct comparison using standard units	Compare and order lengths, mass, volume/capacity and temperature and record the results using <, > and =	Choose and use appropriate standard units to estimate and measure length/height, mass, capacity and temperature Solve simple problems in a practical context involving addition and subtraction	Reason about multiplicative relationships between specific measured quantities, drawing on knowledge of 2, 5 and 10 times tables and knowledge of fractions Solve more complex problems involving measures	
Tell the time to ¼ past, ½ past, ¼ to and o'clock and draw hands on a clock face to show these times		Tell and write the time to 5 minutes and draw hands on a clock face to show these times Compare and sequence intervals of time	Use time facts to solve problems Solve more complex problems involving time	
Geometry	**Geometry**	**Geometry**	**Geometry**	
Identify and describe the properties of 2-D shapes, including the number of sides and lines of symmetry Compare and sort 2D shapes, including regular and irregular polygons	Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Identify 2-D shapes on the surface of 3-D shapes	Compare and sort common 2-D and 3-D shapes and everyday objects, recognising and describing their geometric properties Solve problems involving shapes and reason about their properties	Compare and sort common 2-D and 3-D shapes and everyday objects using more than one criterion, identifying and describing their properties Reason about and solve more complex problems involving shapes and their properties	
Order and arrange combinations of mathematical objects in patterns	Use mathematical vocabulary to describe position, direction and movement Use and apply knowledge of quarter, half and three-quarter turns (clockwise and anti-clockwise)	Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line Investigate the concept of rotation or "turn" in relation to angle as a movement Relate quarter turns to right angles	Order and arrange combinations of mathematical objects in more complex patterns and sequences Solve more complex problems involving position and direction	
Statistics	**Statistics**	**Statistics**	**Statistics**	
Interpret and construct simple pictograms and tally charts Ask and answer questions by counting the objects in each category and sorting categories by quantity	Interpret and construct tables, simple pictograms with many-to-one correspondence, and block diagrams using simple scales (2s or 5s)	Ask and answer questions about totalling and comparing categorical data	Use more complex charts to ask and answer questions by reading from the chart the number of objects in each category, sorting the categories by quantity, totalling and comparing categorical data	
