Year 2 Progression in Maths
Mathematics National Curriculum and Interim Teacher Assessment Frameworks 2016
All objectives are taught each term. Children working at Greater Depth are required to apply their learning in many other contexts, make links and explain their learning using precise maths vocabulary. They Need to display a deeper understanding of Maths by reasoning and problem solving.

National Curriculum Progression	Working towards the expected standard at KS1	Working at the expected standard at KS1	Working at greater depth within the expected standard at KS1
Number – number and place value **Year 2** Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward Read and write numbers to at least 100 in numerals and in words Recognise the place value of each digit in a two-digit number (tens, ones) *Partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13)* Identify, represent and estimate numbers using different representations, including the number line Compare and order numbers from 0 up to 100; use <, > and = signs *Find 1 or 10 more or less than a given number* Use place value and number facts to solve problems	The pupil can demonstrate an understanding of place value, though may still need to use apparatus to support them (e.g. by stating the difference in the tens and ones between 2 numbers i.e. 77 and 33 has a difference of 40 for the tens and a difference of 4 for the ones; by writing number statements such as 35 < 53 and 42 > 36). The pupil can read and write numbers correctly in numerals up to 100 (e.g. can write the numbers 14 and 41 correctly).	The pupil can partition two-digit numbers into different combinations of tens and ones. This may include using apparatus (e.g. 23 is the same as 2 tens and 3 ones which is the same as 1 ten and 13 ones).	The Pupil can do all that is within expected and explain their learning.
Number – addition and subtraction **Year 2** *Choose an appropriate strategy to solve a calculation based upon the numbers involved (recall a known fact, calculate mentally, use a jotting)* Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot *Understand subtraction as take away and difference (how many more, how many less/fewer)* Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 *Recall and use number bonds for multiples of 5 totalling 60 (to support telling time to nearest 5 minutes)* *Select a mental strategy appropriate for the numbers involved in the calculation* Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones - a two-digit number and tens - two two-digit numbers - adding three one-digit numbers Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems Solve problems with addition and subtraction *including those with missing numbers*:	The pupil can use number bonds and related subtraction facts within 20 (e.g. 18 = 9 + ?; 15 = 6 + ?). The pupil can add and subtract a two-digit number and ones and a two-digit number and tens where no regrouping is required (e.g. 23 + 5; 46 + 20), they can demonstrate their method using concrete apparatus or pictorial representations.	The pupil can recognise the inverse relationships between addition and subtraction and use this to check calculations and work out missing number problems (e.g. Δ – 14 = 28). The pupil can add 2 two-digit numbers within 100 (e.g. 48 + 35) and can demonstrate their method using concrete apparatus or pictorial representations. The pupil can subtract mentally a two-digit number from another two-digit number when there is no regrouping required (e.g. 74 – 33). The pupil can use estimation to check that their answers to a calculation are reasonable (e.g. knowing that 48 + 35 will be less than 100).	The pupil can reason about addition (e.g. pupil can reason that the sum of 3 odd numbers will always be odd). The pupil can recognise the relationships between addition and subtraction The pupil can work out mental calculations where regrouping is required (e.g. 52 – 27; 91 – 73). The pupil can solve more complex missing number problems (e.g. 14 + – 3 = 17; 14 + Δ = 15 + 27). The pupil can solve word problems that involve more than one step (e.g. which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?).

- using concrete objects and pictorial representations, including those involving numbers, quantities and measures - applying their increasing knowledge of mental and written methods.			
Number – multiplication and division **Year 2** *Understand multiplication as repeated addition* *Understand division as sharing and grouping and that a division calculation can have a remainder* Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers *Derive and use doubles of simple two-digit numbers (numbers in which the ones total less than 10)* *Derive and use halves of simple two-digit even numbers (numbers in which the tens are even)* Calculate mathematical statements for multiplication *(using repeated addition)* and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Solve problems involving multiplication and division *(including those with remainders),* using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	The pupil can count in twos, fives and tens from 0 and use counting strategies to solve problems (e.g. count the number of chairs in a diagram when the chairs are organised in 7 rows of 5 by counting in fives). The pupil can recall doubles and halves to 20 (e.g. pupil knows that double 2 is 4, double 5 is 10 and half of 18 is 9).	The pupil can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables to solve simple problems, demonstrating an understanding of commutativity as necessary (e.g. knowing they can make 7 groups of 5 from 35 blocks and writing $35 \div 5 = 7$; sharing 40 cherries between 10 people and writing $40 \div 10 = 4$; stating the total value of six 5p coins). The pupil can read scales in divisions of ones, twos, fives and tens in a practical situation where all numbers on the scale are given (e.g. pupil reads the temperature on a thermometer or measures capacities using a measuring jug). The pupil can use different coins to make the same amount (e.g. pupil uses coins to make 50p in different ways; pupil can work out how many £2 coins are needed to exchange for a £20 note).	The pupil can use multiplication facts to make deductions outside known multiplication facts (e.g. a pupil knows that multiples of 5 have one digit of 0 or 5 and uses this to reason that 18×5 cannot be 92 as it is not a multiple of 5). The pupil can determine remainders given known facts (e.g. given $15 \div 5 = 3$ and has a remainder of 0, pupil recognises that $16 \div 5$ will have a remainder of 1; knowing that $2 \times 7 = 14$ and $2 \times 8 = 16$, pupil explains that making pairs of socks from 15 identical socks will give 7 pairs and one sock will be left). The pupil can solve word problems that involve more than one step (e.g. which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?). The pupil can …rewrite addition statements as simplified multiplication statements (e.g. $10 + 10 + 10 + 5 + 5 = 3 \times 10 + 2 \times 5 = 4 \times 10$). The pupil can read the time on the clock to the nearest 5 minutes. The pupil can read scales in divisions of ones, twos, fives and tens in a practical situation where not all numbers on the scale are given.
Number - fractions **Year 2** *Understand and use the terms numerator and denominator* *Understand that a fraction can describe part of a set* *Understand that the larger the denominator is, the more pieces it is split into and therefore the smaller each part will be* Recognise, find, name and write fractions $\frac{1}{3}, \frac{1}{4}, \frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity *Count on and back in steps of $\frac{1}{2}$ and $\frac{1}{4}$* Write simple fractions for example, $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$		The pupil can identify 1/3, 1/4 , 1/2 , 2/4 , 3/4 and knows that all parts must be equal parts of the whole.	The pupil can find and compare fractions of amounts (e.g. 1/4 of £20 = £5 and 1/2 of £8 = £4 so 1/4 of £20 is greater than 1/2 of £8).
Measurement **Year 2** Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ('C); capacity (l/ml) to the nearest		The pupil can read the time on the clock to the nearest 15 minutes.	

appropriate unit, using rulers, scales, thermometers and measuring vessels. Compare and order lengths, mass, volume/capacity and record the results using >,< and = Recognise and use symbols for pounds (£) and pence (p) Combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Add and subtract money of the same unit, including giving change Solve simple problems in a practical context involving addition and subtraction of money *and measures (including time)* Compare and sequence intervals of time Know the number of minutes in an hour and the number of hours in a day Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times			
Geometry – properties of shapes **Year 2** Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line Identify 2-D shapes on the surface of 3-D shapes, (for example, a circle on a cylinder and a triangle on a pyramid) Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces Compare and sort 2-D and 3-D shapes and everyday objects. **Geometry – position and direction** **Year 2** Order and arrange combinations of mathematical objects in patterns and sequences. Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).	The pupil can recognise and name triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres from a group of shapes or from pictures of the shapes	The pupil can describe properties of 2-D and 3-D shapes (e.g. the pupil describes a triangle: it has 3 sides, 3 vertices and 1 line of symmetry; the pupil describes a pyramid: it has 8 edges, 5 faces, 4 of which are triangles and one is a square).	The pupil can describe similarities and differences of shape properties (e.g. finds 2 different 2-D shapes that only have one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices but can describe what is different about them).
Statistics **Year 2** Interpret and construct simple pictograms, tally charts, block diagrams and simple tables Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data.			