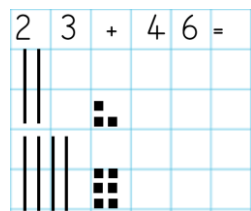| Year 2 Calculation Policy			
	Addition & Subtraction		**Multiplication & Division**	

<table>
<tr><td rowspan="2">National Curriculum Statements</td><td colspan="2">

recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 (deriving facts such as using $3 + 7 = 10$; $10 - 7 = 3$ and $7 = 10 - 3$ to calculate $30 + 70 = 100$; $100 - 70 = 30$ and $70 = 100 - 30$.)
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
show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
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:
- using concrete objects and pictorial representations, including those involving numbers, quantities and measures
- applying their increasing knowledge of mental and written methods
solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (from Measurement)

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count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward (copied from Number and Place Value)
recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers
show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot
calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals ($=$) signs
solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts

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|	Addition	Subtraction	Multiplication	Division
	Recall all number bonds within 20 including addition and subtraction to create fact families (for example, $9 + 7 = 16$; $7 + 9 = 16$; $16 - 7 = 9$; $16 - 9 = 7$). When adding three single digit numbers, children are taught to look for doubles or number bonds to 10. Using part part whole and bar models to represent addition calculations. $17 + 12 =$ $50 + 3 =$ Using the hundred square to add multiples of 10 e.g. $22 + 40$	Recall all number bonds within 20 including addition and subtraction to create fact families (for example, $9 + 7 = 16$; $7 + 9 = 16$; $16 - 7 = 9$; $16 - 9 = 7$). Solving 18-15 by recalling addition facts that 18 is made up to 15 and 3 Understand the word difference by visually comparing Numicon pieces and towers of cubes Finding the difference between numbers by using blank number lines. 	Children can count up in 2s, 5s and 10s to answer multiplication questions. Children then recall their 2, 5 and 10 times table. To begin counting in 3s, starting to recognise the matching times tables. Connect 10x table to place value when adding and subtracting 10 Connect 5x table to divisions on the clock face To recall all doubles of numbers up to double 10. To recognise the importance of equal groups when multiplying	To recall halves of all numbers to 20 Recognise the link between even numbers, halving and counting in 2s To understand division as the number of groups in a number. Using an arrow as a reminder. $15 \div 5$ e.g. $15 \div 5$ is understood as how many groups of 5 are in 15? Using groups and arrays. Finding the groups of 2s, 5s and 10s in numbers by using a number line. $12 \div 2$

Partition numbers to add two digit numbers together by drawing tens and ones.

are the tens column and ones are kept in the ones column. We use counting on to find the answer.

When introducing addition with bridging ten, children use counters to recognise the ten and "the extra bit".

9 + 3   10 + 2
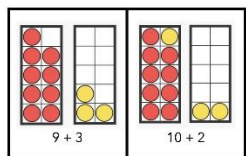
When bridging ten, children draw out the numbers using tens and ones. They then group the ones to make an extra ten and then count on to find the answer.
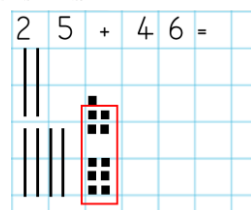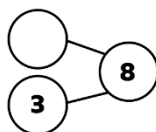

Using part part whole and bar models to represent subtraction calculations.
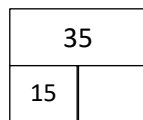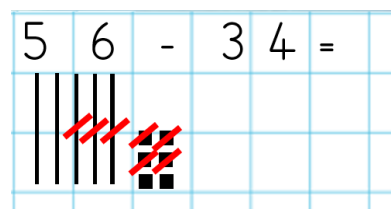

Subtract one using and known ($5-3=2$ so the answer is 32) and two digit partitioning facts e.g. $35-3$
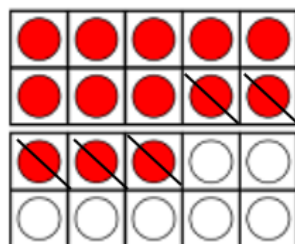
Beginning to use inverse to check answers

Subtracting two-digit from two-digit (no bridging ten) – drawing out the first number in tens and ones and crossing out the tens and ones to find the answer

When introducing subtraction, bridging ten, children use counters to recognise bridging through ten.
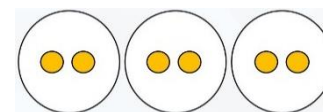
13 - 5 =

Subtracting bridging ten. Draw out the tens and ones then convert the ten into ten ones and then cross off to find the answer.

Using resources, and drawing pictures, to show groups matching multiplication calculations (4 groups of 3, 4 x 3)

Using images/practical resources to recognise that 3×2 and $2 + 2 + 2$ are equal (understood as 3 lots of 2, 3 groups of 2)

Building, drawing and interpreting arrays to match multiplication calculations (3×2, 2×3, 2 groups of 3, 3 groups of 2)
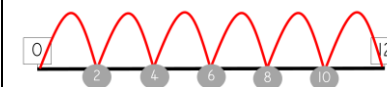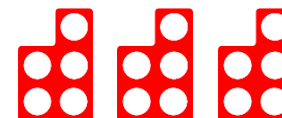

Children learn that multiplication is commutative e.g. 5×7 is the same as 7×5

Recall that multiplying a number by 0 always equals 0

Recognise the link between even numbers, doubling and the 2 times table

Recall and use multiplication and division inverse facts practically and mentally e.g. $3 \times 5 = 15$ (3 groups of 5 is 15) so $15 \div 5 = 3$ (in 15, 5 occurs 3 times)
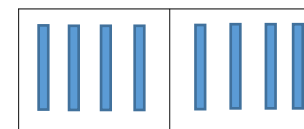

Counting up in 2s, 5s and 10s to divide by these numbers

Using knowledge of 2, 5, and 10x table to divide (inverse)

To calculate half of numbers sharing in ones e.g. half of 12
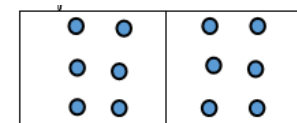
To calculate half of even, two-digit numbers using tens and ones e.g. half of 80

Working out unit and non-unit fractions of amounts by sharing practically, then moving on to drawing this method
e.g. ¼ of 12 therefore ¾ of 12 = 9

¼ of 12 = 3

*ones are drawn as Numicon shapes Children begin to use inverse to check answers.	2 3 - 6 = 5 6 - 3 8 =		
Vocabulary	Put Together Add Altogether Total Sum	Take away Minus Subtract Distance between Difference between More than and less than Difference	Multiply Times Groups of Lots of Equal groups Array	Divide Share Equal parts Equal groups Each have… Fraction

Use of = symbol

Inverse for + & - and x & ÷