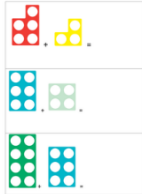# Calculation Policy- Addition

Year	FS- 'Maths moments video'	Year 1- 'Maths Moments video'	Year 2- 'Maths Moments video'	Year 3- 'Maths Moments video'
Mental Calculations and Methods	Count and order numbers to 20. Count out objects from a larger group. Add single digit numbers by counting all. Add single digit numbers by counting on. Number bonds: 2, 3, 4. Doubles up to 5. Use vocabulary such as 'more' and 'fewer' to compare sets. Give one more mentally. Use vocabulary of addition to talk about practical activities/problems.	Number bonds: 5, 6, 7, 8, 9, 10, 11. Add 10. Doubles up to 10. Largest number first. 1 more. Add one-digit and two-digit numbers to 20, including zero Solve one-step problems that involve addition, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9	Number bonds: 20, 12, 13, 14,15, 16, 17, 18, 19. Recall and use addition facts to 20 fluently, and derive and use related facts up to 100 Add 1 digit to 2 digits by bridging. Partition second number, add tens then ones and recombine. Add 10 and multiples of 10. Doubles up to 20 and multiples of 5. Add near multiples of 10. Add and subtract numbers using concrete objects, pictorial representations, and mentally, including.	Add numbers 1 and 2 digit numbers to 3 digit numbers. Add multiples of 10, 100. Add single digit bridging through boundaries. Partition second number to add and recombine. Use near doubles to add. Add near multiples of 10 and 100 by rounding and adjusting.
Fractions			Counting in fractions up to 10, starting from any numbers and using the 1/2 and 2/4 equivalence on the number line	Addition of fractions with the same denominator within one whole.
Written Methods	Mark making to represent numbers- correct formation of numbers to 10. Pictorial representations of problems.	Read, write and interpret mathematical statements involving addition (+),and equals (=) signs	Add two two-digit numbers using concrete objects, pictorial representations progressing to formal written methods. 40 + 9 → 49 + 20 + 3 +23 60 + 12=72 72	Add numbers with up to three digits, using formal written methods of columnar addition with regrouping to carry 4 2 3 + 8 8 5 1 1 1 1

Calculation Policy- Addition

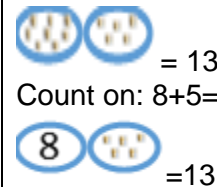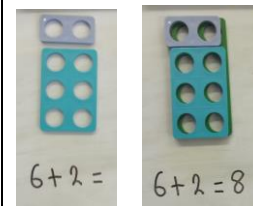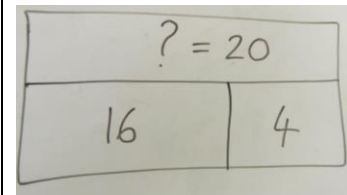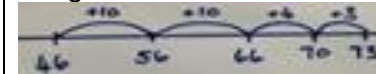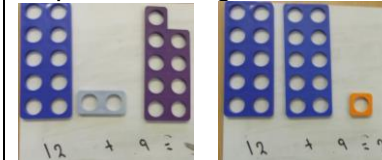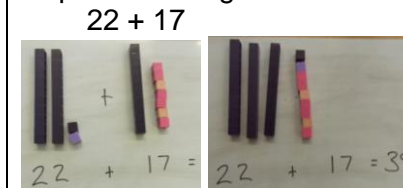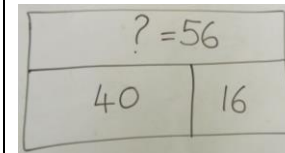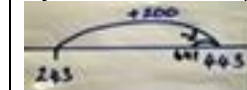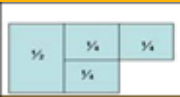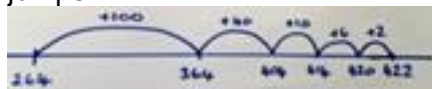| Developing conceptual understanding				
	Counting on songs, rhymes games and with apparatus. Count all and 1 more with apparatus. Doubles $\square + \square = \square\square$ $\square\square + \square\square = $ $\square\square + \square\square = $ Using numbers as labels for counting. 	Number bonds to 10 with apparatus: Use bonds of 10 to calculate bonds of 20 Count all: = 13 Count on: 8+5= 13 8 =13 Count on, on number track, in 1s 8 + 5 = 13 Use Numicon to represent addition: 6+2 = 6+2 =8 Bar Model: ? = 20 16 | 4	Number track / Number line – jumps of 1 then efficient jumps using number bonds 18 + 5 = 23 46 + 27 = 73 Count in tens then bridge. 25 + 29 by + 30 then -1 (Round and adjust) Represent using Numicon: Represent using Diennes: 22 + 17 22 + 17 = 22 + 17 =39 Bar Model: ? =56 40 | 16	Number line: 264 + 158 efficient jumps 400 + 800 = using 4 + 8 = 12 40 + 80 = 120 So 400 + 800 = 1200 243 + 198 by +200 then -2 (Round and adjust) Pairs that make 100 23 + 77 Bead string Diennes 100s, 10s, 1s 113 + 76 113 + 76 = 113 + 76 =189 (Also with £, 10p and 1p) Bar model ? =127 83 | 44
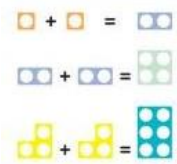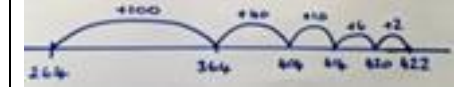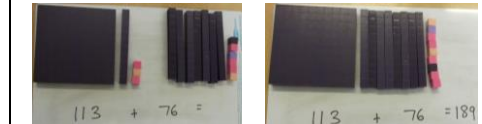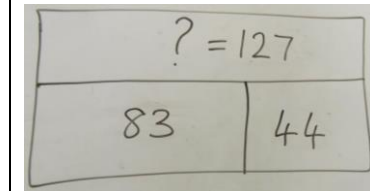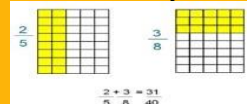
Calculation Policy- Addition

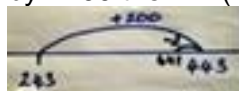| Year	Year 3- 'Maths Moments video'	Year 4- 'Maths Moments video'	Year 5- 'Maths Moments video'	Year 6- 'Maths Moments video'
Mental Calculations Mental methods	Add numbers 1 and 2 digit numbers to 3 digit numbers. Add multiples of 10, 100. Add single digit bridging through boundaries. Partition second number to add and recombine. Use near doubles to add. Add near multiples of 10 and 100 by rounding and adjusting.	Continue to add numbers mentally. Add multiples of 10s, 100s, 1000s. Fluency of 2 digit + 2 digit. Partition second number to add then recombine. Decimal pairs of 10 and 1. Use near doubles to add. Add near multiples. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	Add multiples of 10s, 100s, 1000s, tenths. Fluency of 2 digit + 2 digit including with decimals. Partition second number to add then recombine. Use number facts, bridging and place value. Adjust numbers to add. Add and subtract numbers mentally with increasingly large numbers	Perform mental calculations, including with mixed operations and large numbers. Add multiples of 10s, 100s, 1000s, tenths, hundredths. Fluency of 2 digit + 2 digit including with decimals. Partition second number to add then recombine. Use number facts, bridging and place value. Adjust numbers to add.
Fractions	Addition of fractions with the same denominator within one whole. $\frac{2}{5} + \frac{3}{5} = \frac{5}{5}$	Addition of fractions with the same denominator within one whole. $\frac{2}{5} + \frac{3}{5} = \frac{5}{5}$	Add fractions with the same denominator and denominators that are multiples of the same number. $\frac{1}{2} + \frac{3}{4} = \frac{2}{4} + \frac{3}{4} = \frac{5}{4}$ Recognise mixed number fractions and improper fractions and convert from one to the other and write mathematical statements e.g. 2/5 + 4/5 = 6/5 =1 1/5	Add fractions with different denominators and mixed numbers, using the concept of equivalent fractions. Start with fractions where the denominator of one fraction is a multiple of the other (e.g. 1/2 + 1/8 = 5/8) and progress to varied and increasingly complex problems Practice calculations with simple fractions and decimal equivalents to aid fluency $\frac{2}{5}$ $\frac{3}{8}$ $\frac{2}{5} + \frac{3}{8} = \frac{31}{40}$
Written Methods	Add numbers with up to three digits, using formal written methods of columnar addition with regrouping to carry. $\begin{array}{r} 4\,2\,3 \\ +\ \ 8\,8 \\ \hline 5\,1\,1 \\ {}^{1}\ \ {}^{1} \end{array}$	Add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate. $\begin{array}{r} 2\,4\,5\,8 \\ +\ \ 5\,9\,6 \\ \hline 3\,0\,5\,4 \\ {}^{1}\ \ {}^{1}\ \ {}^{1} \end{array}$	Add whole numbers with more than 4 digits, including using formal written methods (columnar addition). $\begin{array}{r} 2\,3\,4\,5\,4 \\ +\ \ \ \ 5\,9\,6 \\ \hline 2\,4\,0\,5\,0 \\ {}^{1}\,{}^{1}\,{}^{1} \end{array}$	Solve addition multi-step problems in contexts, deciding which operations and methods to use and why

Calculation Policy- Addition

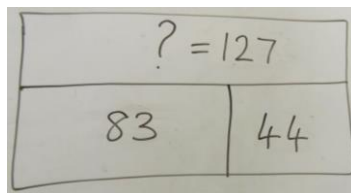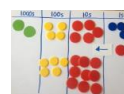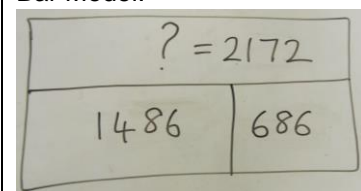| Developing conceptual understanding			
	Number line: 264 + 158 efficient jumps 400 + 800 = using 4 + 8 = 12 40 + 80 = 120 So 400 + 800 = 1200 243 + 198 by +200 then -2 (Round and adjust) Pairs that make 100 23 + 77 Bead string Diennes 100s, 10s, 1s 113 + 76 (Also with £, 10p and 1p) Bar model 	Place Value Counters or Diennes 2458 + 596 Show 2458 and 596 Combine the 1s. Exchange ten 1s for a 10 counter. Combine the 10s. Exchange ten 10s for a 100 counter. Combine the 100s. Exchange ten 100s for a 1000 counter Read final answer Three thousand and fifty-four. Bar Model: 	Set out the calculation In columns. 4 ones + 6 ones = 10 ones (1 ten and 5 ones) Carry 1 ten below tens. 5 tens + 9 tens + 1 ten = 15 tens (1 hundred and 5 tens) Carry 1 hundred bellow hundreds. 4 hundreds + 5 hundreds + 1 hundred = 10 hundreds (1 thousand and 0 hundreds) Carry 1 thousand below thousands. 3 thousands + 1 thousand = 4 thousands 2 ten thousands + 0 ten thousands= 2 ten thousands. Bar Model: 	23454 + 596 23454 + 596 0 1 23454 + 596 50 1 1 23454 + 596 050 1 1 1 23454 + 596 4050 1 1 1 23454 + 596 24050 1 1 1