Addition: Written Calculations

EYFS:	Objectives (by end of year)
Children will engage in a wide variety of songs and rhymes, games	Using quantities and objects, add
and activities. They will begin to relate addition to combining two	two single digit numbers and count
groups of objects first by counting all and then by counting on	on to find the answer
from the largest sumber	on to find the answer.
from the largest number.	
They will find one more than a given number.	
In practical activities and through discussion they will begin to use	
the vocabulary involved in addition.	
You have five apples and I have three apples. How many apples	
Tou have five apples and thave three apples. How many apples	
altogether?	
Year 1: Number line	
	Add one-digit and two-digit
	numbers to 20, including zero.
3+4 +4+	· 5
	Represent and use number bonds
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	nepresent and use number points
	and related subtraction facts within
Use of 10 and 20 frames	20.
15 + 4 = 0 5 + 0 + 1 = 9 0 + 0 = 6 0 = 3 + 4	Interpret addition number
	sentences and solve missing box
	problems using concrete objects
	problems, using concrete objects
	and pictorial representations.
Vear 2. Empty number line used to count on in multiples of 10 and 1	
Tear 2. Empty humber line used to count on in multiples of 10 and 1	
36 + 23 = 59	Add numbers using concrete
36 + 23 = 59 +10 +10 +3	Add numbers using concrete objects, pictorial representations,
36 + 23 = 59 $+10$ $+3$	Add numbers using concrete objects, pictorial representations, including those involving numbers.
36 + 23 = 59 $+10$ $+3$	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures:
36 + 23 = 59 $+10 + 3$ $36 + 46 - 56 - 59$	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures:
$36 + 23 = 59$ $46 \qquad 56 \qquad 59$ Partitioning:	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures:
36 + 23 = 59 $46 56 59$ Partitioning: $36 + 23$	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures: - A two-digit number and ones
36 + 23 = 59 $46 56 59$ Partitioning: $36 + 23 = 36 + 23 = 56$	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures: - A two-digit number and ones TU + U
$36 + 23 = 59$ $\frac{+10}{36} + 36 = 56 = 59$ Partitioning: $36 + 23 = 56$ $56 + 3 = 59$ (keeping first number whole)	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures: - A two-digit number and ones TU + U - A two-digit number and tens
36 + 23 = 59 $46 56 59$ Partitioning: $36 + 23$ $36 + 23$ $36 + 20 = 56$ $56 + 3 = 59 (keeping first number whole)$	 Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures: A two-digit number and ones TU + U A two-digit number and tens TU + T
36 + 23 = 59 $46 56 59$ Partitioning: $36 + 23$ $36 + 23$ $36 + 23$ $36 + 20 = 56$ $56 + 3 = 59 (keeping first number whole)$ Due and of V2 measing to the matrixic and column method (only)	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures: - A two-digit number and ones TU + U - A two-digit number and tens TU + T - Two two-digit numbers TU +
36 + 23 = 59 $46 56 59$ Partitioning: $36 + 23 = 56$ $56 + 23 = 56$ $56 + 3 = 59 (keeping first number whole)$ By end of Y2, moving to the partitioned column method (only	Add numbers using concrete objects, pictorial representations, including those involving numbers, quantities and measures: - A two-digit number and ones TU + U - A two-digit number and tens TU + T - Two two-digit numbers TU +
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Year 3: Column addition with carrying					
Use expanded column method from Year 2 to support the move to			Add numbers with up to three digits		
columnar addition.			using the formal written methods of		
No boundary crossing	Crossing 10s boundary	Crossing 10s/100s boundary	columnar addition where		
442 + 335 = 777	457 + 219=676	568 + 275 = 843	appropriate.		
442	457	568	Estimate and use the inverse		
+335	+219	+ 275	(subtraction) to check answers to a		
777	676	843	calculation.		
	1	11			
(Extend to adding more than two numbers and include HTO + TO to					
reinforce place value .					
Year 4: Column	addition with ca	nrrving			
No boundary crossing	Crossing 10s boundary	Crossing 10s/100s boundary	Add numbers with up to four digits		
2442 + 335 = 3777	1457 + 219=1676	1568 + 275 = 1843	using the formal written methods of		
			columnar addition where		
2442	1457	1568	annronriate		
+ 335	+ 219	+ 275			
<u>2777</u>	<u>1676</u>	<u>1843</u>	Estimate and use the inverse		
Extand to addir	ng moro than two	numbers and include decimals for	(subtraction) to chock answers to a		
Extend to adding more than two numbers and include decimals for			(subtraction) to check answers to a		
measurement and money.					
Year 5: Column addition (including decimals with up to two decimal places)					
Extend Year 4 methods to larger numbers and use in decimal			Add whole numbers and decimals		
contexts includ	ing money. All bo	bundary crossings to be made.	with more than four digits using		
			columnar addition. (Extend to		
4.37m + 3.49m			adding more than two numbers and		
4.37			include conversion of		
+ <u>3.49</u>			measurement).		
<u>7.86</u> = 7.86m					
Include examples where conversion of measurement is required					
For example: 4.27m + 0.2cm					
TOT Example: 4					
Year 6: Column addition (including decimals up to three decimal place			ces)		
Secure written methods in all problem solving contexts.		Solve addition multi-step problems			
		-	in context.		
Continue to pra	actise and use the	e formal written method for larger			
numbers and decimals. (Extend to adding more than two numbers)					
		5			
Our aim is that	by the end of Yea				
(with jottings) when appropriate, but for calculations, that they					
cannot do in their heads, they use an efficient formal written					
method accura	tely and with con	fidence.			