

Calculation Policy - Addition

EYFS

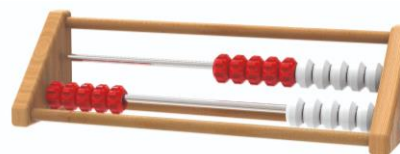


Understanding the operation and related vocabulary

- understand addition as combining two quantities
- record using marks that they can interpret and explain
- begin to use the vocabulary involved in adding: *add, altogether, total, , ..more than ..*

Recalling number facts

- subitise numbers to 5.
- recall number bonds to 5 and some number bonds to 10.



- Count and order number to 20
- Know one more or less than a given number to 20
- Verbally count beyond 20
- Have a deeper understanding of numbers to 10.

Mental methods

- Add and subtract two single digit numbers - count on or back or use quantities and objects to find the answer.
- Solve problems including doubling.



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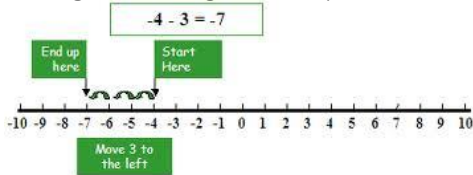
Year 1	Year 2
Understanding the operation and related vocabulary	
- Understand addition as combining two or more quantities; increasing one quantity - Read write and interpret mathematical statements involving + and = signs - Solve missing number problems - Understand the vocabulary related to addition: <i>Plus, the sum of</i>	- Understand addition as combining two or more quantities; increasing one quantity - Show that addition can be done in any order (commutative law) - Recognise the inverse between addition and subtraction - Solve missing number problems - Understand the vocabulary related to addition
Recalling number facts	
- Recall and use addition facts to 10 fluently - Know number pairs with a total of 20	- Recall and use addition facts to 20 fluently and derive and use related facts up to 100 - Know compliments to the next multiple of 10 $52 + ? = 60$ - Know pairs of multiples of 10 with a total of 100
Mental methods and mental methods with jottings	
- Add one digit and two digit numbers to 20 including zero - Represent and use number bonds within 20	Add numbers using concrete objects, pictorial representations and mentally including; a 2 digit number and ones; a 2 digit number and tens; two 2 digit numbers; add 3 1 digit numbers
Estimating and checking	
	Check calculations by adding in a different order

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Year 3	Year 4
Understanding the operation and related vocabulary	
- Understand the principles of the commutative and associative law - Understand the inverse between addition and subtraction - Solve missing number problems - Understand read and spell vocabulary related to addition correctly: increase	
Recalling number facts	
- Continue to recall and use addition facts to 20 fluently and derive and use related facts beyond 100 e.g. $80+50$ - Know pairs of 2 digit numbers with a total of 100	- Know compliments to the next 100 $568 + ? = 600$
Mental methods and mental methods with jottings	
HTU + U HTU + tens HTU + hundreds  	Continue to practise mental methods with increasingly large numbers
Formal written layout	
Add numbers with up to 3 digits using formal written methods of columnar addition $\begin{array}{r} 789 \\ + 642 \\ \hline 1431 \\ \hline 11 \end{array}$ Answer: 1431	- Add numbers with up to 4 digits using formal written methods of columnar addition - Add decimals to 2 decimal places (money or measures) Compact column addition $\begin{array}{r} 789 \\ + 642 \\ \hline 1431 \\ \hline 11 \end{array}$ Answer: 1431
Estimating and checking	
- Estimate the answer to calculation - Use inverse operations to check answers - Use equivalent calculations to check answers	- Estimate the answer to calculation - Use inverse operations to check answers - Use equivalent calculations to check answers

This Calculation Policy summaries some of the Statutory Requirements for the 2014 Maths National Curriculum with the written methods to be taught for each year group within Witherley Primary School. Planning should be done from the NC2014 and an easy to view Four Operation Flyer is available for each year group to be shared with parents and children annually.

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Year 5	Year 6
Understanding the operation and related vocabulary	
- Continue to solve number problems - Begin to use brackets - Read spell and pronounce mathematical vocabulary related to addition correctly	- Use knowledge of the order of operations - Continue to solve number problems - Explore the order of operations using brackets - Read spell and pronounce mathematical vocabulary related to addition correctly
Recalling number facts	
- Continue to use knowledge of addition facts and place value to derive related facts with numbers to one decimal place, e.g. $1.2 + 0.7$ - Know compliments to 1, e.g. $0.3 + 0.7 = 1$ / $0.83 + 0.17$	- Continue to use knowledge of addition facts and place value to derive related facts with numbers to two decimal places - Know complements to the next whole number, e.g. $7.632 + ? = 8$
Mental methods and mental methods with jottings	
- Add numbers mental with increasingly large numbers - Add tenths and one digit whole numbers and tenths e.g. - partition: add or subtract a whole number and adjust, e.g. $4.3 + 2.9 = 4.3 + 3 - 0.1$, $6.5 - 3.8 = 6.5 - 4 + 0.2$ 	- Perform mental calculations including with mixed operations, large numbers and decimals - Add positive and negative integers (temperature) e.g. $-4 - 3 = -7$ 
Formal written layout	
- Add whole numbers with more than 4 digits - Add decimals, including a mix of whole numbers and decimals; and decimals with different numbers of decimal places $\begin{array}{r} + 23.59 \\ 7.55 \\ \hline 31.14 \\ \hline 111 \end{array}$ The decimal point should be aligned in the same way as the other place value columns, and must be in the same column in the answer	- Practise addition for larger numbers - Continue to practise addition calculations with decimals (up to 3 decimal places) $\begin{array}{r} 4.2 \\ 0.34 \\ 5.871 \\ + 18 \\ \hline 28.411 \end{array}$ $\rightarrow$ $\begin{array}{r} 4.200 \\ 0.340 \\ 5.871 \\ 18.000 \\ \hline 28.411 \end{array}$
Estimating and checking	
Use rounding to check answers and determine levels of accuracy Continue to use appropriate strategies to check answers	Use estimation to check answers and determine levels of accuracy Continue to use appropriate strategies to check answers

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