Number: Addition and Subtraction

NUMBER BONDS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	recall all addition and subtraction facts up to five. recall some addition and subtraction facts within 10.	derive and recall addition facts for totals up to 10 represent and use number bonds and related subtraction facts within 20	recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100 derive and recall all pairs of multiples of 10 with totals up to 100	derive and recall pairs of 2-digit numbers with a total of 100	derive and recall what must be added to any 3-digit number to make the next multiple of 100	derive and recall what must be added to any 4-digit number to make the next multiple of 1000. derive what must be added to a decimal with one decimal place to make the next whole number	derive and recall what must be added to a decimal with two decimal places to make the next whole number
MENTAL CALCULATION/RECALL							
Nursery	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
	use quantities and objects to add 2 single digits by counting on use quantities and objects to subtract 2 single digits by counting back use the language add/altogether, take away, more and less	add and subtract one-digit and two-digit numbers to 20, including zero	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	add and subtract numbers mentally, including: * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds	find the difference between near multiples of 1000 add or subtract any near multiple of 10 or 100 to any 2 or 3-digit number	add and subtract numbers mentally with increasingly large numbers add and subtract any pair of decimals up to one decimal place	perform mental calculations, including with mixed operations and large numbers

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	recall doubles to 5	derive and recall addition doubles for numbers to 10 add near doubles	derive and recall addition doubles to 20 derive and recall addition doubles for multiples of 10 to 100.	add near doubles	derive and recall addition doubles for numbers 1-100 and corresponding halves. add near doubles	derive and recall doubles and halves of decimal to one decimal place add near doubles of decimals up to one decimal place	
		add a multiple of 10 to a one-digit number	derive and recall what must be added to a 2-digit number to make next multiple of 10.	derive and recall sums and differences of multiples of 10	derive and recall sums and differences of pairs of multiples of 10, 100 and 1000.		derive and recall addition and subtraction facts for multiples of 10 up to 1000 derive and recall addition and subtraction facts for decimal numbers with one decimal place
		read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs	show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				use their knowledge of the order of operations to carry out calculations involving the four operations

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WRITTEN METHODS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	use marks relating to addition and subtraction that they can interpret and explain use the language add/altogether, take away, more and less	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs *(appears also in Mental 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	add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate	add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)	add and subtract a range of large whole numbers and decimal numbers

INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	estimate a number of objects and check by counting	begin to recognise that addition and subtraction are inverse operations	recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation	use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy. Use knowledge of inverse operations to carry out calculations.

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PROBLEM SOLVING							
Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	solve simple addition and subtraction problems using reception criteria explore and represent patterns within numbers up to 10.	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ - 9	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	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction add and subtract amounts of £ to give change using both £ and p in practical contexts	solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division