

Number: Addition and Subtraction

NUMBER BONDS								
F1	F2	Early Learning Goals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Explore the composition of numbers to 10	Automatically recall (without reference to rhymes, counting or other aids)	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				
	Automatically recall number bonds for numbers 0-10	number bonds up to 5 (including subtraction facts) and some numbers bonds to 10 including double facts						
	Begin to understand the operations of addition and subtraction and use associated vocabulary							
	Begin to understand mathematical symbols associated with addition and subtraction							

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MENTAL CALCULATION									
Fast recognition of up to 3 objects, without having to count them (subitising)	Subitise	Subitise up to 5	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: <ul style="list-style-type: none"> * 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 with increasingly large numbers	perform mental calculations, including with mixed operations and large numbers
	Automatically recall number bonds for numbers 0 – 10	Automatically recall number bonds up to 5 and some number bonds up to 10 including double facts	read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Written Methods)	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	
	To understand and recall doubling facts up to 10								

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WRITTEN METHODS								
F1	F2	Early Learning Goals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Show finger numbers up to 5	To become familiar with and understand mathematical symbols linked to addition and subtraction		read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)		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)	
Experiment with their own symbols and marks as well as numerals	To begin to represent mathematical sentences with appropriate symbols							
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS								
				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.

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PROBLEM SOLVING								
F1	F2	Early Learning Goals	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			<p>solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$</p>	<p>solve problems with addition and subtraction:</p> <ul style="list-style-type: none"> * using concrete objects and pictorial representations, including those involving numbers, quantities and measures * applying their increasing knowledge of mental and written methods 	<p>solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p>	<p>solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p>	<p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>	<p>solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why</p>
				<p><i>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (copied from Measurement)</i></p>				<p>Solve problems involving addition, subtraction, multiplication and division</p>