

Number: Addition and Subtraction

Key of text colours

EYFS Development Matters (DM) Objectives & NC Objectives

Key concepts that create solid foundations in EYFS to build upon for the NC Objectives

NC Objective appears elsewhere within the same topic progression document

NC Objective also appears in another topic progression document

NUMBER BONDS							
EYFS	ELG	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>explore the composition of numbers to 10</p> <p>automatically recall number bonds for numbers 0-10</p> <p>begin to understand the operations of addition and subtraction and use associated vocabulary</p> <p>begin to understand mathematical symbols associated with addition and subtraction</p>	<p>automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some numbers bonds to 10 including double facts</p>	<p>represent and use number bonds and related subtraction facts within 20</p>	<p>recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100</p>				

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MENTAL CALCULATION							
subitise automatically recall number bonds for numbers 0 – 10 understand and recall doubling facts up to 10.	subitise up to 5 automatically recall number bonds up to 5 and some number bonds up to 10 including double facts	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, including: <ul style="list-style-type: none"> * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds 		add and subtract numbers mentally with increasingly large numbers	perform mental calculations, including with mixed operations and large numbers
		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

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WRITTEN METHODS							
EYFS	ELG	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>become familiar with and understand mathematical symbols linked to addition and subtraction</p> <p>begin to represent mathematical sentences with appropriate symbols</p>		<p>read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)</p>		<p>add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction</p>	<p>add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate</p>	<p>add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)</p>	
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS							
			<p>recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.</p>	<p>estimate the answer to a calculation and use inverse operations to check answers</p>	<p>estimate and use inverse operations to check answers to a calculation</p>	<p>use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy</p>	<p>use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p>

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PROBLEM SOLVING							
EYFS	ELG	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$	solve problems with addition and subtraction: <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 	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	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
			<i>solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change (NC objective in Measurement)</i>				Solve problems involving addition, subtraction, multiplication and division