

Maths Progression Document: Number: Addition and Subtraction

The progression maps are structured using the topic headings as they appear in the National Curriculum. Each 'topic' has been divided into sub categories to illustrate progression in key areas.

<u>Nursery</u>	<u>Reception</u>	<u>Year 1</u>	<u>Year 2</u>
Number bonds			
	Automatically recall number bonds to 5 and some number bonds 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
	know double facts to 10 and how quantities can be distributed equally.		
	Explore the composition of number to 10. (also in number and place value)		
Mental Calculation			
	Part-whole: identify smaller numbers within a number (conceptual subitising – seeing groups and combining to a total)	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
		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
Written Methods			
		read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs (appears also in Mental Calculation)	
Inverse operations, estimating and checking answers			
	recognise that a group of objects partitioned into two groups can be recombined to make the same total.		recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.
Problem Solving			
Solve real world mathematical problems	begin to make mathematical choices	solve one-step problems that involve addition and	solve problems with addition and subtraction:

<p><i>with numbers up to 5 (also in number and place value)</i></p>	<p><i>within their play: there are 6 pom poms, how could you share fairly with you friend?</i></p>	<p><i>subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$</i></p>	<p><i>* using concrete objects and pictorial representations, including those involving numbers, quantities and measures</i></p> <p><i>* applying their increasing knowledge of mental and written methods</i></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>

All programmes of study statements are included and some appear twice. This is indicated in the text. This occurs where:

- *The statement has central relevance to more than one sub category within a topic;*
- *The statement has central relevance to more than one mathematics topic. This is done to reflect the aims of the curriculum that pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems (Mathematics programmes of study: key stages 1 and 2 page 3). However, the connections made are not intended to be exhaustive and teachers will seek to support pupils in making other connections.*