Brentfield Primary School

Children of Today, Champions for Tomorrow

Progression in Addition and Subtraction

All programmes of study statements are included in the progression map 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.

PROGRESSION IN ADDITION AND SUBTRACTION							
	EYFS	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
NUMBER BONDS	• automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts.	• 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				
MENTAL CALCULATION	• add and subtract two single-digit numbers • Count on or back to find the answer	• add and subtract one-digit and two-digit numbers to 20, including zero • read, write and interpret mathematical statements involving addition (+), subtraction (-)	• add and subtract numbers using concrete objects, pictorial representations, and mentally, including: - a two-digit number and ones	• add and subtract numbers mentally, including: - 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 • use their knowledge of the order of operations to carry out calculations

		and equals (=) signs	- a two-digit number and tens - two two-digit number - adding three one-digit numbers • show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot				involving the four operations
FORMAL WRITTEN METHODS				• 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)	
INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS			• recognise and use the inverse relationship between addition and subtraction and use this to	• estimate the answer to a calculation and use inverse operations to	• estimate and use inverse operations to check answers to a calculation	• use rounding to check answers to calculations and determine, in the context of	• use estimation to check answers to calculations and determine, in the context of

			check calculations and solve missing number problems.	check answers		a problem, levels of accuracy	a problem, levels of accuracy.
PROBLEM SOLVING	• solve problems, including doubling, halving and sharing.	• solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as = □ - 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 (also in measures)	• 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