Addition and Subtraction

Progression of Skills:
- Number Bonds
- Mental Calculations
- Written Methods
- Inverse Operations, Estimating and Checking Answers
- Problem Solving

Number Bonds					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Represent and use number bonds and related subtraction facts within 20.	Recall and use addition and subtraction facts to 20 fluently. Derive and use related facts up to 100. <u>Ongoing in weekly arithmetic</u>	*Build on year 2 to ensure mastery.*			

Written Methods					
Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.	*Build on year 1 to ensure mastery.*	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 four digits using the formal written methods of columnar addition and subtraction where appropriate.	Add and subtract whole numbers with more than four digits, including using formal written methods.	*Build on year 5 to ensure mastery.*

Mental Calculation					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Add and subtract one-digit and two-digit numbers to 20, including 0.	Add and subtract numbers using concrete objects, pictorial representations and mental strategies including: • A two-digit number and ones, tens • Two two-digit numbers • Adding three one-digit numbers Ongoing in weekly arithmetic	Add and subtract numbers mentally including: • A three-digit number and ones • A three-digit number and tens • A three-digit number and hundreds Ongoing in weekly arithmetic	*Build on year 3 to ensure mastery.*	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.	Show that the addition of two numbers can be done in any order and subtraction of one number from another cannot. Ongoing in weekly arithmetic	*Build on year 2 to ensure mastery.*			Use their knowledge of the order of operations to carry out calculations involving the four operations.

Inverse Operations, Estimating and Checking Answers					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Ongoing in weekly arithmetic	Estimate the answer to a calculation and use inverse operations to check answers. Ongoing in weekly arithmetic	Estimate and use inverse operations 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.

Problem Solving					
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 = □ - 9. **Through Rainbow Awards- termly**	Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures. <u>Ongoing in weekly arithmetic</u>	Solve problems including missing number problems, using number facts, place value and more complex addition and subtraction. <u>Ongoing in weekly arithmetic</u>	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 with addition and subtraction by applying their increasing knowledge of mental and written methods. <u>Ongoing in weekly arithmetic</u>	*Build on year 2 to ensure mastery.*			Solve problems involving addition, subtraction, multiplication and division.