		Fluency	Written	Reasoning & Problem Solving
Y1		Represent and use number bonds and related subtraction facts within 20	Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs add and subtract one-digit and two-digit numbers to 20, including zero	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9. Problems should include terms: put together, add, altogether, total, take away, distance between, more than and less than, so pupils develop concept of +/- and use operations flexibly.
Y2		Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ▫ a two-digit number and ones ▫ a two-digit number and tens ▫ two two-digit numbers ▫ 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	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 ▫ recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Y3		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 with up to three digits, using formal written methods of columnar addition and subtraction Estimate the answer to a calculation and use inverse operations to check answers	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
Y4			Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate estimate and use inverse operations to check answers to a calculation	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Y5		Add and subtract numbers mentally with increasingly large numbers	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Y6		Perform mental calculations, including with mixed operations and large numbers	Use their knowledge of the order of operations to carry out calculations involving the four operations Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division

Crowmarsh Gifford CE Primary School Calculation Policy
Subtraction

	Fluency	Written	Reasoning & Problem Solving
Y1	Represent and use number bonds and related subtraction facts within 20	Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs add and subtract one-digit and two-digit numbers to 20, including zero	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9. Problems should include terms: put together, add, altogether, total, take away, distance between, more than and less than, so pupils develop concept of +/- and use operations flexibly.
Y2	Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100	Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ▫ a two-digit number and ones ▫ a two-digit number and tens ▫ two two-digit numbers ▫ 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	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 ▫ recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems
Y3	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 with up to three digits, using formal written methods of columnar addition and subtraction Estimate the answer to a calculation and use inverse operations to check answers	Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.
Y4		Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Estimate and use inverse operations to check answers to a calculation	Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
Y5	Add and subtract numbers mentally with increasingly large numbers	Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Y6	Perform mental calculations, including with mixed operations and large numbers	Use their knowledge of the order of operations to carry out calculations involving the four operations Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Solve problems involving addition, subtraction, multiplication and division

	Fluency	Written	Reasoning & Problem solving
Y1	Count in multiples of twos, fives and tens	Solve one-step problems using concrete objects, pictorial representations and arrays *(with the support of the teacher)*	
Y2	Recall and use multiplication facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	Calculate statements for multiplication within the multiplication tables and write them using the multiplication and equals signs. Show that multiplication of two numbers can be done in any order (commutative)	Solve problems involving multiplication using materials, arrays, repeated addition, mental methods and multiplication facts, including problems in contexts
Y3	Recall and use multiplication facts for the 3, 4 and 8 multiplication tables. (Multiply whole numbers by10)	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including **TU x U**, using mental and progressing to **formal written methods** **(short multiplication)**	Solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems
Y4	Recall multiplication facts to 12 × 12. Use place value, known & derived facts to multiply mentally, including x by 0 and 1, multiplying together three numbers. Recognise/use factor pairs and commutativity in mental calculations. (Multiply whole numbers by 10 and 100)	**TU and HTU x U** using formal written layout **(short multiplication)** (Use estimation to check answers to calculations)	Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems
Y5	Identify multiples/factors, including finding all factor pairs of a number, & common factors of two numbers. Know/use vocabulary of prime numbers, prime factors and composite (non-prime) nos. Establish if a number up to 100 is prime; recall prime numbers to 19. Multiply numbers mentally using known facts. Multiply whole numbers and those involving decimals by 10/100/1000. Recognise square numbers and cubed numbers and notation	**Th H T U x U and TU** using a formal written method including **long multiplication** for two-digit numbers (Use estimation to check answers to calculations)	Solve problems involving multiplication and division where larger numbers are used by decomposing them into their factors
Y6	Perform mental calculations, including with mixed operations/large numbers. Identify common factors/multiples and prime numbers. Use knowledge of order of operations to carry out calculations. Identify value of each digit to 3dp and multiply numbers by 10/100/1000 (answers to 3dp)	Multi-digit numbers (up to 4 digits) x TU whole number using the formal method of **long multiplication**. Multiply one-digit numbers with up to two decimal places by whole numbers Use estimation to check answers to calculations	Solve problems involving addition, subtraction, multiplication and division

Crowmarsh Gifford CE Primary School Calculation Policy
Division

	Fluency	Written	Reasoning & Problem solving
Y1			Solve one-step problems by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
Y2	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.
Y3	Recall and use division facts for the 3, 4 and 8 multiplication tables.	Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.
Y4	Recall multiplication and division facts for multiplication tables up to 12 × 12 Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1.	*Short division is in non-statutory guidance for year 4*	
Y5	Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Establish whether a number up to 100 is prime and recall prime numbers up to 19 Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context	Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Solve problems involving addition, subtraction, multiplication and division Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
Y6	Perform mental calculations, including with mixed operations and large numbers Identify common factors, common multiples and prime numbers	Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context	Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why Use their knowledge of the order of operations to carry out calculations involving the four operations