

Bathwick St. Mary School Calculation progression

		ELG	1	2	3	4	5	6
Counting		-Children count reliably with numbers from one to 20, place them in order and say which number is one more or one less than a given number.	-Count to and across 100 forwards and backwards beginning with 0 or 1 or from any given number. -Count in different multiples including 1's, 2's, 5' and 10's.	-Count in steps of 2, 3, and 5, from 0 and in tens from any number forwards and backwards.	-Count from 0 in multiples of 4, 8, 50, and 100, finding 10 or 100 more or less than a given number.	-Count in multiples of 6, 7, 9, 25 and 1000. -Count backwards through 0 to include negative numbers.	-Count forwards and backwards in steps of 10 for any given number up to 1000000. -Count forwards and backwards with positive and negative whole numbers through 0.	count on aback in decimals and fractions
	Place value		-Read and write numbers from 1 to 20 in digits and in words and beyond to 100	-Recognise the place value of each digit in a 2 digit number (tens, ones) -Compare and order numbers using <, >, = up to 100.	-Recognise the place value of each digit in a 3 digit number (hundreds, tens and ones) -Compare and order numbers up to 1000.	-Recognise the place value of each digit in a four digit number. -Order and compare numbers beyond 1000. -divide a 1 digit number by 10 or 100	-Read, write order and compare numbers to at least 1000 000 and determine the value of each digit. -- Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	-Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit including decimal numbers. - multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
Number Facts			-Represent and use number bonds to 5, 10 and 20 and related subtraction facts within 20.	-Recall and use + and - facts to 20 fluently. -Derive and use related facts up to 100. -Recall and use x and ÷ facts for the 2, 5 and 10 x tables, Recognise odd and even numbers.	-Recall and use x and ÷ facts for the 3, 4 and 8 times tables as well as those in previous years	-Recall x and ÷ facts for x tables up to 12 x 12.	-Identify multiples and factors, including finding factor pairs - Recall prime numbers up to 19 and beyond Recognise and use square numbers and cube numbers	-Identify common factors, common multiples and prime numbers up to and over 100.
Addition and subtraction	Mental	-Using quantities and objects, they add and subtract two single-digit numbers and count on or back to find the answer.	-Add and subtract 1 digit and 2 digit numbers to 20 including 0.	-Add and subtract... 2 digit number and ones 2 digit number and tens 2, 2 digit numbers -Add three one digit numbers Apply increasing knowledge of written methods	-Add and subtract... 3 digit and ones 3 digit and tens 3 digit and hundreds (2 digit beyond 100)	Practise mental methods	-Add and subtract numbers mentally with increasingly large numbers	Perform mental calculations, including with mixed operations and large numbers.
	Written			Subtract by finding the difference .	-Add and subtract numbers with up to 3 digits using the formal written methods of columnar addition and subtraction			
Multiplication and division	Mental	-They solve problems, including doubling, halving and sharing.	-Solve one step problems using concrete objects, pictorial reps and arrays with support (of teacher). Introduce vocabulary of: lots of and sharing	-Calculate mathematical statements for x and ÷ within the multiplication tables to 12 Know 2, 5, 10 x tables nad division facts	-Write and calculate mathematical statements for x and ÷ using the x tables they know including 2 digit x 1 digit mentally... Know 2,,3,4,5,10 x table snad division facts	-Use place value known and derived facts to multiply and divide mentally including multiplying by 0 and 1, divide by 1, multiply 3 numbers. -Recognise and use factor pairs and commutativity in mental calculations -Distributive law for 2 digit x 1 digit Know all times tables to 12x12 and related division facts	-Multiply and divide numbers mentally drawing upon known facts. Know all times table sand related division facts to 12x12	-Perform mental calculations, including with mixed operations and large numbers including fractions and decimals.
	Written			...and write them using x, + and = Use repeated addition or subtraction Use partitioning to multiply 2 digit numbers by a single digit number e.g. $2 \times 12 = 2 \times 10 + 2 \times 2 = 24$... progressing to written methods for multiplication. a) grid method b) extended columnar multiplication for 2digits x1 digit numbers c) formal columnar multiplication division – use repeated addition or subtraction and introduce short division			

