

## St Giles' C of E Primary School NUMBER Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>ADDITION AND SUBTRACTION</b>	<p>ELG - Using quantities and objects, children add and subtract two single-digit numbers and count on or back to find the answer.</p>	<p>*Read, write and interpret mathematical statements Involving addition and subtraction and equals sign                      * represent and use number bonds and related subtraction facts within 20                      * add and subtract one-digit and two-digit numbers to 20                      * solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems such as <math>\_\_ - 9 = 7</math></p>	<p>* solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures, applying increasing know ledge of mental and written methods                      * recall and use addition and subtraction facts to 20 fluently, and derive and use related number 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 number, adding three one- digit number                      * show that addition of two numbers can be done in any order [communicative] and subtraction of one number from another cannot                      * recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems</p>	<p>* 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 written methods of columnar addition and subtraction                      * estimate the answer to a calculation and use inverse methods to check answers                      * solve problems including missing number problems, using number facts, place value, and more complex addition and subtraction</p>	<p>* add and subtract numbers with up to 4 digits using the formal methods of columnar addition and subtraction where appropriate                      * estimate and use inverse operations to check answers to calculations                      * solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p>	<p>*add and subtract whole numbers with more than 4 digits, including using formal written methods [columnar addition and subtraction]                      * add and subtract numbers mentally with increasingly large numbers                      * 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 and why</p>	<p>* practise addition and subtraction using formal written methods                      * solve addition and subtraction multi- step problems in contexts, deciding which operations and methods and why</p>
<b>MULTIPLICATION AND DIVISION</b>	<p>ELG - Children solve problems including doubling, halving and sharing.</p>	<p>* solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays</p>	<p>* 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</p>	<p>* recall and use multiplication and division facts for the 3,4 and 8 multiplication tables                      * write and calculate mathematical statements for multiplication and division using the</p>	<p>* recall multiplication and division facts for multiplication tables up to <math>12 \times 12</math>                      * use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1;</p>	<p>* 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</p>	<p>* multiply multi-digit numbers by up to 4 digits by a two-digit whole number using the formal written method of long multiplication                      * divide numbers up to 4-digits by any two-digit whole number using the formal written method</p>

			<p>division within the multiplication tables and write them using the multiplication (<math>\times</math>), division (<math>\div</math>) and equals signs</p> <p>* show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot</p> <p>* solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts</p>	<p>multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to simple written methods (grid method)</p> <p>* solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which <math>n</math> objects are connected to <math>m</math> objects</p>	<p>dividing by 1; multiplying together 3 numbers</p> <p>* recognise and use factor pairs and commutativity in mental calculations</p> <p>* multiply two-digit and three-digit numbers by a one digit- number using a grid method leading to an expanded formal method</p> <p>* use formal written method to divide 3-digit numbers by 1-digit</p> <p>* 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 such as <math>n</math> objects are connected to <math>m</math> objects</p>	<p>* establish whether a number up to 100 is prime and recall prime numbers up to 19</p> <p>* multiply numbers up to 4 digits by a one- or two-digit number using formal written method, including long multiplication for two-digit numbers</p> <p>* multiply and divide numbers (incl decimals) mentally drawing upon known facts</p> <p>* divide numbers up to 4 digits by a 1- digit numbers using formal written method of short division and interpret remainders appropriately in context</p> <p>* multiply and divide whole numbers and those involving decimals by 10, 100 and 1000</p> <p>* recognise and use square numbers and cube numbers, and the notation for squared (<math>n^2</math>) and cubed (<math>n^3</math>)</p> <p>* solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes</p> <p>* solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign</p> <p>* solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates</p>	<p>of long division and interpret remainders fractions or by rounding, as appropriate for the context</p> <p>* divide numbers up to 4-digits by a single and 2-digit number using formal written methods of short division where appropriate</p> <p>* perform mental calculations, including with mixed operations and large numbers</p> <p>* identify common factors, common multiples and prime numbers</p> <p>* use knowledge of the order of operations to carry out calculations involving the four operations</p>
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