| Number \& Numerical Patterns | Multiplication \& Division |  |  |  |  |  |
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| Early Learning Goals | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| - Have a deep understanding of number to 10 , including the composition of each number. <br> - Subitise (recognise quantities without counting) up to 5. <br> - 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. <br> - Verbally count beyond 20 , recognising the pattern of the counting system. <br> - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. <br> - Explore and represent patterns within numbers up to 10 , including evens and odds, double facts and how quantities can be distributed equally. | - Solve onestep problems involving multiplication and division, by calculating the answer using concrete objects, pictorial | - Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers. <br> - Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals ( $=$ ) signs. <br> - Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. <br> - Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. | - Recall and use multiplication and division facts for the 3,4 and 8 multiplication tables. <br> - 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. <br> - 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. | - Recall multiplication and division facts for multiplication tables up to $12 \times 12$. <br> - Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1 ; dividing by 1 ; multiplying together three numbers. <br> - Recognise and use factor pairs and commutativity in mental calculations. <br> - Multiply two-digit and three-digit numbers by a onedigit number using formal written layout. <br> - 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 $n$ objects are connected to m objects. | - Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. <br> - Know and use the vocabulary of prime numbers, prime factors and composite (nonprime) numbers. <br> - Establish whether a number up to 100 is prime and recall prime numbers up to 19. <br> - Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for twodigit numbers. <br> - Multiply and divide numbers mentally drawing upon known facts. <br> - 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. <br> - Multiply and divide whole numbers and those involving decimals by 10,100 and 1000. <br> - Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3). <br> - Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. <br> - Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. <br> - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. | - Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication. <br> - 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. <br> - Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context. <br> - Perform mental calculations, including with mixed operations and large numbers. <br> - Identify common factors, common multiples and prime numbers. <br> - Use knowledge of the order of operations to carry out calculations involving the four operations. |

