|  | Reception | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
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| Multiplication and Division: Recall, Represent, Use |  |  | Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers <br> Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot | Recall and use multiplication and division facts for the 3,4 and 8 multiplication tables | Recall multiplication and division facts for the 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 | 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 (non prime) numbers <br> Establish whether a number up to 100 is prime and recall prime numbers up to 19 <br> Recognise and use square numbers and cube numbers, and the notation squared ( ${ }^{2}$ ) and cubed ${ }^{3}$ | Identify common factors, common multiples and prime numbers <br> Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |
| Multiplication and Division: Calculations |  |  | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division ( $\div$ ) and equals (=) signs | 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 | Multiply two-digit and three-digit by one-digit numbers using formal written layout | Multiply numbers up to four-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 on known facts Divide numbers up to four digits by a one-digit number using the formal written method of short division and interpret remainders | 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 four digits by a two-digit whole number using the formal written method of long division, and interpret remainders as |


|  |  |  |  |  |  | appropriately for the context <br> Multiply and divide whole numbers and those involving decimals by 10,100 and 1,000 | whole number remainders, fractions or by rounding, as appropriate for the context <br> Divide numbers up to four digits by a <br> 2-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 |
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| Multiplication and Division: Solve Problems |  | Solve one-step problems involving multiplication and division; by calculating the answer using concrete objects, pictorial representation, and arrays with the support of the teacher | Solve one-step problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in context | Solve problems including missing number problems, involving multiband division, including positive integer scaling problems and correspondence problems in which $n$ objects are connected to m objects | Solve multiplication and division problems 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 |  |  |

