Multiply and Divide

	Years 1 and 2	Years 3 and 4	Years 5 and 6
Complexity	- Solve one-step (two-step at greater depth) problems involving multiplication and division.	- Solve problems involving multiplying and dividing, 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)	- Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. - Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. - Use knowledge of the order of operations to carry out calculations involving the four operations.
Methods	- Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs.	- Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. - Use place value, known and derived facts to multiply and divide mentally, including:	- Multiply multi-digit numbers 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 a two-digit

	- 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 mental methods	multiplying by 0 and 1; dividing by 1; multiplying together three numbers. - Recognise and use factor pairs and commutativity in mental calculations	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. - 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. - Perform mental calculations, including with mixed operations and large numbers.
Checking	- Use known multiplication facts to check the accuracy of calculations	- Recognise and use the inverse relationship between multiplication and division and use this to check calculations and solve missing number problems	- Estimate and use inverse operations and rounding to check answers to a calculation

Using multiplication and division facts	- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables. - Recognise odd and even numbers. - Use multiplication and division facts to solve problems	- Recall multiplication and division facts for multiplication tables up to 12 × 12.	- Identify common factors, common multiples and prime numbers. - Establish whether a number up to 100 is prime and recall prime numbers up to 19. - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. - Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3). - Solve problems involving multiplication and division including using knowledge of factors and multiples, squares and cubes