Progression in Mathematics: Multiplication and Division

		Y1	Y2	Y3	Y4	Y5	Y6
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. • Show that multiplication of two numbers can be done in any order and division of one number by another cannot.	• Recall and use multiplication and division facts for the 3, 4 and 8 tables	• Recall multiplication and division facts for the multiplication tables up to 12 x 12. • 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. • Recognise and use factor pairs and commutativity in mental calculations.	• Identify multiples and factors, including finding actor pairs of a number, and common factors of two numbers. • Know and use the vocabulary of prime numbers, prime factors and composite numbers. • Establish whether a number up to 100 is prime and recall prime numbers up to 19. • Recognise and use square numbers and cube numbers, and the notation for these.	• Identify common factors, common multiples and prime numbers. • Use estimation to check answers and calculations, and determine, in the context of a problem, an appropriate degree of accuracy.
Multiplication and Division: Calculations			• Calculate mathematical statements for multiplication an division within the tables and write them using correct signs	• Write and calculate mathematical statements for multiplication and division using the 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 numbers by one-digit using formal written methods.	• Multiply numbers up to 4 digits by one- or two-digit numbers using formal written methods, including long multiplication. • Multiply and divide numbers mentally using known facts. • Divide numbers up to 4 digits by one-digit using short division and interpret remainders in context. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	• Multiply numbers up to 4 digits by two-digit numbers using long multiplication. • Divide numbers up to 4 digits by two-digits using long division and interpret remainders as fractions, or by rounding in context. • Divide numbers up to 4 digits by two-digits using short division and interpret remainders in context. • Perform mental calculations, including with mixed operations and large numbers.

Progression in Mathematics: Multiplication and Division

		Y1	Y2	Y3	Y4	Y5	Y6
Multiplication and Division: Solve Problems		• Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of an adult.	• Solve one-step problems involving multiplication and division, materials, arrays, repeated addition, mental methods and known facts, including problems in contexts.	• 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.	• Solve problems involving multiplying and adding, including 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 multiplication and division including using their knowledge of factors and multiples, squares and cubes. • Sole problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	• Solve problems involving addition, subtraction, multiplication and division.
Multiplication and Division: Combined Operations						• Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	• Use knowledge of the order of operations to carry out calculations involving the four operations.