Maths Progression of Skills and Knowledge

	KS1		KS2			
	Year 1	Year 2	Year3	Year 4	Year 5	Year 6
Multiplication and Division	Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising even and odd numbers. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication,	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Write and calculation 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.	Recall multiplication and division facts for multiplication facts 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. Multiply two-digit and three-	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. Establish whether a number up to 100 is prime and recall prime numbers up to 19. Recognise and use square numbers and cube numbers	Identify common factors, common multiples and prime numbers. Use estimation and check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. Multiply multi-digit numbers up to 4-digits by a 2-digit number using the formal written method of long multiplication.

		division and equal signs. Solve 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 multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	digit numbers by a one-digit number using formal written methods. 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.	and the notation for both. Multiply numbers up to 4-digits by a 1-digit or 2-digit numbers using a formal written method, including long multiplication for 2-digit numbers. Multiply and divide numbers mentally drawing upon known facts. Divide numbers up to 4-digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context. Multiply and divide whole numbers and those	Divide numbers up to 4-digits by a 2-digit numbers 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 2-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context.

					involving decimals by 10, 100 and 1000. Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	Perform mental calculations, including mixed operations and large numbers. Solve problems involving the four operations. Use their knowledge of the order of operations to carry out calculations involving the four operations.

Ration and Proportion						Solve problems involving the relative sizes of two quantities where missing

						values can be found by using integer multiplication and division facts. Solve problems involving the calculation of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison. Solve problems involving similar shapes where the scale factor is known or can be found. Solve problems involving unequal sharing and grouping using knowledge

						of fractions and multiples.