Multiplication and Division facts					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
count in multiples of twos, fives and tens.	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward. recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	count from 0 in multiples of 4, 8, 50 and 100. recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	count in multiples of 6, 7, 9, 25 and 1 000. recall multiplication and division facts for multiplication tables up to 12 × 12	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.	

Mental Calculation					
	show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	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	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 and divide numbers mentally drawing upon known facts. multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	perform mental calculations, including with mixed operations and large numbers. associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3 /8).
Written Calculation					
	calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) 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	multiply two-digit and three-digit numbers by a onedigit number using formal written layout.	multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers. divide numbers up to 4 digits by a one-digit number using the formal written	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 whole number using the formal written method of

		formal written methods.		method of short division and interpret remainders appropriately for the context	short division where appropriate for the context 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. use written division methods in cases where the answer has up to two decimal places.
PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS					
			recognise and use factor pairs and commutativity.	identify multiples and factors, including finding all factor pairs of a number, and	identify common factors, common multiples and prime numbers.

				common factors of two numbers. know and use the vocabulary of prime numbers, prime factors and composite (non-prime) number. 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 squared (^{2}) and cubed (^{3}).	use common factors to simplify fractions; use common multiples to express fractions in the same denomination. calculate, estimate and compare volume of cubes and cuboids using standard units, including centimetre cubed (cm ^{3}) and cubic metres (m ^{3}), and extending to other units such as mm ^{3} and km ^{3}.
Order of operations					
					use their knowledge of the order of operations to carry out calculations involving the four operations

INVERSE OPERATIONS, ESTIMATING AND CHECKING ANSWERS					
		estimate the answer to a calculation and use inverse operations to check answers	estimate and use inverse operations to check answers to a calculation		use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
PROBLEM SOLVING					
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.	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division 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 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 multiplication and division including using their knowledge of factors and multiples, squares and cubes. solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	solve problems involving addition, subtraction, multiplication and division. solve problems involving similar shapes where the scale factor is known or can be found.

				solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	