Progression in Multiplication and Division:

MULTIPLICATION AND DIVISION FACTS					
Year 1	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
count in multiples of ones, twos, and tens	*count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward*	*count from 0 in multiples of 4, 8, 50 and 100*	*count in multiples of 6, 7, 9, 25 and 1 000*	*count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000*	
recall and use multiplication and division facts for the 1, 2, 10 multiplication tables,	recall and use multiplication and division facts for the 5, 3, 4 multiplication tables, including recognising odd and even numbers	recall and use multiplication and division facts for the 7, 6 and 8 multiplication tables	recall multiplication and division facts for multiplication tables up to 12 × 12, including direct teaching of the 11, 9, 12 times tables	recall division facts for multiplication tables up to 12 × 12, Recall speed / corresponding division facts / facts 12-20x	recall multiplication and division facts for multiplication tables up to 12 × 12, including missing number equations. Recall speed / corresponding division facts / facts 12-20x
MENTAL CALCULATION					
		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	multiply and divide numbers mentally drawing upon known facts	perform mental calculations, including with mixed operations and large numbers
	show that multiplication of two numbers can be done in any order and division of one number by another cannot		recognise and use factor pairs and commutativity in mental calculations	multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	
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 formal written methods	multiply two-digit and three-digit numbers by a one-digit 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	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 one-digit number using the formal written method of short division and interpret remainders appropriately for the context	divide numbers up to 4-digits by a two-digit whole number using the formal written method of 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
PROPERTIES OF NUMBERS: MULTIPLES, FACTORS, PRIMES, SQUARE AND CUBE NUMBERS					
			recognise and use factor pairs and commutativity in mental calculations (repeated)	identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers.	identify common factors, common multiples and prime 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, and the notation for squared (^{2}) and cubed (^{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					
					use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy