

Maths Progression Framework – Multiplication and Division
(Italics – Roseberry added objectives)

Multiplication and Division – Recall, Represent and Use						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Begin to count in multiples of tens.</p> <p><i>To have an awareness of counting in 2s and 5s.</i></p>	<p>Can recall and count in multiples of 2, 5 and 10 and can represent these in a variety of ways with increasing accuracy.</p>	Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	Recall multiplication and division facts for multiplication tables up to 12×12	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
Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. (ELG)	<p>Begins to understand that sharing (multiples of twos, fives and tens) can be shown in a variety of ways. For example: concrete, pictorial and written.</p>	Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	<p>Begins to understand the term derived facts to help mentally multiply and divide simple equations.</p>	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	<p>Use place value, known and derived facts to multiply and divide mentally to help estimate equations which include:</p> <p>2 digits by 1 digit</p> <p>2 digits by 2 digits</p>	Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy
				Recognise and use factor pairs and commutativity in mental calculations	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)	
Multiplication and Division - Calculations						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (\times), division (\div) 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
					Multiply and divide numbers mentally drawing upon known facts	Perform mental calculations, including with mixed operations and large numbers (all four operations)
					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 number using the formal written method of short division where appropriate, interpreting remainders according to 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
					Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	
Multiplication and Division – Solving Problems						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	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 multiplication and division, including scaling by simple fractions and problems involving simple rates.	Solve number and practical problems involving the above objectives
Multiplication and Division – Combined Operations						
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	Solve number and practical problems involving addition, subtraction, multiplication and division
						Use their knowledge of the order of operations to carry out calculations involving the four operations (BIDMAS)

