Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving

Glen Hills Primary School Progression Map
Maths – Multiplication and Division

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving
4+	Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.						
Year 1	To count in multiples of twos, fives and tens. (copied from Number and Place Value)						To 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.

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving
Year 2	To count in steps of 2, 3, and 5 from 0, and in tens from any number, forward or backward. (copied from Number and Place Value) To recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	To show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	To calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs.				To solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving
Year 3	To count from 0 in multiples of 4, 8, 50 and 100 . (copied from Number and Place Value) To recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	To 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. (appears also in Written Methods)	To 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. (appears also in Mental Methods)			To estimate the answer to a calculation and use inverse operations to check answers. (copied from Addition and Subtraction)	To 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.
Year 4	To count in multiples of 6, 7, 9, 25 and 1000. (copied from Number and Place Value) To recall multiplication and division facts for multiplication tables up to 12 × 12	To 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. To recognise and use factor pairs and commutativity in	To multiply two-digit and three-digit numbers by a one-digit number using formal written layout.	To recognise and use factor pairs and commutativity in mental calculations (repeated).		To estimate and use inverse operations to check answers to a calculation . (copied from Addition and Subtraction)	To 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

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving
		mental calculations. (appears also in Properties of Numbers)					objects are connected to m objects.

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving
Year 5	To count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000. (copied from Number and Place Value)	To multiply and divide whole numbers and those involving decimals by 10, 100 and 1000.	To 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. To 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.	To identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. To know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. To establish whether a number up to 100 is prime and recall prime numbers up to 19. To recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3}).			To solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. To solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. To solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving
Year 6		To associate a fraction with division and calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8) (copied from Fractions)	To multiply multi digit numbers up to 4 digits by a two digit whole number using the formal written method of long multiplication. To 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, as appropriate for the context. To use written division methods in	To identify common factors, common multiples and prime numbers. To use common factors to simplify fractions; use common multiples to express fractions in the same denomination. (copied from Fractions) To 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. (copied from Measures)	To use their knowledge of the order of operations to carry out calculations involving the four operations.	To use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy.	To solve problems involving addition, subtraction, multiplication and division. To solve problems involving similar shapes where the scale factor is known or can be found. (copied from Ratio and Proportion)

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving
			cases where the answer has up to two decimal places. (copied from Fractions (including decimals))				

Year	Multiplication and Division Facts	Mental Calculation	Written Calculation	Properties of Numbers: Multiples, Factors, Primes, Square and Cube Numbers	Order of Operations	Inverse Operations, Estimating and Checking Answers	Problem Solving