Danson Primary School Maths Skills Progression: Multiplication and Division

Multiplication and Division							
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication and Division facts	I can explore counting on in steps of 2 from zero	I can *count in multiples of twos, fives and tens to 50* (copied from Number and Place Value)	I can *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)	I can *count from 0 in multiples of 4, 8, 50 and 100* (copied from Number and Place Value) I can recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables I can recall multiplication tables through doubling, by connecting the 2, 4 and 8 multiplication tables	I can *count in multiples of 6, 7, 9, 25 and 1 000* (copied from Number and Place Value) I can recall multiplication and division facts for multiplication tables up to 12 × 12	I can *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)	
Mental calculation		I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	I can recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers	I can 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) I can recognise and use factor pairs and commutativity in	I can 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	I can multiply and divide numbers mentally drawing upon known facts I can multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	I can perform mental calculations, including with mixed operations and large numbers I can *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)

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				mental calculations (appears also in Properties of Numbers)			
Written calculations	I can solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups. I can solve practical problems that involve grouping and sharing.	I can 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	I can calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs I can show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot	I can 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)	I can multiply two-digit and three-digit numbers by a one-digit number using formal written layout	I can 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 I can 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	I can multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication I can 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 I can *use written division methods in cases where the answer has up to two decimal places* (copied from Fractions (including decimals
Properties of number					I can recognise and use factor pairs and commutativity in mental calculations (repeated)	I can identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. I know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers I can establish whether a number up to 100 is prime and recall prime numbers up to 19 I can recognise and use square numbers and	I can identify common factors, common multiples and prime numbers *I can use common factors to simplify fractions; use common multiples to express fractions in the same denomination* (copied from Fractions) *I can 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)

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						cube numbers, and the notation for squared (^{2}) and cubed (^{3})	
Inverse operations				*I can estimate the answer to a calculation and use inverse operations to check answers* (copied from Addition and Subtraction)	*I can estimate and use inverse operations to check answers to a calculation* (copied from Addition and Subtraction)		I can use estimation to check answers to calculations and determine, in the context of a problem, levels of accuracy
Problem solving		I can 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	I can solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	I can 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	I can 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	I can solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes I can solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	I can solve problems involving addition, subtraction, multiplication and division I can *solve problems involving similar shapes where the scale factor is known or can be found* (copied from Ratio and Proportion)