Marshfield CE VC Primary School

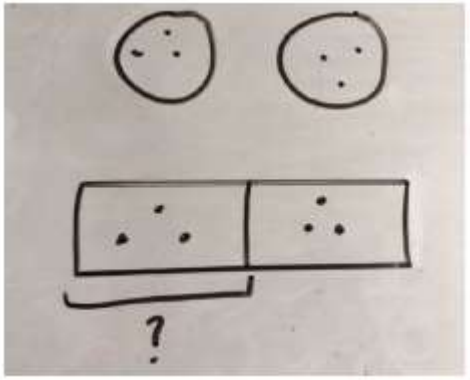
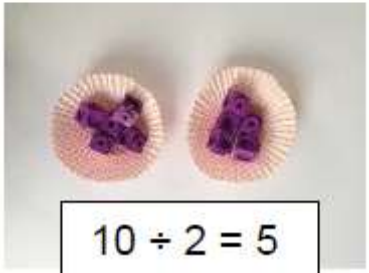
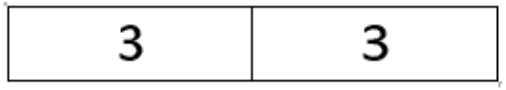
Learning together, inspiring each other, achieving our best

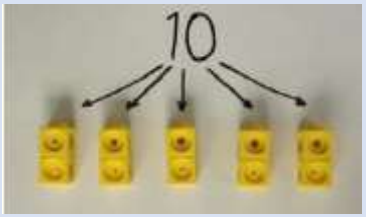
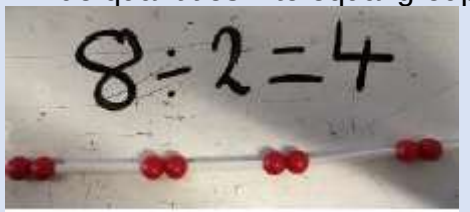
Division

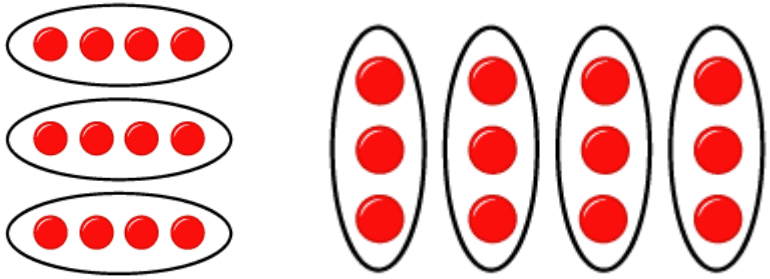
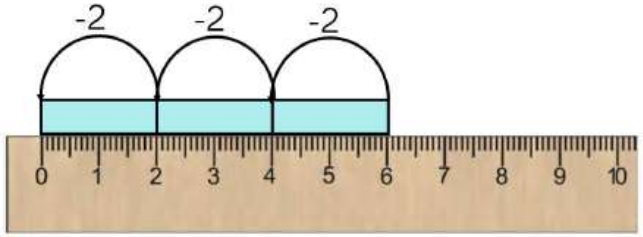
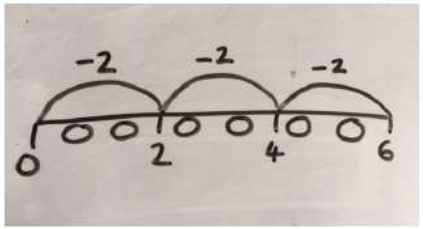
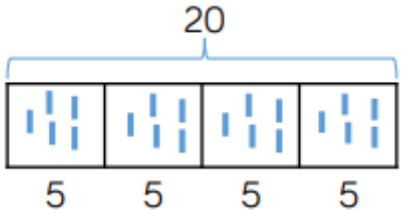
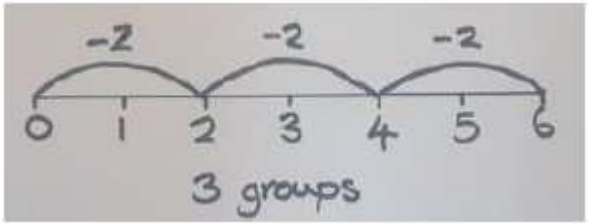
National Curriculum Objectives by Year Group

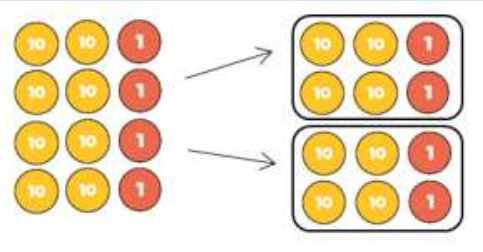
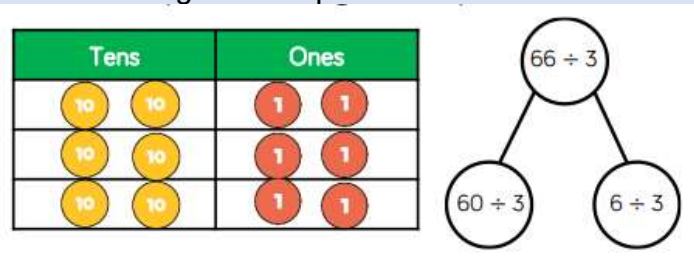
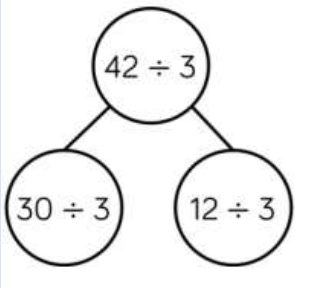
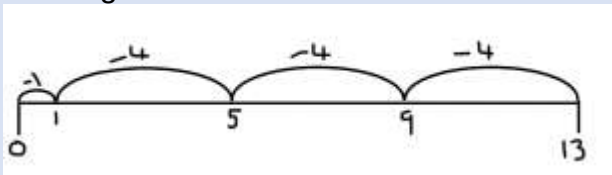
Year Group	Multiplication
EYFS	• **ELG:** solve problems, including doubling, halving and sharing. • **Exceeding:** solve practical problems that involve combining groups of 2, 5 or 10, or sharing into equal groups
Year 1	• Solve one-step problems involving division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.
Year 2	• Recall and use division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers • Calculate mathematical statements for division within the multiplication tables and write them using the division (÷) and equals (=) signs • Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • Solve problems involving division, using materials, arrays, repeated addition, mental methods, and division facts, including problems in contexts.
Year 3	• Recall and use division facts for the 3, 4 and 8 multiplication tables • Write and calculate mathematical statements for division using the multiplication tables that they know, using mental and progressing to formal written methods • Solve problems, including missing number problems, involving division.
Year 4	• Recall division facts for multiplication tables up to 12 × 12 • Use place value, known and derived facts to divide mentally, including dividing by 1 • Recognise and use factor pairs and commutativity in mental calculations
Year 5	• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two 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 • Divide numbers mentally drawing upon known facts • 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 whole numbers and those involving decimals by 10, 100 and 1000 • Solve problems involving division including using their knowledge of factors and multiples, squares and cubes • Solve problems involving division and a combination of these, including understanding the meaning of the equals sign • Solve problems involving division, including scaling by simple fractions and problems involving simple rates.
Year 6	• 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

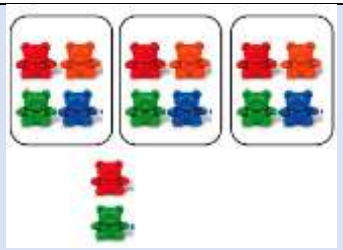
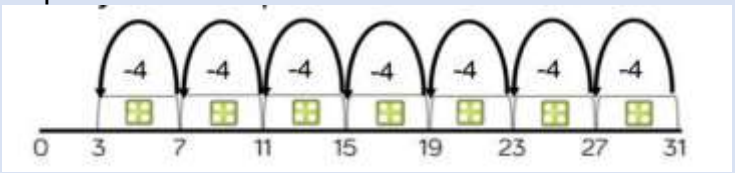
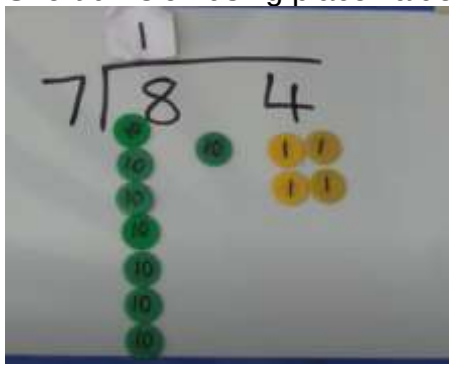
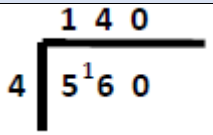
	• Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context • Perform mental calculations, including with mixed operations and large numbers • Identify common factors, common multiples and prime numbers • Use their knowledge of the order of operations to carry out calculations involving the four operations • Solve problems involving division • Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

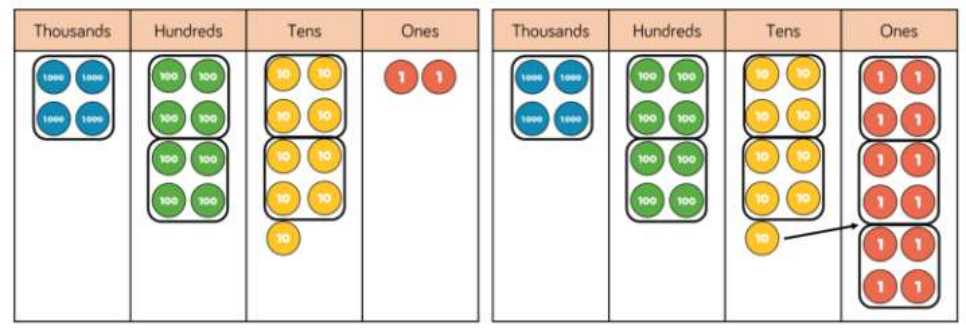
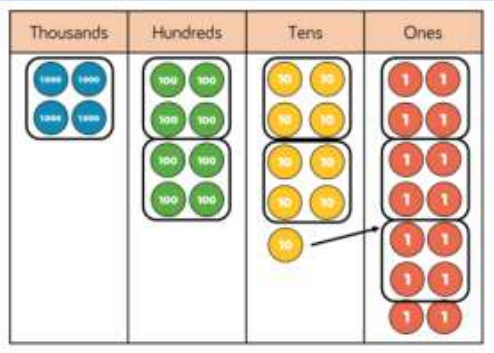
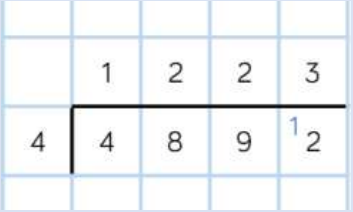
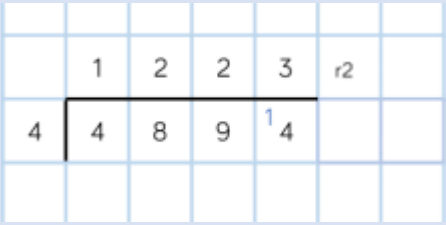
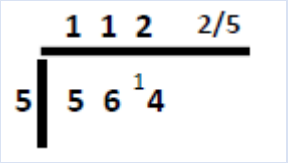
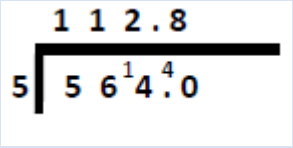
Year Group	Possible Concrete and Visual Representations	Children's Recording	Vocabulary
EYFS	Sharing objects:    Halving: 	Share 9 buns between three people. 9 ÷ 3 = 3 Bar models: 6 ÷ 2 = 3  	half of halving share between sharing equal groups sets **count in twos , fives and tens (Exceeding)**

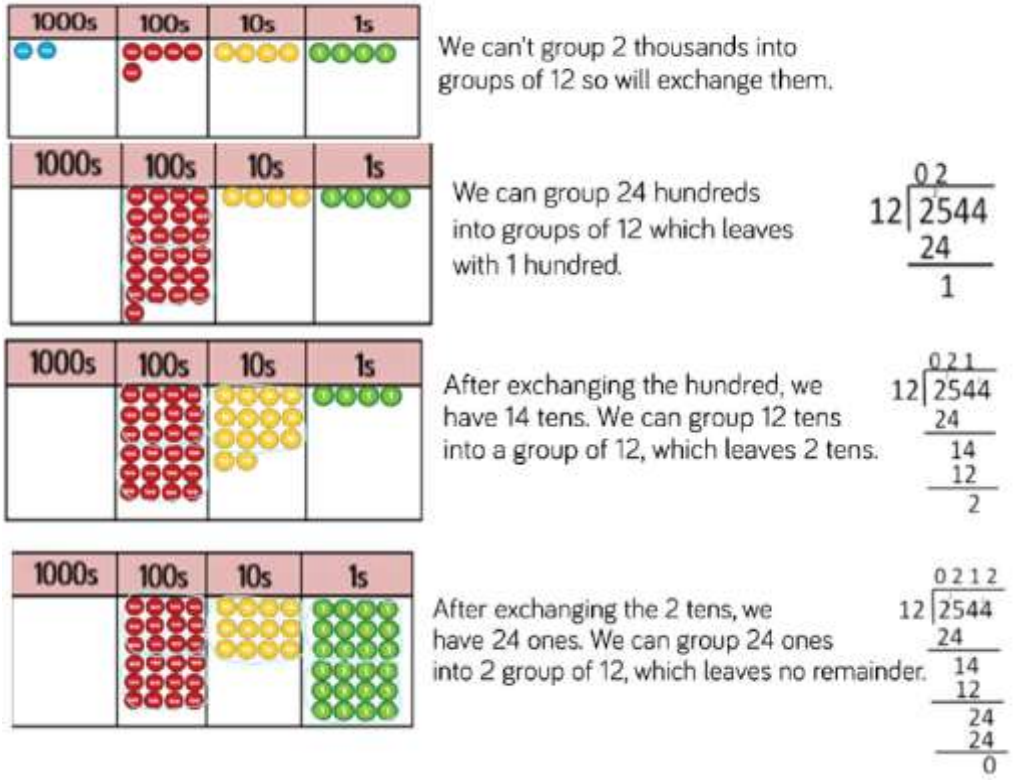
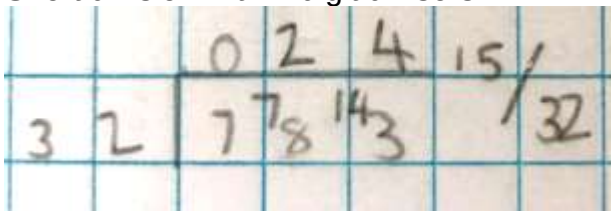
Year 1	Division as grouping: 10 ÷ 5  Divide quantities into equal groups:  	Record as number sentences using ÷ and = 8 ÷ 4 = 2 “Eight divided into four equal groups = two in each group”		share into division dividing grouping count back unequal equal

Year 2	Arrays: 12 ÷ 3 = 4 or 12 ÷ 4 = 3  Repeated subtraction (using Cuisenaire rods above a ruler)   Bar modelling: 	Repeated subtraction:  Record calculations using ÷ and = symbols.	array row column fact family inverse divide, divided by, divided into left, left over repeated subtraction

Year 3	Partitioning to divide 2-digit numbers: 84 ÷ 2 =  Place value grids and part-whole models:  Partitioning in different ways to divide numbers:  Division with remainders: How many squares can we make from 13 matchsticks? 	Dividing with remainders:  Written method (after partitioning): 42 ÷ 3 42 = 30 + 12 30 ÷ 3 = 10 12 ÷ 3 = 4 10 + 4 = 14 Division with remainders: 29 ÷ 8 = 3r5	missing number times table remainder partition fact family inverse operation empty box

	 Repeated subtraction with remainders: 		
Year 4	Dividing whole numbers by powers of 10:  Physically move counters to right on place value grid. Short division using place value counters: 		quotient divisor dividend factors

Year 5	Short division: Place value counters: 4892 ÷ 4  Short division with remainders:  	Short division:  With remainders:  With remainder as a fraction  With remainder as a decimal  	compact short scale down test of divisibility

Year 6	Dividing decimals by powers of 10:  Physically move counters to right on place value grid. Long division:  02 12 | 2544 24 1 021 12 | 2544 24 14 12 2 0212 12 | 2544 24 14 12 24 24 0	Long division: Multiples of 12: 12 × 1 = 12 12 × 2 = 24 12 × 3 = 36 12 × 4 = 48 12 × 5 = 60 12 × 6 = 72 12 × 7 = 84 12 × 8 = 96 12 × 7 = 108 12 × 10 = 120 (×30) (×6) Short division with 2-digit divisors: 	brackets balance order of operations precedence