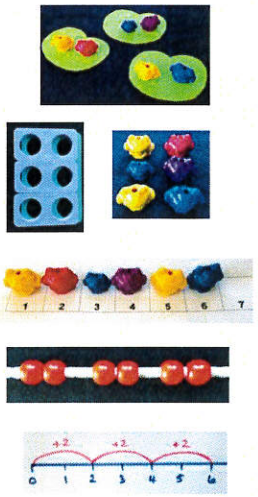
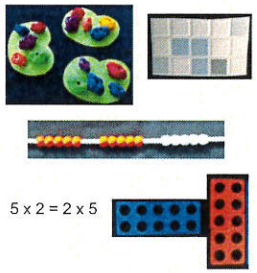
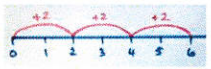
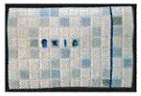
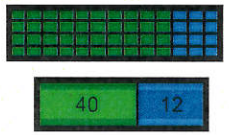
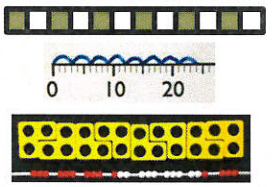
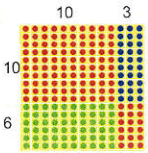
Multiplication

Written Methods		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 ÷ using the x tables they know progressing to formal written methods.	Multiply two-digit and three-digit numbers by a one-digit number using formal written layout 243 x 6 = 1458 (1)	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 243 x 36 = 1458 + 7290 = 8748 (1)	Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication 5172 x 38 = 41376 + 155160 = 196536 (1)
Developing conceptual understanding	2 frogs on each lily pad. 	5 frogs on each lily pad 5 x 3 = 15  5 x 2 = 2 x 5 Build tables on counting stick  Link to repeated addition 	If I know 10 x 8 = 80 then ...  So 13 x 4 = 10 x 4 + 3 x 4  Build tables on counting stick 	 40 x 6 = 240 3 x 6 = 18 43 x 6 = 258 If I know 4 x 6 = 24 then 40 x 6 is ten times bigger, 40 x 60 is one hundred times bigger. 13 x 16 by partitioning  100 + 30 + 60 + 18 = 208 Build tables on counting stick  Introduce the Ladder Method in the Summer Term of Year 4.	Ladder method 243 x 6 18 (3 x 6) 240 (40 x 6) 1200 (200 x 6) 1458	5172 x 38 = 41376 + 155160 = 196536 (1) 2 151 5172 x 38 = 41376 + 155160 = 196536 (1) 5172 x 38 = 41376 (151) + 155160 (2) = 196536 (1)
With jottings **... or in your head ....**	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	Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	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 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 Recognise and use factor pairs and commutativity in mental calculations	Multiply and divide numbers mentally drawing upon known facts Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers establish whether a number up to 100 is prime	Perform mental calculations, including with mixed operations and large numbers
Just know it!	Count in multiples of twos, fives and tens	Recall and use x and ÷ facts for the 2, 5 and 10 x tables, including recognising odd and even numbers.	Recall and use x and ÷ facts for the 3, 4 and 8 times tables.	Recall x and ÷ facts for x tables up to 12 x 12.	Recall prime numbers up to 19 know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers Recognise and use square numbers and cube numbers, and the notation for squared (^{2}) and cubed (^{3})	

Year	1	2	3	4	5	6
Foundations	Count in 2s	2 x table	Review 2x, 5x and 10x	4x, 8x tables 10 times bigger	4x, 8x tables 100, 1000 times bigger	Multiplication facts up to 12 x 12
	Count in 10s	10 x table	4x table	3x, 6x and 12x tables	3x, 6x and 12x tables 10, 100, 1000 times smaller	Partition to multiply mentally
	Doubles up to 10	Doubles up to 20 and multiples of 5	Double two digit numbers	Double larger numbers and decimals	Double larger numbers and decimals	Double larger numbers and decimals
	Count in 5s	5 x table	8 x table	3x, 9x tables	3x, 9x tables	Multiplication facts up to 12 x 12
	Double multiples of 10	Count in 3s	3 x table	11x, 7 x tables	11x , 7 x tables Partition to multiply mentally	Partition to multiply mentally
	Count in 2s, 5s and 10s	2 x, 5 x and 10 x tables	6 x table or review others	6x, 12 x tables	6x, 12 x tables	Double larger numbers and decimals