



	Nursery	Reception	Year 1	Year 2	Year 3	Year 4
White Rose Maths Small Steps		<i>Foundational concepts of number to support development of calculation and numerical reasoning</i> -Doubles – explore how numbers can be made with 2 equal parts. <u>Sharing and grouping:</u> -Explore sharing -Sharing -Explore grouping -Grouping -Even and odd sharing -Play with and build doubles	-Count in 2s -Count in 10s -Count in 5s -Recognise equal groups -Add equal groups -Make arrays -Make doubles -Make equal groups - grouping -Make equal groups – sharing	-Recognise equal groups -Make equal groups -Add equal groups -Introduce the multiplication symbol -Multiplication sentences -Use arrays -Make equal groups – grouping -Make equal groups – sharing -The 2 times-table -Divide by 2 -Doubling and halving -Odd and even numbers -The 10 times-table -Divide by 10 -The 5 times-table -Divide by 5 -The 5 and 10 times-tables	<u>Multiplication and Division A:</u> -Multiplication – equal groups -Use arrays -Multiples of 2 -Multiples of 5 and 10 -Sharing and grouping -Multiply by 3 -Divide by 3 -The 3 times-table -Multiply by 4 -Divide by 4 -The 4 times-table -Multiply by 8 -Divide by 8 -The 8 times-table -The 2, 4 and 8 times-tables <u>Multiplication and Division B:</u> -Multiples of 10 -Related calculations -Reasoning about multiplication - Multiply a 2-digit number by a 1-digit number – no exchange - Multiply a 2-digit number by a 1-digit number – with exchange -Link multiplication and division -Divide a 2-digit number by a 1-digit number – no exchange -Divide a 2-digit number by a 1-digit number – flexible partitioning -Divide a 2-digit number by a 1-digit number – with remainders -Scaling -How many ways?	<u>Multiplication and Division A:</u> -Multiples of 3 -Multiply and divide by 6 -6 times-table and division facts -The 3,6 and 9 times-tables -Multiply and divide by 7 -7 times-table and division facts -11 times-table and division facts -12 times-table and division facts -Multiply by 1 and 0 -Divide a number by 1 and itself -Multiply 3 numbers <u>Multiplication and Division B:</u> -Factor pairs -Use factor pairs -Multiply by 10 -Multiply by 100 -Divide by 10 -Divide by 100 -Related facts-multiplication and division -Informal written methods for multiplication -Multiply a 2-digit number by a 1-digit number -Multiply a 3-digit number by a 1-digit number -Divide a 2-digit number by a 1-digit number -Divide a 3-digit number by a 1-digit number -Correspondence problems -Efficient multiplication
National Curriculum Links		<u>Early Learning Goal: Numerical Patterns</u> -Explore and represent patterns within numbers up to	-Count in multiples of twos, fives and tens. -Solve one step problems involving	-Recall and use multiplication and division facts for the 2-, 5- and 10-times tables, including recognising odd and even numbers.	-Count from 0 in multiples of 4, 8, 50 and 100. -Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	-Recall and use multiplication and division facts for multiplication tables up to 12 × 12. -Count in multiples of 6, 7, 9, 25 and 1000.



		10, including evens and odds, double facts and how quantities can be distributed equally.	multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	-Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ($\times$), division ($\div$) and equals ($=$) signs. -Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. -Show that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	-Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods. -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 objectives	-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 two-digit and three-digit numbers by a one-digit number using formal written layout -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.
Vocabulary		double, equal groups, even, fair, grouping, groups, odd, pair, sharing, unequal, groups	array, divide, repeated, addition	divide, even, half, lots of, multiply, odd, twice, times times-table,	commutative, inverse, multiple, product, remainder, scaling	factor, factor pair, inverse, triple, efficient, dividend, divisor, quotient