



	Nursery	Reception	Year 1	Year 2	Year 3	Year 4
White Rose Maths Small Steps/ Mastering Number in Reception	<i>Foundational concepts for calculation and numerical reasoning</i> Through number objectives including: -Comparison 1, 2 and 3 -Counting 1, 2, 3, 4, 5 and 6 -Subitising 1, 2, 3, 4, 5 and 6 The focus is on children beginning to have an understanding of numbers to 5 through noticing and representing small quantities, perceptual subitising and counting.	<i>Foundational concepts for calculation and numerical reasoning</i> Composition: -Explore how all numbers are made of 1s -Focus on composition of 3 and 4 -Explore the concept of whole and part -Focus on the composition of 3,4 and 5 -Focus on 5 -Focus on 6 and 7 as 5 and a bit -Focus on 7 -Doubles – explore how numbers can be made with 2 equal parts. -Composition – 5 and a bit -Composition of 10 <u>How many now?</u> -Add more -How many did I add? -Take away -How many did I take away?	<u>Within 10</u> -Introduce parts and wholes -Part-whole model -Write number sentences -Fast families – addition facts -Number bonds within 10 -Systematic number bonds within 10 -Number bonds to 10 -Addition -add together -Addition – add more -Addition problems -Find a part -Subtraction- find a part -Fact families – the eight facts -Subtraction – take away/cross out (How many left?) -Subtraction – take away (How many left?) -Subtraction on a number line -Add or subtract 1 or 2 <u>Within 20</u> -Add by counting on within 20 -Add ones using number bonds -Find and make number bonds to 20 -Doubles -Near doubles -Subtract ones using number bonds -Subtraction – counting back -Subtraction – finding the difference -Related facts -Missing number problems	-Bonds to 10 -Fact families – Addition and subtraction bonds within 20 -Related facts -Bonds to 100 (tens) -Add and subtract 1s -Add by making 10 -10 more and 10 less -Add three 1-digit numbers -Add to the next 10 -Subtract across a 10 -Subtract from a 10 -Subtract a 1-digit number from a 2-digit number (across a 10) -10 more, 10 less -Add and subtract 10s -Add two 2-digit numbers (not across a 10) -Add two 2-digit numbers (across a 10) -Subtract two 2-digit numbers (not across a 10) -Subtract two 2-digit numbers (across a 10) -Mixed addition and subtraction -Compare number sentences -Missing number problems	-Apply number bonds within 10 -Add and subtract 1s -Add and subtract 10s -Add and subtract 100s -Spot the pattern -Add 1s across a 10 -Add 10s across a 100 -Subtract 1s across a 10 -Subtract 10s across a 100 -Make connections -Add two numbers (no exchange) -Subtract two numbers (no exchange) -Add two numbers (across a 10) -Add two numbers (across a 100) -Subtract two numbers (across a 10) -Subtract two numbers (across a 100) -Add 2-digit and 3-digit numbers -Subtract a 2-digit number from a 3-digit number -Complements to 100 -Estimate answers -Inverse operations -Make decisions	-Add and subtract 1s, 10s, 100s and 1000s -Add two 4-digit numbers – no exchange -Add two 4-digit numbers – one exchange -Add two 4-digit numbers – more than one exchange -Subtract two 4-digit numbers – no exchange -Subtract two 4-digit numbers – one exchange -Subtract two 4-digit numbers – more than one exchange -Efficient subtraction -Estimate answers -Checking strategies



National Curriculum Links	<u>Development matters</u> <u>3-4 years</u> -Solve read word mathematical problems with numbers up to 5. Compare quantities using language: 'more than', 'fewer than'.	<u>Early Learning Goals (ELG) - Number</u> -Have a deep understanding of numbers to 10, including the composition of each number. -Subitise (recognise quantities without counting) up to 5. -Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. <u>ELG- Numerical Patterns</u> -Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. -Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. <u>Development matters – reception year</u>	-Represent and use number bonds and related subtraction facts within 20. -Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. -Add and subtract one-digit and two-digit numbers to 20, including zero. -Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as $7 = \square - 9$.	-Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100. -Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. -Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods. - Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. -Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	-Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens, a three-digit number and hundreds. -Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. -Estimate the answer to a calculation and use inverse operations to check answers. -Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.	-Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate. -Estimate and use inverse operations to check answers to a calculation. -Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.
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		-Count objects, actions and sounds. Subitise. -Link the number symbol (numeral) with its cardinal number value. -Count beyond ten. -Compare numbers. -Understand the 'one more than/one less than' relationship between consecutive numbers. -Explore the composition of numbers to 10. -Automatically recall number bonds for numbers 0–5 and some to 10.				
Vocabulary		1 less, 1 more, add, add more, altogether, first, left, now, part, take away, whole	addition, add together, subtraction/ subtract, difference, double, efficient, equal to, fact family, greater, group, inverse, less, minus, near double, number bond, plus, symbol, systematic, total, addend, sum	calculation, exchange, method, multiple, one(s), operation, partition, related facts, ten(s), value, increase, decrease,	Column addition, column, subtraction, digit, estimate, exchange, hundred(s), inverse, crossing the 10, crossing the 100	efficient, inverse, round, thousand(s)