

Maths Long Term Plan whole school 2020.21 NP

	Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn first 6 weeks-recovery curriculum Key Curriculum Objectives from previous year	<p>Key Curriculum Objectives from previous year (N) Number, Shape, space and measure.</p> <p>Recites numbers in order to 10.</p> <p>Knows that numbers identify how many objects are in a set.</p> <p>Shows an interest in representing numbers.</p> <p>Shows awareness of similarities of shapes in the environment. (Shape, space and measures)</p> <p>Uses positional language. (Shape, space and measures)</p> <p>Uses shapes appropriately for tasks. (Shape, space and measures)</p> <p>Is beginning to talk about the shapes of everyday objects, e.g. "round" and "tall". (Shape, space and measures)</p>	<p>Key Curriculum Objectives from previous year (Year R):</p> <p>Four operations and number</p> <p>Counts objects to 10, and beginning to count beyond 10.</p> <p>Counts an irregular arrangement of up to ten objects.</p> <p>Uses the language of "more" and "fewer" to compare two sets of objects. (Numbers)</p> <p>Finds the total number of items in two groups by counting all of them.</p> <p>Says the number that is one more than a given number.</p> <p>Finds one more or one less from a group of up to five objects, then ten objects.</p> <p>Counts reliably with numbers from 1 to 20, places them in order and says which number is one more or one less than a given number (ELG).</p> <p>Adds and subtracts, using quantities and objects, 2 single-digit numbers, and counts on or back to find the answer (ELG). (Numbers)</p> <p>Solves problems, including doubling, halving and sharing (ELG). (Numbers)</p>	<p>Key Curriculum Objectives from previous year (Year 1):</p> <p>Four operations and number</p> <p>Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.</p> <p>Count and write numbers to 100 in numerals</p> <p>Count in multiples of twos, fives and tens from 0</p> <p>Identify one more and one less of a given number</p> <p>Read and write numbers from 1 to 20 in numerals. (Number and Place Value)</p> <p>Count in twos, fives and tens to solve problems e.g. count the number of chairs in a diagram when the chairs are organised in 7 rows of 5 by counting in fives</p> <p>Partition and combine numbers using apparatus if required e.g. partition 76 into tens and ones; combine 6 tens and 4 ones.</p> <p>Write mathematical statements involving addition (+), subtraction (-) and equals (=) signs. Demonstrate an understanding of the commutative law (e.g. $3 + 2 = 5$, therefore $2 + 3 = 5$)</p> <p>Demonstrate an understanding of inverse relationships involving addition and subtraction (e.g. if $3 + 2 = 5$, then $5 - 2 = 3$).</p> <p>Recall at least four of the six number bonds for 10 and reason about associated facts (e.g. $6 + 4 = 10$, therefore $4 + 6 = 10$ and $10 - 6 = 4$). Represent and use number bonds within 20</p> <p>Represent and use subtraction facts within 20.</p> <p>Add one-digit and two-digit numbers to 20, including zero.</p> <p>Subtract one-digit and two-digit numbers to 20, including zero.</p> <p>Solve one-step problems involving multiplication by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. Solve one-step problems involving</p>	<p>Key Curriculum Objectives from previous year (Year 2):</p> <p>Four operations and number</p> <p>Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward</p> <p>Recognise the place value of each digit in a two digit number (tens, ones).</p> <p>Compare and order numbers from 0 up to 100; use and = signs Use place value and number facts to solve problems.</p> <p>Partition two-digit numbers into different combinations of tens and ones Use reasoning about numbers and relationships to solve more complex problems</p> <p>Recall the multiples of 10 below and above any given 2 digit number Solve problems with addition and subtraction using CPA representations, including those involving numbers, quantities and measures</p> <p>Solve problems with addition and subtraction applying knowledge of written methods and mental methods where regrouping may be required Recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships</p> <p>Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. Add and subtract numbers where no regrouping is required, using CPA representations, and mentally, including a two digit number and ones.</p> <p>Add and subtract numbers</p>	<p>Key Curriculum Objectives from previous year (Year 3):</p> <p>Four operations and number</p> <p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. Recognise the place value of each digit in a three-digit number (hundreds, tens, ones).</p> <p>Compare and order numbers up to 1000. Read and write numbers up to 1000 in words.</p> <p>Solve number problems and practical problems involving these ideas. Add and subtract numbers mentally, including a three-digit number and ones.</p> <p>Add numbers with up to three digits using the formal method of columnar addition.</p> <p>Add and subtract numbers mentally, including a three-digit number and tens. Subtract numbers with up to three digits using the formal method of columnar subtraction Add and subtract numbers mentally, including a three-digit number and hundreds.</p> <p>Estimate the answer to a calculation and use inverse operations to check answers.</p> <p>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.</p> <p>Write and calculate mathematical statements for multiplication and division using the multiplication tables that he/she knows, including for two digit numbers times one-digit numbers, using mental and progressing to formal written methods</p> <p>Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and</p>	<p>Key Curriculum Objectives from previous year (Year 4):</p> <p>Four operations and number</p> <p>Count in multiples of 6, 7, 9, 25 and 1000. Find 1000 more or less than a given number.</p> <p>Count backwards through zero to include negative numbers.</p> <p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones).</p> <p>Order and compare numbers beyond 1000. Identify, represent and estimate numbers using different representations including measures</p> <p>Round any number to the nearest 10, 100 or 1000.</p> <p>Solve number and practical problems that involve all of the above and with increasingly large positive numbers.</p> <p>Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value Add numbers with up to four digits using the formal method of columnar addition.</p> <p>Subtract numbers with up to four digits using the formal method of columnar subtraction</p> <p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.</p> <p>Recall multiplication and division facts for multiplication tables up to 12×12.</p> <p>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.</p> <p>Multiply two-digit and three-digit numbers by a one-digit number using formal written layout, 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.</p>	<p>Key Curriculum Objectives from previous year (Year 5):</p> <p>Four operations and number</p> <p>Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit Find the difference between the largest and smallest whole numbers that can be made from using three digits. Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000.</p> <p>Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero.) Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000. Solve number problems and practical problems that involve ordering and comparing numbers to 1 000 000, counting forwards or backwards in steps, interpreting negative numbers and rounding.</p> <p>Read Roman numerals to 1000 (M) and recognise years written in Roman numerals. Add and subtract whole numbers with more than 4 digits, including using formal written methods</p> <p>Add and subtract numbers mentally with increasingly large numbers Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy.</p> <p>Solve addition and subtraction multistep problems in contexts, deciding which operations and methods to use and why identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers. (</p> <p>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. Multiply numbers up to 4 digits by a one- or two-digit number using a</p>

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			division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.	using concrete objects, pictorial representations, and mentally, including a two-digit number and tens. Add and subtract numbers using CPA representations, and mentally, including adding three one-digit numbers. Show that addition of two numbers can be done in any order 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. Recall doubles and halves to 20. Solve missing number problems using addition and subtraction	correspondence problems in which n objects are connected to m objects.		formal written method, including long multiplication for two-digit numbers. Multiply and divide numbers 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. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. Recognise and use square numbers and the notation for squared (2). Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes. Recognise and use cube numbers and the notation for cubed (3).
Autumn 1	<p><u>Number Blocks</u> Recovery Curriculum 1:1 correspondence Cardinality Counts an irregular arrangement of up to ten objects Adding one more and taking one away. Counting to 10 and back. Identifying numerals 1-10. Matching numeral to quantity. Comparing two groups of objects identifying when they have 1 more or less or the same amount. Taking a whole number, breaking it into two parts to then make it a whole number.</p>	-Place value (within 10) -Addition & Subtraction (within 10)	Number: Place Value Number: Addition & subtraction	-Number: Place value -Number: Addition & subtraction	Number: -Place value Number: Addition & subtraction	-Number: Place value -Number Addition & subtraction - -Statistics	-Number: Place Value -Number: Addition, subtraction, Number: multiplication & division
Autumn 2	<p><u>Number</u>: Number formation & recording these numerals_1-10 Counting to 20 and back Adding and subtracting 2 single</p>	Addition subtraction (within 20) Geometry Place Value (within 20)	Number: Addition & subtraction Measurement: Money Number: Multiplication and division	Number: Addition & subtraction Number: Multiplication and division.	Measurement: Length and Perimeter Number: Multiplication and Division	Number: Multiplication & division Measurement: Perimeter and area	Number: Fractions Geometry: Position and direction SATS preparation

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	digit groups of objects .Number bonds. Estimating. <u>Patterns:</u> To make and identify a pattern & make a repeated pattern. <u>2 D & 3 D shapes:</u> Identifying a shape by describing its unique characteristics. <u>Positional Language:</u> To know & describe where they have placed the shape.		Consolidation				
Spring 1	<u>Measure:</u> Height - To measure from the base of the object to the top. To order three items by height. <u>Length</u> - To measure from the beginning to the end. To order three items by length. <u>Distance</u> – to measure from the start to the finish using non-standard forms of measuring.	Consolidation Number: Addition and subtraction (within 20) Number: Place value (within 50)	Number: Multiplication and division Statistics	-Number: Multiplication & division -Measurement: Money Statistic	Number: Multiplication and Division Measurement: Area Number: Fractions	Number: Multiplication & division Number: Fractions	Number: Decimals Number: Percentages Number: Algebra SATS preparation
Spring 2	<u>Number:</u> To count in 2's, 5's & 10's <u>Money:</u> To use everyday language related to money. Identify the difference between how a 1p, 2p, 5p, 10p, 20p, 50p, £1.00 & £2.00 look like. Counting with 1p, 2p, 5p & 10p coins. Choosing coins to match the <u>Time:</u> Use everyday language related to time.	Measurement: Length and height Measurement: weight and volume Consolidation	Geometry: Properties of shapes Number: Fractions	Measurement: Length and Perimeter Number: Fractions Consolidation	Number: Fractions Number: Decimals Consolidation	Number: Fractions Number: Decimals and percentages Consolidation	Measurement: Converting units Measurement: Perimeter, Area and Volume Number: Ratio Statistics SATS preparation
Summer 1	<u>Capacity</u> Full, empty, nearly full, and nearly empty. Order two items by capacity. Which has more which has less. <u>Weight</u> Practice weighing items on scales.	Consolidation Number: Multiplication and division Number: Fractions Geometry: Position and direction	Measurement: Length and Height. Geometry: Position and direction Consolidation and problem solving.	-Number: Fractions Measurement: Time	Number: Decimals Measurement: Money Measurement: Time	Consolidation Number: Decimals Geometry: Properties of shape	Geometry: Properties of Shape Consolidation and SATs preparation

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	To order two items by weight. Which is heavier or lighter/ heaviest or lightest						
Summer 2	<p><u>Number:</u> Identify own mathematical problems based on own interests and fascinations. Doubling / halving / sharing. Review areas that need further consolidation.</p>	<p>Number: Place Value (within 100) Measurement: Money Measurement: Time</p>	<p>Measurement: Time Measurement: Mass, Capacity and Temperature Consolidation</p>	<p>Geometry: Properties of Shape Measurement: Mass and Capacity Consolidation</p>	<p>Statistics Geometry: Properties of shape Geometry: Position and direction Consolidation</p>	<p>Geometry: Position and direction Measurement: converting units Measurement: Volume</p>	<p>Consolidation, investigations and preparations for KS3</p>