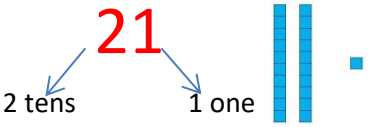
By the end of year 2, children will solve problems with one or a small number of simple steps. Children will discuss their understanding and begin to explain their thinking using appropriate mathematical vocabulary, hands-on resources and different ways of recording. They will begin to show more exploration by asking simple questions relevant to the problem and begin to suggest ways of solving them.

Number - Counting and understanding numbers

Children will develop their understanding of place value of numbers to at least 100 and apply this when ordering and comparing numbers. Children will count fluently forwards and backwards up to and beyond 100 and will be able to count in multiples of 2, 3, 5 and 10. They will also be able to count in tens from any given number. They will use hands-on resources to help them understand and apply their knowledge of place value in two digit numbers, representing the numbers in a variety of different ways.

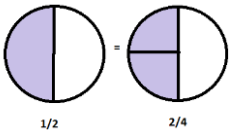


Number-Calculating

Children learn that addition and multiplication number sentences can be re-ordered and the answer remains the same (commutativity) such as 9+5+1= 5+1+9. They learn that this is not the case with subtraction and division. They solve a variety of problems using mental and written calculations for +, -, x, ÷ in practical contexts. These methods will include partitioning which is where the number is broken up into more manageable parts (e.g. 64 = 60 + 4 or 50 + 14), re-ordering (e.g. moving the larger number to the beginning of the number sentence when adding several small numbers) and using a number line. Children will know and be able to recall the 2, 5 and 10 times tables, as well as the matching division facts (4 x 5 = 20, 20 ÷ 5 = 4). They apply their knowledge of addition and subtraction facts to 20 and can use these to work out facts up to 100.

Number- Fractions

Children will develop their understanding of fractions and link it to division. They explore this concept using pictures, images and hands-on resources. They will solve problems involving fractions (e.g. find 1/3 of the hexagon or ¼ of the marbles) and record what they have done. They will understand that some have the same value (equivalent) e.g. ½ = 2/4.

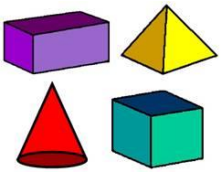


Measurement

Children will estimate, choose, use and compare a variety of measurements for length, mass, temperature, capacity, time and money. By the end of year 2, they will use measuring apparatus such as rulers accurately. They will use their knowledge of measurement to solve problems (e.g. how many ways to make 50p). They extend their understanding of time to tell the time to 15 minutes. Some will begin to understand telling the time in 5 minute intervals. They will know key time related facts (60 minutes in an hour, 24 hours in a day) and relate this to their everyday life.

Geometry

Children will identify, describe, compare and sort common 2-D and 3-D shapes according to their properties (sides, vertices, edges, faces) and apply this knowledge to solve simple problems. They develop their understanding by finding examples of 3-D shapes in the real world and exploring the 2-D shapes that can be found on The faces of the 3d shapes (e.g. a circle is one of the faces on a cylinder). Children begin to describe position, direction and movement in a range of different situations, including understanding rotation (turning through right angles clockwise and anti-clockwise). They use their knowledge of shape in patterns and sequences.



Statistics

Children sort and compare information, communicating findings by asking and answering questions. They will draw simple pictograms, tally charts and tables.

Vocabulary partition, sum, difference, commutative, place value, times, divide, array, inverse, third, three quarters, two quarters, equivalence, cm/m, kg/g, 'c , l/ml, pounds and pence, quarter to/past (time to 5 minutes), symmetry, turns, rotation, right angle, clockwise, anti-clockwise

Village Infants Year 2 Long Term Maths Planning - Number						
	1A	**1B**	**2A**	**2B**	**3A**	**3B**
Counting: In steps of 2,3,5 from 0 Count in 10s from any number forwards and backwards	Count in steps of 2,5, and 10	Count in steps of 2,5, and 10 forwards and backwards	count in steps of 3	count in steps of 3	Count forwards and backwards in steps of 2, 3, 5, and 10	Count forwards and backwards in steps of 2, 3, 5, and 10
Place Value: Recognise place value of 2 digit numbers – 100 Zero as place holder Compare, order numbers using using > < = Number Line – with and without numbers 100 Sq Partitioning method	Recognise the place value of each digit in 2 digit numbers		Adding using partitioning Place numbers on an empty number line	Estimate numbers	Estimate numbers	Estimate numbers
Representing Number: Statements using > < = Read/Write in numerals and words - 100	Compare and order numbers to100 Read and write numbers to 100 in numerals and words Partition numbers in tens and ones, and in different ways	Recognise the place value of each digit emphasising zero as a place holder Use > < =	Compare and order numbers using > < = Read and write numbers for multiples of 10 in numerals and words	Read and write numbers to 100 in numerals and words		
Number Facts +/- Use NF to solve problems Recall and use NF to 20 fluently, and derive and use related facts to 100 eg 3+7=10, 30+70=100	recall and use + and - facts to 10	recall and use + and - facts to 20 Find and use related facts to 100	recall and use + and - facts to 20 apply to 100	Subtraction facts for 20 and 100	Subtraction facts for 20 and 100	

Addition/Subtraction T-tens, O-ones Add and subtract using concrete/pictorial representations and mentally TO & O TO & T TO & TO O & O& O Recognise commutative law with + but not – Recognise and use the inverse relationship between + and – and use to check calculations and solve missing number problems Partition numbers in different ways eg 23 = 20+3 23 = 10+13 Applying increasing knowledge of mental and written methods. **Problems +/-** Using concrete, pictorial and abstract representations Recognise and use the inverse of + and – and use this to check calculations and solve missing number problems	two digit and 1s two digit and 10s	Use of commutative two 2 digit numbers Solve problems	recognise inverse relationships (+/-) Understand commutativty (+ and not -, and x and not ÷) Use of the partitioning method to add and subtract two 2 digit numbers Begin to use column method	apply increasing knowledge of mental and written methods Range of methods explored including mental, column, partitioning and number line adding 3 numbers	apply increasing knowledge of mental and written methods Range of methods explored including mental, column, partitioning and number line	
Number Facts x/÷ Know tables for 2,5,10 Recall and use number sentences/facts x/÷ for 2,5 and 10 Odd /even numbers		recognise odd and even numbers	2, 5 and 10 times table	2, 5 and 10 times table including ÷ Solve problems	2, 5 and 10 times table Doubles and halves	2,5,10 times tables. 3 times tables. Doubles and halves
Multiplication/Division Calculate mathematical statements for x/÷ Recognise commutative law of x and not ÷ **Problems x/÷** Solve problems using concrete resources, arrays, repeated addition, mental methods, x/÷ facts		simple x ÷ 2,5,10 x tables Halving and doubling (linking 2 x tables)	2,5,10 x tables	2,5,10 x and ÷	recognise inverse relationships (x/÷) 2,3, 5,10 x and ÷	Problem Solving

					Problem Solving	
Recognising Fractions: Recognise, find, name and write fractions for 1/3 1/4 , 2/4, ¾ of a length, shape, set of objects or quantity Know that 2/4 = ½	recognise, find and name fractions of shape	recognise, find and name fractions of a number and length	Fractions and name thirds, two quarters is the same as a half, three quarters	recognise equivalence e.g ½=2/4 fractions of shape and measure e.g. length		

Village Infants	Year 2 Long Term Maths Planning – Shape Space and Measure					
Money: Recognise and use £ / p Combine amounts to make a particular value Use different combinations of coins to make same value Problem solving using +/- include giving change	Recognise coins	Recognise and combine amounts of money	Giving change	Problem Solving	Problem Solving	Problem Solving
Time: Compare and sequence intervals of time Tell and write time to 5 minutes, inc ¼ past/to the hour – draw hands on clock face Know mins/hr and hrs/day	Hour / half past Know mins/hr hrs/day	Hour / half past Quarter past / to Some begin to go to 5 minute intervals	Compare and sequence intervals of time (data handling) 5 minute interval	Hour / half past Quarter past / to Some begin to go to 5 minute intervals	Hour / half past Quarter past / to Some begin to go to 5 minute intervals	
Measures Choose and use appropriate standard units to estimate and measure Length/height [m/cm] Mass [kg/g] Temperature [°C] Capacity [l/ml] Compare and order length, mass, capacity and order using <> =		mass (<,> =)	volume/ capacity l ml, cm ,m (<,> =)	Temperature 'C, Mass g and kg (<,> =)	measure and estimation	measure and estimation
Shape Vertices, edges, faces symmetry **Properties of 2D Shape** Identify and describe the properties of 2D shapes inc number of sides and line of symmetry in a vertical line Compare and sort 2D shapes inc everyday objects **Properties of 3D shapes** Identify 2D shapes/faces on 3D shapes Compare and sort common 3D shapes – inc everyday objects **Angles** Right angles-turns/time	2D shapes	Symmetry	3D shapes	2D Shapes + right angles and turns	3D Shapes, and begin to compare	2D and 3D shapes

Position & Direction Order and arrange combinations of mathematical objects in patterns & sequences Use mathematical vocabulary to describe position, direction and movement inc movement in a straight line Understand the terms clockwise and anti-clockwise Use programmable robots giving directions in right angle turns	Sequence numbers	Sequence shapes		Rotate shapes Clockwise / anti-clockwise Programmable robots-link to coding		
Statistics Construct simple pictograms, tally charts, block diagrams and tables Draw pictograms where one symbol represents multiple represents multiple units Interpret simple pictograms, tally charts, block diagrams and tables in a variety of contexts Ask and answer simple questions by counting the number of objects in a category and sorting the categories by totalling and comparing categorical data	Pictograms Block graphs	Tally chart tables (venn / carroll)	Ask and answer simple questions about statistics Sort categories by totalling and comparing	Sort categories by totalling and comparing	Ask and answer simple questions about statistics Sort categories by totalling and comparing	Ask and answer simple questions about statistics Sort categories by totalling and comparing