Stamshaw Infant School
"Helping stars to shine brightly"

Progression in Maths

University of Chichester Academy Trust

Strand	Early Years	Year 1	Year 2	Year 3
Place Value	**End Points** Match and sort, compare amounts, compare size, Representing 1, 2 and 3, Comparing 1,2 and 3, Composition of 1,2 and 3, circles and triangles, positional language. Representing numbers to 5, 1 more or less. Introducing zero, comparing numbers to 5, Composition of 4 and 5, 6,7 and 8. Counting to 9 and 10, comparing numbers to 10, Deepening understanding, patterns and relationships. **ELG: Have a deep understanding of number to 10, including the composition of each number;** **- Subitise (recognise quantities without counting) up to 5;** **ELG: Verbally count beyond 20, recognising the pattern of the counting system;** **- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;**	**End points** • Sort objects and Count objects. • Count objects from a larger group. • Represent objects. • Recognise numbers as words. • Count on from any number within 10. • Count one more. • Count backwards within 10 including Count one less. • Compare groups by matching. (incorporate Fewer, more, same. Less than, greater than, equal to) • Compare numbers. • Order objects and numbers. Count forwards and backwards and write numbers to 20 in numerals and words. • Numbers from 11 to 20. • Tens and ones. • Count one more and one less. • Compare groups of objects. • Compare numbers. • Order groups of objects. • Order numbers.	**End Points** • Numbers to 20. • Count objects to 100 by making 10s. • Recognise tens and ones. • Use a place value chart. • Partition numbers to 100. • Write numbers to 100 in words. • Flexibly partition to 100. • Write numbers to 100 in expanded form. • 10s on the number line to 100. • 10s and 1s on the number line to 100. • Estimate numbers on a number line. Compare objects. • Compare numbers. • Order objects and numbers. • Count in 2s, 5s & 10s. • Count in 3s.	Recognise the place value of each digit in a 3-digit number (100s, 10s, 1s) Compare and order numbers up to 1,000 Identify, represent and estimate numbers using different representations Read and write numbers up to 1,000 in numerals and in words. Solve number problems and practical problems involving these ideas
	Key vocabulary Number; zero; numbers to 20; count, forwards, backwards; how many, more, fewer, equal, group; order, largest, smallest, less; even, odd	**Key vocabulary** Numbers to 100; place value; digit, integer; symbol; compare; equal to, more, less, greater than, fewer, less than, greatest, smallest; first, second, third…last; ones, tens, partition, exchange; order, largest, smallest, biggest, least, most.	**Key vocabulary** 2-digit; base 10; pattern; sequence; Numbers to one hundred Hundreds Partition, recombine Hundred more/less	
Addition and Subtraction	**End Points** combining 2 amounts, making pairs, bonds to 10, Build numbers beyond 10	**End Points** • Introduce parts and wholes and the part-whole model. • Write number sentences. • Fact families – Addition facts. • Number bonds within 10 -	**End Points** Bonds to 10. • Fact families – Addition and subtraction bonds to 20. • Related facts. • Bonds to 100 (tens). • Add and subtract 1s. • Add by making 10. • Add three 1-digit	Number - addition and subtraction - add and subtract numbers with up to 3 digits, using formal

	Adding more, taking away, compose and decompose. Doubling ELG: **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.**	systematically. • Number bonds to 10. • Addition: Add together. • Addition: Add more (including add 1 or 2 more) • Addition problems. • Find a part. • Subtraction: Find a part. • Fact families – 8 facts. • Subtraction: Take away/ cross out (how many left?). (including subtract 1 or 2) • Take away (how many left?). • Subtraction on a number line. Add by counting on. • Find and make number bonds. • Add by making 10. • Subtraction – Not crossing 10. • Subtraction – Crossing 10 (1). • Subtraction – Crossing 10 (2). • Related Facts. • Compare Number Sentences.	numbers. • Add to the next 10. • Add across a 10. • Subtract across 10. • Subtract from a 10. • Subtract a 1-digit number from a 2-digit number – across a 10. • 10 more and 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.	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
	<u>Key vocabulary</u> One more, one less, altogether, how many are left? Same, different, number bond, part-whole, add, take-away	**Key vocabulary** Number bonds, part, whole; plus; fact family, addition sentence, number sentence; how many more; number line; commutative; addition, more, make, sum, total, add together, altogether; calculation; Inverse equals, is the same as (including equals sign); subtract, , subtraction, take away, minus; difference,between, what is the difference? how many more?, how many less? how much more is?	**Key vocabulary** Bar model; operation, inverse operation; column; exchange; bridge; method;	
Measure	**End Points** compare size, mass and capacity, exploring patterns. Time length and height spatial awareness, patterns	**End Points** Compare lengths and heights. • Measure length (1). • Measure length (2). Introduce weight and mass. • Measure mass. • Compare mass. • Introduce capacity. • Measure capacity. • Compare capacity Recognising coins. • Recognising notes. • Counting in coins. Before and after. • Dates. • Time to the hour. • Time to the half hour. • Writing time. • Comparing time.	**End Points** Recognising coins & notes • Count money – pence. • Count money – pounds (notes and coins). • Count money – notes and coins. • Select money. • Make the same amount. • Compare money. • Find the total. • Find the difference. • Find change. • Two-step problems Measure length (cm). • Measure length (m). • Compare lengths. • Order lengths. • Four operations with lengths. Compare mass. • Measure mass in grams. • Measure mass in kilograms. • Compare capacity. • Millilitres. • Litres. • Temperature.	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) - add and subtract amounts of money to give change, using both £ and p in practical contexts - tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks - estimate and read time with increasing accuracy

			O'clock and half past. • Quarter past and quarter to. • Telling time to 5 minutes. • Minutes in an hour, hours in a day. • Find durations of time. • Compare durations of time.	to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, am/pm, morning, afternoon, noon and midnight - know the number of seconds in a minute and the number of days in each month, year and leap year - compare durations of events [for example, to calculate the time taken by particular events or tasks]
	Key vocabulary Now, before, soon, later, after, next, fastest; time, yesterday, today, tomorrow, day, week, weekend, month, year; Days of the week: Monday, Tuesday, etc. Seasons: spring, summer, autumn, winter; birthday, holiday; Morning, afternoon, evening, night, midnight bedtime, dinner/lunch time, playtime; length, height, breadth, tall, short, long, tallest, shortest, longest, longer/shorter, taller/shorter, wider/narrower, weigh, weight, heavy, heavier, heaviest, light, lighter, lightest, balance	**Key vocabulary** Length, measure, measuring; ruler, cm; mass; balance, scale; volume, full, half full, quarter full, empty; capacity; holds, Container; money; value; coin; note; amount; 1p, 2p, 5p, 10p, 20p, 50p, £1, £2, £5, £10; hour, o'clock, half past, clock, watch, hands; hour, minute, second; before, after next, last now, soon, early, late quick, quicker, quickest, quickly, fast, faster, fastest, slow, slower, slowest, slowly old, older, oldest, new, newer, newest	**Key vocabulary** Change, total; distance; metres; g/kg; ml/l; temperature, thermometer, degrees Celsius, increase, decrease, warmer, colder; quarter past/to, 5 past, 10 past, twenty to etc, start, duration, end, interval, how long…? When did it start /end /finish…?, seconds;	
Multiplication and Division	**End Points** Sharing and grouping, even and odd, **ELG: Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.**	**End Points** Count in 10s. • Make equal groups. • Add equal groups. • Make arrays. • Make doubles. • Make equal groups – grouping. • Make equal groups – sharing.	**End Points** Recognise equal groups. • Make equal groups. • Add equal groups. • Multiplication sentences using the x symbol. • Multiplication sentences from pictures. • Use arrays. • 2 times-table. • 5 times-table. • 10 times-table. • Make equal groups – sharing. • Make equal groups – grouping. • Divide by 2. • Odd and even numbers. • Divide by 5. • Divide by 10.	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 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
	Key vocabulary Double, half, halve, halving, pairs, twice as many, share, equal, unequal, group, left over	**Key vocabulary** How many altogether? How may are there?; groups, groups of, equal groups, unequal groups; row, column, array; number sentence; double, doubles; equal groups of 2, equal groups of 5, equal groups of 10; share, sharing, equally, odd, even,	**Key vocabulary** Times-table; facts; multiples; repeated addition; lots of; of; multiply; multiplied by; times; commutative; twos, fives, tens, threes; array; go into; divide, divide between, division, dividing; grouping, sharing;	

				objects are connected to m objects
Fractions	**End Points**	**End Points** Halving shapes or objects. • Halving a quantity. • Find a quarter of a shape or object. • Find a quarter of a quantity.	**End Points** Make equal parts. • Recognise half. • Find half. • Recognise quarter. • Find a quarter. • Recognise a third. • Find a third. • Unit fractions. • Non-unit fractions. • Equivalence of ½ and $^2/_4$. • Find three quarters. • Count in fractions.	Number - fractions - count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 - recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. - recognise and use fractions as numbers: unit fractions and non - unit fractions with small denominators recognise and show, using diagrams, equivalent fractions with small denominators - add and subtract fractions with the same denominator within one whole, compare and order unit fractions, and fractions with the same denominators solve problems that involve all of the above
	Key vocabulary Half, halve, halving	**Key vocabulary** Whole, parts, equal parts, the same; split; groups; share; equally; quarter; four equal parts One half, two halves A quarter, two quarters	**Key vocabulary** Two quarters, three quarters, one third, two thirds; unit fraction, numerator, denominator, vinculum; equivalence, equivalent.	
Geometry (Position and Direction)	**End Points** Spatial reasoning 1, match, rotate, manipulate, visualize and build. spatial mapping (4), mapping.	**End Points** Describe turns. • Describe Position	**End Points** Describing movement. • Describing turns. • Describing movement and turns. • Making patterns with shapes.	

	Key vocabulary On, next to, over, under, around, through.	**Key vocabulary** Turn, full, half, quarter, three quarter; direction; movement, move; position; left, right, up, down; top, bottom, middle, above, below, between; in front, behind	**Key vocabulary** Direction, forwards, backwards; right angle; rotation, Clockwise, anticlockwise	
Statistics	**End Points**	**End Points**	**End Points** Make tally charts. • Draw pictograms (1-1). • Interpret pictograms (1-1). • Draw pictograms (2, 5 and 10). • Interpret pictograms (2, 5 and 10). • Block diagrams.	- interpret and present data using bar charts, pictograms and tables solve one-step and two-step questions [for example 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables
	Key vocabulary	**Key vocabulary**	**Key vocabulary** Count, tally, tally chart, table; data, represent, sort; pictogram, symbol; block diagram, axis; label, title, scale; most popular, most common, least popular, least common; Venn diagram, Carrol diagram.	
Geometry (Shape)	**End Points** **Shapes with 4 sides** **3D Shapes**	**End Points** Recognise & name 3D shapes. • Sort 3D shapes. • Recognise & name 2D shapes. • Sort 2D shapes. • Patterns with 3D & 2D shapes	**End Points** Recognise 2D and 3D shapes. • Count sides on 2D shapes. • Count vertices on 2D shapes. • Draw 2D shapes. • Lines of symmetry. • Use lines of symmetry to complete shapes. • Sort 2D shapes. • Count faces on 3D shapes. • Count edges on 3D shapes. • Count vertices on 3D shapes. • Sort 3D shapes. • Make patterns with 2D & 3D shapes	Geometry - properties of shapes - draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3- D shapes in different orientations and describe them - recognise angles as a property of shape or a description of a turn identify right angles, recognise that 2 right angles make a half-turn, 3 make three-quarters of a turn and 4 a complete turn; identify whether angles are greater than or less than a right angle
	Key vocabulary Shape, circle, triangle, rectangle, square, side, straight, curved, cylinder, cube, cuboid, cone, sphere, pyramid, face, same, different, pattern.	**Key vocabulary** Polygon, 2D, 3D, group, sort, corner (point, pointed) Face, side, edge Make, build, draw.	**Key vocabulary** Pentagon, hexagon, octagon, quadrilateral; prism; vertices, vertex; rotate; Symmetry, symmetrical, line of symmetry; horizontal, vertical; Fold; pattern, repeating pattern.	

				- identify horizontal and vertical lines and pairs of perpendicular and parallel lines