# Maths Progression Grid

Creswell C of E
Infant and Nursery School

| | F1 | F2 | Y1 | Y2 |
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| **Knowledge** | **Number**<br>Understanding numbers to 5 and recite numbers past 5. Knows that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle).<br>**Position**<br>Describe a familiar route<br>**Shape**<br>Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc.<br>**Pattern**<br>Notice and correct an error in a repeating pattern. | **Number and place value**<br>Have a deep understanding of numbers to 10, including the composition of each number Subitise to 5. Verbally count to 20, recognizing the pattern of the counting system.<br>**Comparing numbers**<br>Compare quantities up to 10 in different contexts, recognizing when one quantity is greater than, less than or the same as the other quantity.<br>**Identifying, representing and estimating numbers**<br>Identify and represent numbers with objects and pictorial representations including introduction to a number line.<br>**Reading and writing numbers**<br>Practise reading and writing numbers from 1 to 10 in numerals and words.<br>**Understanding place value**<br>Have a deep understanding of numbers to 10, including the composition of each number. Verbally count beyond 20, | **Number and place value**<br>Pupils practise counting (1, 2, 3…), ordering (for example, first, second, third…), and to indicate a quantity (for example, 3 apples, 2 centimetres), including solving simple concrete problems, until they are fluent. Pupils begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100, supported by objects and pictorial representations. They practise counting as reciting numbers and counting as enumerating objects, and counting in twos, fives and tens from different multiples to develop their recognition of patterns in the number system (for example, odd and even numbers), including varied and frequent practice through increasingly complex questions. They recognise and create repeating patterns with objects and with shapes.<br>**Number – addition and subtraction**<br>Pupils memorise and reason with number bonds to 10 and 20 in several forms (for example, 9 + 7 = 16; 16 – 7 = 9; 7 = 16 – 9). They should realise the effect of adding or subtracting | **Number and place value**<br>Using materials and a range of representations, pupils practise counting, reading, writing and comparing numbers to at least 100 and solving a variety of related problems to develop fluency. They count in multiples of three to support their later understanding of a third. As they become more confident with numbers up to 100, pupils are introduced to larger numbers to develop further their recognition of patterns within the number system and represent them in different ways, including spatial representations. Pupils should partition numbers in different ways (for example, 23 = 20 + 3 and 23 = 10 + 13) to support subtraction. They become fluent and apply their knowledge of numbers to reason with, discuss and solve problems that emphasise the value of each digit in two-digit numbers. They begin to understand zero as a place holder.<br>**Number – addition and subtraction**<br>Pupils extend their understanding of the language of addition and |

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| | | recognizing the pattern of the counting system.<br>**Addition and subtraction**<br>Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some numbers bonds to 10 including double facts.<br>**Mental calculation**<br>Subitise up to 5 Automatically recall..number bonds up to 5…and some number bonds up to 10 including double facts.<br>**Written methods**<br>Mathematical symbols and numbers.<br>**Multiplication and division**<br>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.<br>**Mental calculations**<br>Solve one-step problems involving multiplication and division, calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher (Objective also shown in Problem Solving).<br>**Number – equations**<br>Have a deep understanding of numbers to 10, including the | zero. This establishes addition and subtraction as related operations. Pupils combine and increase numbers, counting forwards and backwards. They discuss and solve problems in familiar practical contexts, including using quantities. Problems should include the terms: put together, add, altogether, total, take away, distance between, difference between, more than and less than, so that pupils develop the concept of addition and subtraction and are enabled to use these operations flexibly.<br>**Number- multiplication and division**<br>Through grouping and sharing small quantities, pupils begin to understand: multiplication and division; doubling numbers and quantities; and finding simple fractions of objects, numbers and quantities. They make connections between arrays, number patterns, and counting in twos, fives and tens.<br>**Number – fractions**<br>Pupils are taught half and quarter as 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities. For example, they could recognise and find half a length, quantity, set of objects or shape. Pupils connect halves and quarters to the equal sharing and grouping of sets of objects and to measures, as well as recognising and combining halves and quarters as parts of a whole.<br>**Measurement** | subtraction to include sum and difference. Pupils practise addition and subtraction to 20 to become increasingly fluent in deriving facts such as using 3 + 7 = 10; 10 – 7 = 3 and 7 = 10 – 3 to calculate 30 + 70 = 100; 100 – 70 = 30 and 70 = 100 – 30. They check their calculations, including by adding to check subtraction and adding numbers in a different order to check addition (for example, 5 + 2 + 1 = 1 + 5 + 2 = 1 + 2 + 5). This establishes commutativity and associativity of addition. Recording addition and subtraction in columns supports place value and prepares for formal written methods with larger numbers.<br>**Number – multiplication and division**<br>Pupils use a variety of language to describe multiplication and division. Pupils are introduced to the multiplication tables. They practise to become fluent in the 2, 5 and 10 multiplication tables and connect them to each other. They connect the 10 multiplication table to place value, and the 5 multiplication table to the divisions on the clock face. They begin to use other multiplication tables and recall multiplication facts, including using related division facts to perform written and mental calculations. Pupils work with a range of |

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| | | composition of each number Automatically recall number bonds to 5 and some number bonds to 10 including double facts. Explore and represent patterns within numbers to 10, including evens and odds, double facts and how quantities can be distributed equally.<br>**Measurement – comparing and estimating**<br>Compare, describe and solve practical problems for: * lengths and heights [e.g. long/short, longer/shorter, tall/short, double/half] * mass/weight [e.g. heavy/light, heavier than, lighter than] * capacity and volume [e.g. full/empty, more than, less than, half, half full, quarter] * time [e.g. quicker, slower, earlier, later] sequence events in chronological order using language [e.g. before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].<br>**Measurement – measuring and calculating**<br>Measure and begin to record the following: * lengths and heights * mass/weight * capacity and volume * time (hours, minutes, seconds) | The pairs of terms: mass and weight, volume and capacity, are used interchangeably at this stage. Pupils move from using and comparing different types of quantities and measures using non-standard units, including discrete (for example, counting) and continuous (for example, liquid) measurement, to using manageable common standard units. In order to become familiar with standard measures, pupils begin to use measuring tools such as a ruler, weighing scales and containers. Pupils use the language of time, including telling the time throughout the day, first using o'clock and then half past.<br>**Geometry – properties of shape**<br>Pupils handle common 2-D and 3-D shapes, naming these and related everyday objects fluently. They recognise these shapes in different orientations and sizes, and know that rectangles, triangles, cuboids and pyramids are not always similar to each other.<br>**Geometry – position and direction**<br>Pupils use the language of position, direction and motion, including: left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside. Pupils make whole, half, quarter and three-quarter turns in both directions and connect turning | materials and contexts in which multiplication and division relate to grouping and sharing discrete and continuous quantities, to arrays and to repeated addition. They begin to relate these to fractions and measures (for example, 40 ÷ 2 = 20, 20 is a half of 40). They use commutativity and inverse relations to develop multiplicative reasoning (for example, 4 × 5 = 20 and 20 ÷ 5 = 4).<br>**Number – fractions**<br>Pupils use fractions as 'fractions of' discrete and continuous quantities by solving problems using shapes, objects and quantities. They connect unit fractions to equal sharing and grouping, to numbers when they can be calculated, and to measures, finding fractions of lengths, quantities, sets of objects or shapes. They meet 4 3 as the first example of a non-unit fraction. Pupils should count in fractions up to 10, starting from any number and using the 2 1 and 4 2 equivalence on the number line (for example, 1 4 1 , 1 4 2 (or 1 2 1 ), 1 4 3 , 2). This reinforces the concept of fractions as numbers and that they can add up to more than one.<br>**Measurement**<br>Pupils use standard units of measurement with increasing accuracy, using their knowledge of the number system. They use the |

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| | | Recognise and know the value of different denominations of coins and notes.<br>**Measurement – time**<br>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.<br>Recognise and use language relating to dates, including days of the week, weeks, months and years.<br>**Geometry – position, direction and movement**<br>Describe position, direction and movement, including half, quarter and three-quarter turn.<br>**Geometry – pattern**<br>They recognise, create and describe patterns. | clockwise with movement on a clock face. | appropriate language and record using standard abbreviations. Comparing measures includes simple multiples such as 'half as high'; 'twice as wide'. They become fluent in telling the time on analogue clocks and recording it. Pupils become fluent in counting and recognising coins. They read and say amounts of money confidently and use the symbols £ and p accurately, recording pounds and pence separately.<br>**Geometry – properties of shape**<br>Pupils handle and name a wide variety of common 2-D and 3-D shapes including: quadrilaterals and polygons, and cuboids, prisms and cones, and identify the properties of each shape (for example, number of sides, number of faces). Pupils identify, compare and sort shapes on the basis of their properties and use vocabulary precisely, such as sides, edges, vertices and faces. Pupils read and write names for shapes that are appropriate for their word reading and spelling. Pupils draw lines and shapes using a straight edge.<br>**Geometry – position and direction**<br>Pupils should work with patterns of shapes, including those in different orientations. Pupils use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (for example, |

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| | | | | pupils themselves moving in turns, giving instructions to other pupils to do so, and programming robots using instructions given in right angles).<br>**Statistics**<br>Pupils record, interpret, collate, organise and compare information (for example, using many-to-one correspondence in pictograms with simple ratios 2, 5, 10). |
| **Skills** | **Number and place value**<br>Fast recognition of up to 3 objects, without having to count them individually (subitising) Recite numbers past 5 Say one number for each item in order 1,2,3,4,5.<br>**Comparing numbers**<br>Compare quantities using language "more than" "fewer than"<br>**Identifying, representing and estimating numbers**<br>Link numerals and amounts for example, showing the right number of objects to match the numeral, up to 5. Show "finger numbers" up to 5. Knows that the last number said when counting a small set of objects tells you how many there are in total (cardinal principle).<br>**Reading and writing numbers**<br>Link numerals and amounts eg right number of objects to match numeral 5 Experiment | **Number and place value**<br>Count objects, actions and sounds. Subitise Count beyond ten.<br>**Comparing numbers**<br>Compare numbers Understand the one more than/one less than relationship between consecutive numbers.<br>**Identifying, representing and estimating numbers**<br>Link the number symbol with its cardinal number value.<br>**Reading and writing numbers**<br>Link the number symbol with its cardinal value Begin to represent number with own symbols.<br>**Understanding place value**<br>Explore the composition of numbers to 10.<br>**Addition and Subtraction**<br>Explore the composition of numbers to 10 Automatically recall number bonds for numbers 0-10 Begin to understand the operations of | **Number and place value**<br> count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number<br> count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens<br> given a number, identify one more and one less<br> identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least<br> read and write numbers from 1 to 20 in numerals and words.<br>**Number Addition and Subtraction**<br> read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs<br> represent and use number bonds and related subtraction facts within 20<br> add and subtract one-digit and two-digit numbers to 20, including zero | **Number and place value**<br> count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward<br> recognise the place value of each digit in a two-digit number (tens, ones)<br> identify, represent and estimate numbers using different representations, including the number line<br> compare and order numbers from 0 up to 100; use <, > and = signs<br> read and write numbers to at least 100 in numerals and in words<br> use place value and number facts to solve problems.<br>**Number addition and subtraction**<br> solve problems with addition and subtraction:<br> using concrete objects and pictorial representations, including those involving numbers, quantities and measures<br> applying their increasing knowledge of mental and written methods |

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| | with their own symbols and marks as well as numerals.<br>**Mental calculation**<br>Fast recognition of up to 3 objects, without having to count them (subitising)<br>**Written methods**<br>Subitise up to 5 Automatically recall number bonds up to 5…and some number bonds up to 10 including double facts.<br>**Multiplication and division**<br>To learn about sharing between groups of people/toys.<br>**Mental calculation**<br>Automatically recall number bonds for numbers 0- 10.<br>**Written calculation**<br>Experiment with their own symbols and marks as well as numerals.<br>**Number – equations**<br>Experiment with their own symbols and marks as well as numerals Solve real world mathematical problems with numbers up to 5 Talk about and identifies the patterns around them. Eg stripes on clothes, designs on rugs and wallpaper (use informal language) Extend and create ABAB patterns Notice and correct an error in a repeating pattern. | addition and subtraction and use associated vocabulary. Begin to understand mathematical symbols associated with addition and subtraction.<br>**Mental calculation**<br>Subitise Automatically recall number bonds for numbers 0 – 10 To understand and recall doubling facts up to 10.<br>**Written methods**<br>To become familiar with and understand mathematical symbols linked to addition and subtraction. To begin to represent mathematical sentences with appropriate symbols.<br>**Multiplication and division**<br>To be introduced to the concepts of sharing equally and doubling. To understand concept of odd and even numbers.<br>**Mental calculation**<br>Automatically recall …number bonds up to 5…and some number bonds to 10 including double facts.<br>**Written calculation**<br>To begin to represent mathematical statements with appropriate symbols.<br>**Fractions** | ▯ solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9.<br>**Number multiplication and division**<br><br>solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.<br>**Number Fractions**<br>▯ recognise, find and name a half as one of two equal parts of an object, shape or quantity<br>▯ recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.<br>**Measurement**<br>▯ compare, describe and solve practical problems for:<br>▯ lengths and heights [for example, long/short, longer/shorter, tall/short, double/half]<br>▯ mass/weight [for example, heavy/light, heavier than, lighter than]<br>▯ capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]<br>▯ time [for example, quicker, slower, earlier, later]<br>▯ measure and begin to record the following:<br>▯ lengths and heights | ▯ recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100<br>▯ add and subtract numbers using concrete objects, pictorial representations, and mentally, including:<br>▯ a two-digit number and ones<br>▯ a two-digit number and tens<br>▯ two two-digit numbers<br>▯ adding three one-digit numbers<br>▯ show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot<br>▯ recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.<br>**Number multiplication and division**<br>▯ recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers<br>▯ calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs<br>▯ show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot<br>▯ solve problems involving multiplication and division, using |

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| | Begin to describe a sequence of events , real or fictional, using words such as "first" "then".<br>**Measurement – comparing and estimating**<br>Compare quantities using language such as "more" and "fewer" Make comparisons between objects relating to size, length, weight and capacity Investigate measure using appropriate vocabulary Heavy/light/same as/ heavier/lighter/tall/short/ Long/longer/shorter/empty Full/nearly full/nearly empty.<br>**Measurement – time**<br>Understand position through words alone Begin to describe a sequence of events using words such as "first", "then".<br>**Geometry - Identifying shape and their properties**<br>Talk about and explore 2d and 3d shapes… using informal and mathematical language "sides", "corners", "straight", "flat", "round" Select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc. Combine shapes to make new ones.<br>**Geometry – drawing and construction**<br>Understand position through words alone eg "The bag is | Beginning to use the term "half" and understand it means sharing into 2 equal parts.<br>**Number – equations**<br>Continue, copy and create repeating patterns Automatically recall number bonds for numbers 0 -10 Explore the composition of numbers to 10 Identifying missing numbers from number lines up to 10.<br>**Measurement – comparing and estimating**<br>Compare length, weight and capacity To use prior vocabulary and supplement with Lightest/heaviest/ Tallest/shortest/ Half full/quickest/ Slowest To compare, describe and solve practical problems for >length and heights. >weight >capacity >time. To order and sequence 3 comparisons of measure.<br>**Measurement – measuring and calculating.**<br>To begin to use non –standard units to measure static objects. To record findings during investigations. To understand the importance of constant baseline.<br>**Measurement – time**<br>To sequence a familiar set of events both fictional and nonfictional To be introduced | • mass/weight<br>• capacity and volume<br>• time (hours, minutes, seconds)<br>• recognise and know the value of different denominations of coins and notes<br>• sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]<br>• recognise and use language relating to dates, including days of the week, weeks, months and years<br>• tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.<br>**Geometry position and direction**<br>Describe position, direction and movement, including whole, half, quarter and three-quarter turns. | materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.<br>**Number fractions**<br>• recognise, find, name and write fractions 1/3, ¼, 2/4, 3/4 of a length, shape, set of objects or quantity<br>• write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of 2/4 and ½.<br>**Measurement**<br>• choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels<br>• compare and order lengths, mass, volume/capacity and record the results using >, < and =<br>• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value<br>• find different combinations of coins that equal the same amounts of money<br>• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change |

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| | under the table" without pointing Select shapes appropriately: flat shapes for building eg a triangular prism for a roof Using construction sets to create various models.<br>**Geometry – comparing and classifying shape**<br>Talk about and compare 2d and 3d shapes (eg circles, rectangles, triangles and cuboids) using informal and formal mathematical language eg sides, corners, flat, round. Make comparisons between objects relating to size, length.<br>**Geometry – position, direction and movement**<br>Understand position through words alone eg "The bag is under the table" with no pointing Describe a familiar route Discuss routes and locations , using words like in front of and behind.<br>**Geometry – pattern**<br>Stages of understanding repeated patterns - continue AB pattern - copy AB pattern - make own AB pattern - spot errors in an AB pattern - can identify the unit of repeat e.g. this is a red-blue pattern.<br>**Statistics – interpreting, constructing and presenting data** | to and understand the o'clock time on an analogue clock. To be able to read and draw the hands on a clock face to show this times.<br>**Geometry - Identifying shape and their properties**<br>Select, rotate and manipulate shapes in order to develop spatial reasoning skills Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can. Recognise and name common 2d and 3d shapes and talk about properties of sides, corners, edges, faces, curved and flat.<br>**Geometry – drawing and construction**<br>Compose and decompose shapes so that children recognise a shape can have others shapes within, just as numbers can. Using various construction sets in sustained construction projects eg The Shard, The 3 bears beds and chairs.<br>**Geometry – comparing and classifying shape**<br>Select, rotate and manipulate shapes in order to develop spatial reasoning skills Compose and decompose shapes so that children | | ▯ compare and sequence intervals of time<br>▯ tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times<br>▯ know the number of minutes in an hour and the number of hours in a day.<br>**Geometry properties of shapes**<br>▯ identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line<br>▯ identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces<br>▯ identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]<br>▯ compare and sort common 2-D and 3-D shapes and everyday objects.<br>**Statistics**<br>▯ interpret and construct simple pictograms, tally charts, block diagrams and simple tables<br>▯ ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity<br>▯ ask and answer questions about totalling and comparing categorical data. |

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| | Experiment with their own symbols and marks as well as numerals. | recognise a shape can have other shapes within it, just as numbers can. To sort shapes into categories according to their properties, eg all 3 sided shapes, shapes with curved edges.<br>**Geometry – position, direction and movement**<br>Select, rotate and manipulate shapes in order to develop spatial reasoning skills To describe position, direction and movement including forwards, backwards, sideways, in front, behind, under, over, beside, next to, in between. To begin to introduce left and right.<br>**Geometry – pattern**<br>Stages of understanding repeated patterns cont. - continue, copy, make own ABC pattern - continue a pattern that has ended mid-unit of repeat - can do the above with a range of patters e.g. ABB, ABBC, AABB can begin to symbolise unit structure of a pattern the letter R for the red dinosaur can begin to explain the rule of a pattern and then create another pattern with the same rule. Can begin to make patterns that are not linear e.g. around | | |

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| | | a circle, or a border with fixed number of spaces.<br>**Statistics – interpreting, constructing and presenting data**<br>Compare quantities up to 10 in different contexts.<br>Introduction to simple tally charts.<br>Use of 3d block towers to vote for storytime book. | | |
| **Vocabulary** | **Number and place value**<br>Number One, two, three to twenty and beyond. None Count on/up/to/from/down Before, after More, less, many, few, fewer, fewest, smaller, smallest Equal to, the same as Odd, even Digit Numeral Compare Order Size Value Between, halfway between.<br>**Addition and subtraction**<br>Number line Add, more, plus, make, sum, total, altogether Double Half, halve Equals, is the same (including equals sign) How many more to make…? How many more is,,, then,,,? How much more is…? Subtract, take away, minus.<br>**Multiplication and division**<br>Odd, even Double, halve Share, share equally Group in pairs Equal groups of Divide<br>**Measure**<br>Full, half, empty Holds Container Weigh, weighs, balance Heavy, heavier, heaviest, light, lighter, lightest Scales Time Days of the week: Monday, Tuesday etc. Seasons: Spring, Summer, Autumn, Winter Days, week, month, year, weekend Birthday, holiday Morning, afternoon, evening, night Bedtime, dinnertime, playtime Today, yesterday, tomorrow Before, after, next, last Quickest, fastest, slowest Clock Once First, second, third Estimate Too many, too few Length, height Longer, longest, shorter, shortest, taller, tallest, higher, highest Money, coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay, change How much? How many? Total | **Number and place value**<br>Greater, lesser Pair Units, ones, tens Ten more/less Figure (s) In order/ A different order Above, below.<br>none how many …? count, count (up) to, count on (from, to), count back (from, to) forwards backwards count in ones, twos, fives, tens equal to equivalent to is the same as more, less most, least many odd, even multiple of few pattern pair<br>digit the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, one less, equal to one more, ten more one less, ten less compare order size first, second, third… twentieth last, last but one before, after next between half-way between above, below<br>guess how many ...? estimate nearly roughly close to about the same as just over, just under too many, too few enough, not enough<br>**Addition and subtraction** | **Number and place value**<br>Number and place value<br>Numeral zero one, two, three … twenty teens numbers, eleven, twelve … twenty twenty-one, twenty-two … one hundred, two hundred … none how many …? count, count (up) to, count on (from, to), count back (from, to) forwards backwards count in ones, twos, fives, tens, threes, and so on equal to equivalent to is the same as more, less most, least tally many odd, even multiple of sequence continue predict few pattern pair, rule > greater than < less than<br>Place value ones tens, hundreds digit one-, two- or three-digit number place, place value stands for, represents exchange the same number as, as many as more, larger, bigger, greater fewer, smaller, less fewest, smallest, least most, biggest, largest, greatest one more, ten more one less, ten less equal to compare order size first, second, |

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| | **Geometry – position and direction**<br>Over, under, underneath, above, below, top, bottom, side On, in, outside, inside In front, behind Front, back Before, after Beside, next to Middle Up, down, forwards, backwards. Sideways Close, far Through Towards, away from Side, roll, turn.<br>**Geometry – properties of shape**<br>Sort Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square Shape Flat, curved, straight, round Solid Corner Face, side Make, build, draw.<br>**Fractions**<br>Whole Equal One half<br>**General problem solving**<br>Listen, join in Say, think, imagine, remember Start from Look at, point to Put What comes next? Find, use, make, build Tell me, describe, pick out, talk about, explain, show me Read, write Tick, draw a line, ring Cost Count, work out Number line, number track, number square, number cards Counters, cubes, blocks, die, dice, dominoes, pegs, peg board Same way, different way In order, in a different order. | addition add, more, and make, sum, total altogether double near double half, halve one more, two more … ten more how many more to make …? how many more subtract take away how many are left/left over? how many have gone? one less, two less, ten less … how many fewer is … than …? how much less is …? difference between equals is the same as number bonds/pairs missing numberis … than …? how much more is …?<br>**Multiplication and division**<br>multiplication multiply multiplied by multiple division dividing grouping sharing doubling halving array number patterns<br>**Measure**<br>measurement size compare guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as roughly just over, just under<br>Length centimetre, metre length, height, width, depth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest, highest … and so on far, near, close ruler metre stick<br>Weight kilogram, half kilogram weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales<br>Capacity and volume litre, half litre capacity volume full empty more than | third … twentieth twenty-first, twenty-second … last, last but one before, after next between halfway between above, below Estimating guess how many …? estimate nearly roughly close to about the same as just over, just under exact, exactly too many, too few enough, not enough<br>**Addition and subtraction**<br>addition add, more, and make, sum, total altogether double near double half, halve one more, two more … ten more … one hundred more how many more to make …? how many more is … than …? how much more is …? subtract take away how many are left/left over? how many have gone? one less, two less, ten less … one hundred less how many fewer is … than …? how much less is …? difference between equals is the same as number bonds/pairs/facts tens boundary, addends, sum.<br>**Multiplication and division**<br>multiplication multiply multiplied by multiple groups of times once, twice, three times … ten times repeated addition division dividing, divide, divided by, divided into grouping sharing, share, share equally left, left over one each, two each, three each … ten each group in pairs, threes … tens equal groups of doubling halving array row, column number patterns multiplication table multiplication fact, division fact. |

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| | | less than half full quarter full holds container<br>Time time days of the week, Monday, Tuesday … months of the year (January, February …) seasons: spring, summer, autumn, winter day, week, weekend, month, year birthday, holiday morning, afternoon, evening, night bedtime, dinner time, playtime today, yesterday, tomorrow before, after earlier, later next, first, last midnight date now, soon, early, late quick, quicker, quickest, quickly slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time how long ago? how long will it be to …? how long will it take to …? how often? always, never, often, sometimes usually once, twice hour, o'clock, half past, quarter past, quarter to clock, clock face, watch, hands hour hand, minute hand hours, minutes Money money coin penny, pence, pound price, cost buy, sell spend, spent pay change dear, costs more cheap, costs less, cheaper costs the same as how much …? how many …? total<br>**Geometry – position and direction**<br>position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind front, back beside, next to opposite apart between middle, edge centre corner direction journey left, right up, down forwards, backwards, sideways across next to, close, near, far along | **Fractions**<br>fraction equivalent fraction mixed number numerator, denominator equal part equal grouping equal sharing parts of a whole half, two halves one of two equal parts quarter, two quarters, three quarters one of four equal parts one third, two thirds one of three equal parts<br>**Measurement**<br>measure measurement size compare measuring scale guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as roughly just over, just under<br>Length centimetre, metre length, height, width, depth long, short, tall high, low wide, narrow thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest, highest … and so on far, further, furthest, near, close ruler metre stick, tape measure<br>Weight kilogram, half kilogram, gram weigh, weighs, balances heavy, light heavier than, lighter than heaviest, lightest scales<br>Capacity and volume litre, half litre, millilitre capacity volume full empty more than less than half full quarter full holds, contains container<br>Temperature – temperature, degree<br>Time time days of the week, Monday, Tuesday … months of the |

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| | | | through to, from, towards, away from movement slide roll turn stretch, bend whole turn, half turn, quarter turn, three-quarter turn<br>**Geometry – properties of shape**<br>shape, pattern flat curved, straight round hollow, solid sort make, build, draw size bigger, larger, smaller symmetry, symmetrical, symmetrical pattern pattern, repeating pattern match 2-D shape corner, side point, pointed rectangle (including square) circle triangle 3-D shape face, edge, vertex, vertices cube, cuboid pyramid sphere cone cylinder.<br>**Fractions**<br>fraction equal part equal grouping equal sharing parts of a whole half one of two equal parts quarter one of four equal parts<br>**Statistics**<br>count, sort, vote group, set list, table<br>**General problem solving**<br>pattern puzzle problem, problem solving mental, mentally what could we try next? how did you work it out? explain your thinking recognise describe draw compare sort, stem sentence. | year (January, February ...) seasons: spring, summer, autumn, winter day, week, weekend, fortnight, month, year birthday, holiday morning, afternoon, evening, night bedtime, dinnertime, playtime today, yesterday, tomorrow before, after earlier, later next, first, last midnight date now, soon, early, late quick, quicker, quickest, quickly slow, slower, slowest, slowly old, older, oldest new, newer, newest takes longer, takes less time how long ago? how long will it be to …? how long will it take to …? how often? always, never, often, sometimes usually once, twice hour, o'clock, half past, quarter past, quarter to 5, 10, 15 … minutes past clock, clock face, watch, hands digital/analogue clock/watch, timer hour hand, minute hand hours, minutes, seconds<br>Money money coin penny, pence, pound price, cost buy, bought, sell, sold spend, spent pay change dear, costs more cheap, costs less, cheaper costs the same as how much …? how many …? Total<br>**Geometry – properties of shape**<br>shape, pattern flat curved, straight round hollow, solid sort make, build, draw surface size bigger, larger, smaller symmetry, symmetrical, symmetrical pattern line symmetry pattern, repeating pattern match |

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| | | | 2-D shape corner, side point, pointed rectangle (including square), rectangular circle, circular triangle, triangular pentagon hexagon octagon 3-D shape face, edge, vertex, vertices cube, cuboid pyramid sphere cone cylinder Position and direction position over, under, underneath above, below top, bottom, side on, in outside, inside around in front, behind front, back beside, next to opposite apart between middle, edge centre corner direction journey, route left, right up, down higher, lower forwards, backwards, sideways across next to, close, near, far along through to, from, towards, away from clockwise, anticlockwise movement slide roll turn stretch, bend whole turn, half turn, quarter turn, three-quarter turn right angle straight line<br>**Statistics**<br>count, tally, sort, vote graph, block graph, pictogram represent group, set list, table label, title most popular, most common least popular, least common<br>**General problem solving**<br>pattern puzzle problem, problem solving mental, mentally what could we try next? how did you work it out? show how you … explain your thinking, stem sentence, explain your method describe the pattern describe the rule investigate recognise describe draw compare |

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| | | | sort mental calculation written calculation. |
| **Books** | The Very Hungry Caterpillar,<br>Pattern Fish<br>Animal counting<br>Ten little dinosaurs<br>One Duck Stuck<br>1,2,3, to the zoo,<br>How big is a million and many more like this. | Power Maths books | Power Maths books<br>Times tables |
| **Resources** | NCETM<br>White Rose Maths<br>Oak Academy<br>https://teachers.thenational.academy/subjects/maths/key-stages/early-years-foundation-stage | NCETM<br>White Rose Maths<br>Oak Academy - https://teachers.thenational.academy/subjects/maths/key-stages/key-stage-1 | |