

Aycliffe Drive Maths Planning in Year Groups

Maths	We use the mixed year group Essential Maths for Years 1/2. Termly diagnostic assessments take place. Maths fluency is taught at least three times each week, sometimes as an extension of the maths lesson and sometimes separately. Whilst the Learning Sequences are the same, the lessons are differentiated according to year group expectations. For example whilst Year 1 pupils recognise and name common 2D and 3D shapes including rectangles, circles and triangles/ 3D shapes including cuboids, pyramids and spheres Year 2 identify and describe the properties of 2D shapes, including the number of sides and symmetry in a vertical line/ identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.
Nursery	Number Develops fast recognition of up to 3 objects, without having to count them individually (subitising). Recites numbers past 5. Says one number for each item in order: 1,2,3,4,5. Knows that the last number reached when counting a small set of objects tells you how many there are in total (cardinal principle). Shows 'finger numbers' up to 5. Links numerals and amounts, e.g. showing the right number of objects to match the numeral, up to 5 Experiments with their own symbols and marks as well as numerals. Solves real world mathematical problems with numbers up to 5 Compares quantities using language: 'more than', 'fewer than'. Numerical Patterns Talks about and identifies the patterns around them, e.g. stripes on clothes, designs on rugs and wallpaper. Uses informal language like 'pointy', 'spotty', 'blobs', etc. Extends and creates ABAB patterns – stick, leaf, stick, leaf. Notices and corrects an error in a repeating pattern. Begins to describe a sequence of events, real or fictional, using words such as 'first', 'then...' Shape, Space and Measure Talks about and explores 2D and 3D shapes using informal and mathematical language, e.g. 'sides', 'corners'; 'straight', 'flat', 'round'. Understands position through words alone, e.g. "The bag is under the table," – with no pointing. Describes a familiar route. Discusses routes and locations, using words like 'in front of' and 'behind'. Makes comparisons between objects relating to size, length, weight and capacity. Selects shapes appropriately, e.g. flat surfaces for building, a triangular prism for a roof, etc. Combines shapes to make new ones, e.g. an arch, a bigger triangle, etc.

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	Count 0-5 in everyday contexts Compare amounts Compare weight Compare size Positional Language	Recite numbers past 5 Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle') Understand position through words alone Select shapes appropriately: flat surfaces for building, triangular prism for roof etc. Talk about and identify the patterns around them Extend and create ABAB patterns	Say one number for each item in order, 1-5 & show finger numbers up to 5 Link numerals and amounts Solve real world mathematical problems with numbers up to 5 Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language Describe a familiar route and location Make comparisons between objects relating to size, length, weight and capacity Combine shapes to make new ones e.g. an arch to make a bigger triangle Notice and correct an error in a repeating pattern Begin to describe a sequence of events, real or fictional
Reception	Children will have a deep understanding of number 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. Verbally count beyond 20, recognising the pattern of the counting system. Be able to 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. They will use everyday language to talk about size, weight, capacity, position, distance, time, and money to compare quantities. Create and describe patterns. Explore characteristics of everyday objects and shapes and use mathematical language to describe them. Use money with increasing confidence.		

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	Pupils work in small groups with adults targeting key content from our agreed curriculum. Maths Learning opportunities are threaded through nearly all aspects of continuous provision.					
	Recognise, count, and order numbers to 5 and beyond. 1 more 1 less. Subitising – notice when patterns are the same or different, make the same values, identify more or less. Counting Skills- Counting reliably using names in order with 1-1 correspondence. Say which number is 1 more or 1 less than a given number. Ordering and recognising numbers Comparison – Measures. Talk about size weight and position. Pattern recognition, comparison, and identification Classification – use language to describe everyday shapes and use mathematical language to describe them. Counting to compare numbers. Count on or back to find answer.		Spatial Thinking - Develop spatial thinking and language linked to position, direction in movements and symbols ☐ Magnitude – Ordering and Estimating ☐ Count reliably with numbers 1-20. Know the position of numbers to 10 and their relationship to other numbers. Say which number is 1 more /1 less. Regrouping parts to find total number. Finding whole and missing parts. Automatic recall of numbers to 5 and know some number bonds to 10. Use quantities to add and subtract two single digit numbers. Begin to count confidently beyond 10, recognising patterns in the number system.		Solve simple mathematical problems. Doubling, halving, and sharing Begin understanding odd and even numbers. Begin to secure understanding of equal and unequal groups. Recognise when a share is fair. Consolidation of learning. Count reliably with numbers 1-20, place them in order and say which number is one more or one less. Solve simple mathematical problems. Ten and some more- counting beyond 20 . Understand patterns in consecutive numbers. Understand groups of ten	
Year 1	Positional language and sequencing, Subitising leading to more and fewer, Number magnitude, estimation and comparison, place	Additive Reasoning, the understanding and language of operations, part whole, equality and comparison,	Geometry 1, regrouping to add and subtract, strategy choices for addition and subtraction problem solving	Doubling and halving, multiplication counting multiples and repeated addition, multiplication	Money, Fractions, problem solving all four operations, time turns and telling the time, time drawing hands on	Measures and reading scales, statistics, geometry 2, place value with larger numbers,

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	value making tens and some more, Time, estimating sequencing and comparing	measures length, height and mass	with addition and subtraction	number of groups, group size and product, division sharing and grouping, problem solving with multiplication and division.	clock and interval of time	calculation review.
Year 2	Positional language and sequencing, Subitising leading to more and fewer, Number magnitude, estimation and comparison, place value making tens and some more, Time, estimating sequencing and comparing	Additive Reasoning, the understanding and language of operations, part whole, equality and comparison, measures length, height and mass	Geometry 1, regrouping to add and subtract, strategy choices for addition and subtraction problem solving with addition and subtraction	Doubling and halving, multiplication counting multiples and repeated addition, multiplication number of groups, group size and product, division sharing and grouping, problem solving with multiplication and division.	Money, Fractions, problem solving all four operations, time turns and telling the time, time drawing hands on clock and interval of time	Measures and reading scales, statistics, geometry 2, place value with larger numbers, calculation review.
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Year3	Number and Place Value Reasoning. Additive Reasoning Mental addition.	Multiplicative reasoning –building fact recall Proportional reasoning –scaling,	Proportional Reasoning- Adding and subtracting fractions	Statistical Reasoning –Scaling Multiplicative Reasoning-	Number and Place value reasoning- Decimals Measurement Reasoning-	Operational reasoning- Understanding and applying

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	Additive reasoning mental subtraction	comparison, fractions Geometric reasoning –Angles and lines Any remaining weeks will be review and close the gap sessions focusing on high value learning- place value, mental and written fluency.	Geometric reasoning – Properties of 2 D shape. Additive reasoning –Formal written Addition and Subtraction. Spatial reasoning – Perimeter.	Multiplicative Laws and Area Multiplicative Reasoning Formal written Multiplication and division	Comparing, Estimating and Calculating with Measures Measurement and Statistical reasoning –Time, Timetables and Time Graphs	the Four Operations Proportional Reasoning – Finding Fractions of Continuous Quantities Rolling Topics First Year Roman Numerals to 100 (4LS28)
Year 4	Number and Place Value Reasoning. Additive Reasoning Mental addition. Additive reasoning mental subtraction	Multiplicative reasoning –building fact recall Proportional reasoning –scaling, comparison, fractions Geometric reasoning –Angles and lines Any remaining weeks will be review and close the gap sessions focusing on high value learning- place value, mental and written fluency.	Proportional Reasoning- Adding and subtracting fractions Geometric reasoning – Properties of 2 D shape. Additive reasoning –Formal written Addition and Subtraction. Spatial reasoning – Perimeter.	Statistical Reasoning –Scaling Multiplicative Reasoning- Multiplicative Laws and Area Multiplicative Reasoning Formal written Multiplication and division Any remaining weeks will be review and close the gap sessions focusing on high value learning- place value, mental and written fluency.	Number and Place value reasoning- Decimals Measurement Reasoning- Comparing, Estimating and Calculating with Measures Measurement and Statistical reasoning –Time, Timetables and Time Graphs	Operational reasoning- Understanding and applying the Four Operations Proportional Reasoning – Finding Fractions of Continuous Quantities Rolling Topics Second year Negative numbers- Counting through Zero and Calculating

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						in Context (4LS29) Geometry- Coordinates in the first Quadrant and Translations (4LS32) Geometry – Position and Direction, incorporating Angles and Plotting Points of a Shape (4LS33)
Year 5	Place Value and Rounding of Large Numbers Interpret Negative Numbers 3 Place Value of Numbers with up to Three Decimal Places Multiply and Divide by 10, 100 and 1,000 Properties of Number – Multiples, Factors and Common Factors Prime and Composite Numbers8 Multiply and Divide Mentally Solve Problems	Add and Subtract Using a Range of Strategies Add and Subtract Using Formal Written Methods Formal Written Method for Multiplication Formal Written Method of Short Division Equivalent Fractions Compare and Order Fractions Adding	6 Problem Solving – All Four Operations Multiply Fractions by Whole Numbers Fraction Problem Solving Measure – Converting Units of Measure Area Volume and Capacity	Percentages Problem Solving – Percentages 3-D Shapes from 2- D Representations Reflection and Translation Perimeter Estimate, Compare, Measure and Draw Angles Identify Unknown Angles	Formal Methods for Division and Multiplication in Increasingly Complex Problems Strategies for Multiplication and Division (Mental and Written) Solving Problems involving Scaling by Simple Fractions and Rates	Reading Timetables and Calculating with Time Solve Problems involving the Four Operations Distinguish between Regular and Irregular Polygons Use Properties of Rectangles Statistics – Solve

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	Involving Knowledge of Key Facts	and Subtracting Fractions			Conversion of Imperial and Metric Units of Measure Fractions, Decimals and Percentages Problem Solving	Comparison, Sum and Difference Problems using Information in a Line Graph Statistics – Interpreting and Evaluating Information Presented in Charts and Tables Roman Numerals
Year 6	Place Value Multiply and Divide by 10, 100 and 1,000 Choosing Effective Mental Calculation Strategies Problem Solving with Four Operations Application of Factors, Multiples and Primes Equivalent Fractions Comparing and Ordering Fractions Adding and Subtracting Fractions	Fraction and Decimal Equivalents Fractions, Decimals and Percentages Calculating Percentages Formal Written Method of Multiplication 3 Area of Parallelograms and Triangles 4 Formal Written Method of Short Division Properties of Shape	Order of Operations and Algebra Formal Written Method for Long Division Exploring Relationships Between Perimeter and Area Recognise and Find Angles Reflection and Translation Multiplying Fractions Dividing Fractions Fraction Problem Solving	Ratio and Proportion Volume Measures Statistics – Interpret Line Graphs and Pie Charts Algebra and Sequences	Statistics – Calculate and Interpret Mean Average Application of Previous Years' Learning Application of Known Facts and Calculation Strategies Any remaining time before SATs will be used to consolidate key learning	Constructing Pie Charts Statistical Representations Further Algebra Financial Maths and Enterprise Maths Preparation for KS3