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End of EYFS Expectations

Learning within Maths begins in the Early Years through 'Mathematics'. Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes (Statutory Framework for the EYFS, 2021).

Number – EARLY LEARNING GOAL
Children at the expected level of development 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

Numerical Patterns – EARLY LEARNING GOAL
Children at the expected level of development will:
- 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
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Key Stage 1 National Curriculum Expectations

Key Stage 1
The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the four operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Key Stage 2 National Curriculum Expectations

Lower Key Stage 2
The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number. By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling.

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Upper Key Stage 2
The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly.

CURRICULUM COVERAGE WITHIN POWER MATHS

	AUTUMN	SPRING	SUMMER
Year 1	Numbers to 10 Part-whole within 10 Addition and subtraction within 10 2D and 3D shapes Numbers to 20	Addition within 20 Subtraction within 20 Numbers to 50 Introducing length and height Introducing weight and volume	Multiplication and division Fractions - halves and quarters Position and direction Numbers to 100 Time Money
Year 2	Numbers to 100 Addition and subtraction Money Multiplication and division	Multiplication and division Statistics Length and height Fractions	Position and direction Problem solving and efficient methods Time Weight, volume and temperature
Year 3	Place value within 1000 Addition and subtraction Multiplication and division	Multiplication and division Money Statistics Length Fractions	Fractions Time Angles and properties of shape Mass Capacity
Year 4	Place value – 4 digit numbers Addition and subtraction Perimeter Multiplication and division	Multiplication and division Area Fractions Decimals	Decimals Money Time Statistics Angles and 2D shape Position and direction

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Year 5	Place value within 100,000 Place value within 1,000,000 Addition and subtraction Graphs and tables Multiplication and division Area and perimeter	Multiplication and division Fractions Decimals and percentages	Decimals Shape – angles Shapes – lines, polygons, 3D shape Position and direction Converting units of measure
Year 6	Place value within 10,000,000 The four operations Factors, multiples, primes Order of operations Fractions	Decimals Percentages Algebra Imperial and metric measures Perimeter, area and volume Ratio and proportion	Properties of shapes Problem solving Statistics

Features of our St. Martin's school life	• At St Martin's, we follow a **mastery mathematics** approach from EYFS through to Year 6. This is delivered via the Pearson **Power Maths** scheme, with supplementary material, where required, selected from White Rose and other complementary resources (e.g. NCETM/nrich). • All children in EYFS and KS1 have access to the online platform, NumBots, a game-based platform designed to boost fluency with addition and subtraction skills. All children have a login, allowing them to use NumBots at home. • Children from Year 2 to Year 6 have access to the online times tables practice platform, Times Tables Rock Stars. Children are expected to play 3-5 times per week (across home and school), for 3-5 minutes each time, to boost confidence and fluency with times tables. As children move up the Rock Stars status levels, this is celebrated in the weekly celebration assembly, with certificates and badges awarded.

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
Vocabulary	See Year 1 vocabulary from Power Maths. Power Maths vocabulary\Year 1 PM vocabulary.pdf	See Year 2 vocabulary from Power Maths. Power Maths vocabulary\Year 2 PM vocabulary.pdf	See Year 3 vocabulary from Power Maths. Power Maths vocabulary\Year 3 PM vocabulary.pdf	See Year 4 vocabulary from Power Maths. Power Maths vocabulary\Year 4 PM vocabulary.pdf	See Year 5 vocabulary from Power Maths. Power Maths vocabulary\Year 5 PM vocabulary.pdf	See Year 6 vocabulary from Power Maths. Power Maths vocabulary\Year 6 PM vocabulary.pdf
Number and Place Value	• Sort objects • Count objects • Represent objects • Count, read and write forwards from any number 0 to 10 • Count, read and writing backwards from any number 10 to 0 • Count one more • Count one less	• Count objects to 100 and read and write numbers in numerals and words • Represent numbers to 100 • Tens and ones with a part whole model • Tens and ones using addition • Use a place value chart • Compare objects • Compare numbers	• Hundreds • Represent numbers to 1,000 • 100s, 10s and 1s (1) • 100s, 10s and 1s (2) • Number line to 1,000 • Find 1, 10, 100 more or less than a given number • Compare objects to 1,000 • Compare numbers to 1,000 • Order numbers	• Roman numerals to 100 • Round to the nearest 10 • Round to the nearest 100 • Count in 1,000s • 1,000s, 100s, 10s and 1s • Partitioning • Number line to 10,000 • 1,000 more or less • Compare numbers • Order numbers • Round to the nearest 1,000	• Number to 10,000 • Roman numerals to 1,000 • Round to the nearest 10, 100 and 1,000 • Number to 100,000 • Compare and order numbers to 100,000 • Round numbers within 100,000 • Numbers to a million	**Number: Place Value** • Numbers to ten million • Compare and order any number • Round any numbers • Negative numbers **Number: Four Rules** • Add and subtract whole numbers • Order of operations

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	• One more and one less within 50 • One more and one less within 100 • One to one correspondence to start to compare groups • Compare groups using language such as equal, more/greater, less/fewer • Introduce = , > and < symbols • Order groups of objects • Order numbers • Ordinal numbers (1st, 2nd, 3rd ….) • The number line • Numbers to 50 • Tens and ones • Represent numbers to 50 • Compare objects within 50 • Compare numbers within 50 • Order numbers within 50 • Order numbers within 100 • Count in 2s • Count in 5s • Count forwards and backwards and write numbers to 20 in numerals and words • Numbers from 11 to 20 • Tens and ones • Compare groups of objects • Count to 100 • Partition numbers • Compare numbers within 100	• Order objects and numbers • Count in 2s, 5s and 10s • Count in 3s	• Count in 50s	• Count in 25s • Negative numbers	• Counting in 10s, 100s, 1,000s, 10,000s and 100,000s • Compare and order numbers to a million • Round numbers to a million • Negative numbers • Add decimals within 1 • Subtract decimals within 1 • Complements to 100 • Add decimals – cross the whole • Add numbers with the same number of decimal places • Subtract numbers with the same number of decimal places • Add numbers with different numbers of decimal places • Subtract numbers with different numbers of decimal places • Add and subtract wholes and decimals • Decimal sequences • Multiply decimals by 10, 100 and 1,000 • Divide decimals by 10, 100 and 1,000	• Mental calculations and estimation • Reasoning from known facts **Number: Algebra** • Find a rule – one step • Find a rule – two step • Use an algebraic rule • Substitution • Formulae • Word Problems • Solve simple one step equations • Solve two step equations • Find pairs of values • Enumerate possibilities **Number: Ratio** • Using ratio language • Ratio and fractions • Introducing the ratio symbol • Calculating ratio • Using scale factors • Calculating scale factors • Ratio and proportion problems
Addition and Subtraction	• Part whole model • Addition symbol • Fact families – Addition facts • Find number bonds for numbers within 10 • Systematic methods for number bonds within 10 • Number bonds to 10	• Fact families – Addition and subtraction bonds to 20 • Check calculations • Compare number sentences • Related facts • Bonds to 100 (tens) • Add and subtract 1s • 10 more and 10 less • Add and subtract 10s	• Add and subtract multiples of 100 • Add and subtract 3-digit numbers and ones – not crossing 10 • Add 3-digit and 1-digit numbers – crossing 10	• Add and subtract 1s, 10s, 100s and 1000s • Add two 4-digit numbers – no exchange • Add two 4-digit numbers – one exchange • Add two 4-digit numbers – more than one exchange	• Add whole numbers with more than 4-digits (column method) • Subtract whole numbers with more than 4-digits (column method) • Round to estimate and approximate	• Problem solving – written addition and subtraction

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	• Compare number bonds • Addition: Adding together • Addition: Adding more • Finding a part • Subtraction: Taking away, how many left? Crossing out • Subtraction: Taking away, how many left? Introducing the subtraction symbol • Subtraction: Finding a part, breaking apart • Fact families – The 8 facts • Subtraction: Counting back • Subtraction: Finding the difference • Comparing addition and subtraction statements a + b > c • Comparing addition and subtraction statements a + b > c + d • Add by counting on • Find & make number bonds • Add by making 10 • Subtraction – Not crossing 10 • Subtraction – Crossing 10 • Related Facts • Compare number Sentences	• Add a 2-digit and 1-digit number – crossing ten • Subtract a 1-digit number from a 2-digit number – crossing ten • Add two 2-digit numbers – not crossing ten – add ones and add tens • Add two 2-digit numbers – crossing ten – add ones and add tens • Subtract a 2-digit number from a 2-digit number – not crossing ten • Subtract a 2-digit number from a 2-digit number – crossing ten – subtract ones and tens • Bonds to 100 (tens and ones)	• Subtract a 1-digit number from a 3-digit number – crossing 10 • Add and subtract 3-digit numbers and tens – not crossing 100 • Add a 3-digit number and tens – crossing 100 • Subtract tens from a 3-digit number – crossing 100 • Add and subtract 100s • Spot the pattern – making it explicit • Add and subtract a 2-digit and 3-digit number – not crossing 10 or 100 • Add a 2-digit and 3-digit number – crossing 10 or 100 • Subtract a 2-digit number from a 3-digit number – cross the 10 or 100 • Add two 3-digit numbers – not crossing 10 or 100 • Add two 3-digit numbers – crossing 10 or 100 • Subtract a 3-digit number from a 3-digit number – no exchange • Subtract a 3-digit number from a 3-digit number – exchange • Estimate answers to calculations	• Subtract two 4-digit numbers – no exchange • Subtract two 4-digit numbers – one exchange • Subtract two 4-digit numbers – more than one exchange • Efficient subtraction • Estimate answers • Checking strategies	• Inverse operations (addition and subtraction) • Multi-step addition and subtraction problems	

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Multiplication and Division	• Count in 10s • Make equal groups • Add equal groups • Make arrays • Make doubles • Make equal groups - grouping • Make equal groups - sharing	• Make equal groups - sharing • Make equal groups - grouping • Divide by 2 • Odd & even numbers • Divide by 5 • Divide by 10	• Multiplication – equal groups • Multiplying by 3 • Dividing by 3 • The 3 times-table • Multiplying by 4 • Dividing by 4 • The 4 times-table • Multiplying by 8 • Dividing by 8The 8 times-table • Comparing statements • Related calculations • Multiply 2-digits by 1- digit • Divide 2-digits by 1- digit • Scaling	• Multiply by 10 • Multiply by 100 • Divide by 10 • Divide by 100 • Multiply by 1 and 0 • Divide by 1 • Multiply and divide by 6 • 6 times-table and division facts • Multiply and divide by 9 • 9 times-table and division facts • Multiply and divide by 7 • 7 times-table and division facts • 11 and 12 times-table • Multiply 3 numbers • Factor pairs • Efficient multiplication • Written methods • Multiply 2-digits by 1-digit • Multiply 3-digits by 1-digit • Divide 2-digits by 1-digit • Solving problems involving correspondence (where n relates to m)	• Multiples • Factors • Common factors • Prime numbers • Square numbers • Cube numbers • Inverse operations (Multiplication and Division) • Multiply by 10, 100 and 1,000 • Divide by 10, 100 and 1,000 • Multiply and divide by multiples of 10, 100 and 1,000 • Multiply 4-digits by 1-digit • Multiply 2-digits (area model) • Multiply 2-digits by 2-digits • Multiply 3-digits by 2-digits • Multiply 4-digits by 2-digits • Divide 4-digits by 1-digit • Divide with remainders	**Number: Four Rules** • Multiply up to a 4-digit by 1- digit number • Short division • Division using factors • Long division • Common factors • Common multiples • Primes • Squares and cubes • Order of operations • Mental calculations and estimation • Reasoning from known facts
Fractions	• Halving shapes or objects • Halving a quantity • Find a quarter of a shape or object • Find a quarter of a quantity	• Make equal parts • Recognise a half • Find a half • Recognise a 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	• Unit and non-unit fractions • Making the whole • Tenths • Count in tenths • Tenths as decimals • Fractions of a number line • Fractions of a set of objects • Equivalent fractions • Compare fractions • Order fractions • Add fractions • Subtract fractions	• What is a fraction? • Equivalent fractions • Fractions greater than 1 • Count in fractions • Add 2 or more fractions • Subtract 2 fractions • Subtract from whole amounts Calculate fractions of a quantity Problem solving – calculate quantities	• Equivalent fractions • Improper fractions to mixed numbers • Mixed numbers to improper fractions • Number sequences • Compare and order fractions less than 1 • Compare and order fractions greater than 1 • Add and subtract fractions • Add fractions within 1 • Add 3 or more fractions • Add fractions • Add mixed numbers • Subtract fractions • Subtract mixed numbers	• Simplify fractions • Fractions on a number line • Compare and order fractions by the denominator • Compare and order fractions by the numerator • Add and subtract fractions • Adding fractions • Subtracting fractions • Mixed addition and subtraction problems • Multiply fractions by whole number • Multiply fractions by fraction • Divide a fraction by a whole number

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					• Subtract – breaking the whole • Subtract 2 mixed numbers • Multiply unit fractions by an integer • Multiply non-unit fractions by an integer • Multiply mixed numbers by integers • Fraction of an amount • Using fractions as operators	• Four rules with fractions • Fraction of an amount • Fraction of an amount - finding the whole
Decimals and Percentages	Not introduced until year 4	Not introduced until Year 4	Not introduced until Year 4	• Recognise tenths and hundredths • Tenths as decimals • Tenths on a place value grid • Tenths on a number line • Divide 1 digit by 10 • Divide 2 digits by 10 • Hundredths • Hundredths as decimals • Hundredths on a place value grid • Divide 1 or 2 digits by 100 • Make a whole • Write decimals • Compare decimals • Order decimals • Round decimals • Halves and quarters	• Decimals up to 2 decimal places • Decimals as fractions • Understand thousandths • Thousands as decimals • Rounding decimals • Order and compare decimals • Understand percentages • Percentages as fractions and decimals • Equivalent fractions, decimals and percentages	• Three decimal places • Multiply by 10, 100 and 1,000 • Divide by 10, 100 and 1,000 • Multiply decimals by integers • Divide decimals by integers • Division to solve problems • Decimals as fractions • Fractions to decimals • Fractions to percentages • Equivalent FDP • Percentage of an amount • Percentages – missing values • Percentage increase and decrease • Order fractions, decimals and percentages

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Measurement Geometry: Properties of Shape	• Recognise and name 3D shapes • Sort 3D shapes • Recognise and name 2D shapes • Sort 2D shapes • Patterns with 3D and 2D shapes	• Recognise 2D and 3D shapes • Count sides on 2D shapes • Count vertices on 2D shapes • Draw 2D shapes • Lines of symmetry • Sort 2D shapes • Make patterns with 2D shapes • Count faces on 3D shapes • Count edges on 3D shapes Count vertices on 3D shapes • Sort 3D shapes • Make patterns with 3D shapes	• Turns and angles • Right angles in shapes • Compare angles • Draw accurately • Horizontal and vertical • Parallel and perpendicular • Recognise and describe 2D shapes • Recognise and describe 3D shapes • Make 3D shapes	• Identify angles • Compare and order angles • Triangles • Quadrilaterals • Lines of symmetry • Complete a symmetric figure	• Measure angles in degrees • Measure with a protractor • Draw lines and angles accurately • Calculate angles on a straight line • Calculate angles around a point • Calculate lengths and angles in shapes • Regular and irregular polygons • Reasoning about 3D shapes	• Measure with a protractor • Introduce angles • Calculate angles • Vertically opposite angles • Angles - triangles • Angles – special cases • Find missing angles • Angles - quadrilaterals • Angles – regular polygons • Draw shapes • Draw nets
Measurement: Weight and Volume Mass, Capacity and Temperature	• Introduce weight and mass • Measure mass • Compare mass • Introduce capacity • Measure capacity • Compare capacity	• Compare mass • Measure mass in grams • Measure mass in kilograms • Compare capacity • Millilitres • Litres • Temperature	• Measure mass • Compare mass • Add and subtract mass • Measure capacity • Compare capacity • Add and subtract capacity	Consolidation of mass and capacity in starter activities	Converting Units: • Metric units: ¬ cm, m, km; ¬ g, kg; ¬ l, ml • Imperial units ¬ Inches ¬ Pounds ¬ Pints	Converting Units: • Metric measures • Convert metric measures • Calculate with metric measures • Miles and kilometres • Imperial measures
Measures: Length and Height Perimeter, Area, Volume	• Compare lengths and heights • Measure length	• Comparing lengths and heights • Non-standard units of measures • Measuring length using a ruler • Solving word problems – length	• Measure length • Equivalent lengths – m & cm • Equivalent lengths – mm & cm • Compare lengths • Add lengths • Subtract lengths • Measure perimeter • Calculate perimeter	• Kilometres • Perimeter on a grid • Perimeter of a rectangle • Perimeter of rectilinear shapes • What is area? • Counting squares • Making shapes • Comparing area	• Measure perimeter • Calculate perimeter • Find unknown lengths • Area of rectangles • Area of compound shapes • Estimate and approximate area • What is volume? • Compare volume • Estimate volume • Estimate capacity	• Shapes – same area • Area and perimeter • Area of a triangle • Area of a parallelogram • Volume – counting cubes • Volume of a cuboid
Geometry: Position and Direction	• Describe turns • Describe positions	• Describe movement • Describe turns • Describe movement and turns • Make patterns with shapes	Consolidation of turns in starter activities	• Describe position • Draw on a grid • Move on a grid • Describe a movement on a grid	• Position in the first quadrant • Reflection • Reflection with coordinates • Translation • Translation with coordinates	• Coordinates in the first quadrant • Plotting coordinates • Translations • Reflections

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						• Reasoning about shapes with coordinates
Statistics	Not introduced until Year 2	• 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	• Pictograms • Bar Charts • Tables	• Interpret charts (discrete) • Comparison, sum and difference • Introduce line graphs • Line graphs	• Read and interpret line graphs • Draw line graphs • Use line graphs to solve problems • Read and interpret tables • Two way tables • Timetables	• Read and interpret line graphs • Draw line graphs • Use line graphs to solve problems • Circles • Read and interpret pie charts • Pie charts with percentages • Draw pie charts • The mean
Time	• Before and after • Dates • Time to the hour • Time to the half hour • Writing time • Comparing time	• 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	• Months and years • Hours in a day • Telling time to 5 minutes • Telling time to the nearest minute • AM and PM • 24 hour clock • Find the duration • Compare the duration • Find start and end times • Measure time in seconds	• Hours, minutes and seconds • Years, months, weeks and days • Analogue to digital – 12 hour • Analogue to digital – 24 hour	• Convert units of time • Timetables	Consolidation of units of time in lesson starters
Money (discrete)	• Recognising coins • Recognising notes • Counting in coins	• 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	• Pounds and pence • Converting pounds and pence • Adding money • Subtracting money • Giving change	• Pounds and pence • Order money • Round to estimate money • Four operations with money	Consolidation of units of money within decimal addition unit	Consolidation of units of money in lesson starters