Maths Curriculum Map

EYFS	Maths is taught through adult-led learning which supports a mastery approach to number: for example, in the autumn term - a depth of understanding of what the number '3' means. This is consolidated through high quality provision during child-initiated learning: for example, representing amounts in a range of ways using manipulatives and developing an understanding of pattern through outdoor learning. **Number** Children will: - Have a deep understanding of numbers 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** Children 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. Although the expected outcomes are focussed on number and numerical patterns, our Castle Newnham Reception mathematics curriculum forms the foundation of mathematical learning across areas below including measure, shape and space, date and time and number.		
KS1	In KS1, in addition to maths lessons, the children take part in mastering number sessions designed to build fluency and number understanding.		
Year 1	**1.1 Place Value (Within 10)** • 1 more • 1 less • Fewer, more, same • Less than, greater than, equal to • Comparing numbers • Ordering numbers Building on knowledge in Reception. **1.2 Addition and subtraction (Within 10)** • Part-whole model • Fact families • Number bonds within 10 • Number bonds to 10 • Addition introduction • Subtraction introduction Builds on 1.1 **1.3 Geometry (Shape)** • Recognise and name 3-D shapes • Recognise and name 2-D shapes • Patterns with 2-D and 3-D shapes Building on knowledge in Reception.	**1.4 Place Value (Within 20)** • Number 11 to 20 • Tens and ones • Comparing objects and numbers • Ordering objects and numbers Builds on 1.1 **1.5 Addition and subtraction (Within 20)** • Add by making 10 • Subtraction - not crossing 10 • Find and make number bonds Builds on 1.2 **1.6 Place Value (WIthin 50)** • Numbers to 50 • Comparing objects and numbers • Ordering objects and numbers • Counting in 2s and 5s Builds on 1.4 **1.7 Length and height** • Comparing lengths • Comparing heights • Measuring length	**1.9 Multiplication and division** • Counting in 10s • Making equal groups • Making arrays Builds on 1.6 **1.10 Fractions** • The whole • A half • A quarter Foundation for future topics. **1.11 Geometry (Position and Direction)** • Describing turns • Describing position Building on knowledge in Reception. **1.12 Measurement (Money)** • Recognising coins • Recognising notes • Counting coins Foundation for future topics. **1.13 Measurement (Time)** • Time to the hour

		• Introducing the ruler Building on knowledge in Reception. **1.8 Mass and volume** • Measuring mass • Comparing mass • Introducing capacity and volume Building on knowledge in Reception.	• Time to the half hour • Writing time • Comparing time Foundation for future topics.
Year 2	**2.1 Place Value** • Representing numbers to 100 • Part-whole model - tens and ones • Count in 3s • Comparing objects and numbers • Ordering objects and numbers Builds on 1.6 **2.2 Addition and subtraction** • Bonds to 100 (tens) • Add and subtract 1 • 10 more and 10 less • Add and subtract 10s • Add and subtracting 2-digit and 1-digit numbers • Adding and subtracting a 2-digit number and a 2-digit number Builds on 1.2 and 1.5 **2.3 Multiplication and division** • Equal groups • Multiplication sentences • 2 times-table • 5 times-table • 10 times-table • Odd and even numbers • Divide by 2 • Divide by 5 • Divide by 10 Builds on 1.9	**2.4 Measurement (Money)** • Counting notes and coins • Comparing money • Find the total • Find the difference • Find change Builds on 1.12 **2.5 Statistics** • Tally charts • Pictograms (1,2, 5 and 10) • Block diagrams Foundation for future topics. **2.6 Properties of shape** • Drawing 2-D shapes • Lines of symmetry • Face on 3-D shapes • Vertices on 3-D shapes • Make patterns with 2-D and 3-D shapes Builds on 1.3 **2.7 Fractions** • Equal parts • A third • Unit fractions • Non-unit fractions • Equivalence of half and 2 quarters • Find three quarters Builds on 1.10	**2.8 Measurement (Time)** • O'clock and half past • Quarter past and quarter to • Telling time to 5 minutes • Hours and days • Finding and comparing durations Builds on 1.13 **2.9 Geometry (Position and direction)** • Describing movement • Describing turns • Movements and turns Builds on 1.11 **2.10 Measurement (length and height)** • Measure length (cm . m) • Compare lengths • Order lengths • Four operations with length Builds on 1.7 and 2.2 and 2.5 **2.11 Measurement (Mass, capacity and temperature)** • Comparing mass • Mass in kg and g • Litres and millilitres • Temperature Builds on 1.8
Year 3	**3.1 Place Value** • Hundreds • Number to 1,000 • 100s,10s and 1s • Comparing objects and numbers • Ordering objects and numbers Builds on 2.1	**3.4 Multiplication and division** • Multiply and divide 2-digit and 1-digit numbers • Divide 100 into 2,4,5 and 10 equal parts • Remainders • Scaling Builds on 3.3	**3.9 Fractions** • The whole • Tenths • Fractions on a number line • Fractions of objects • Equivalent fractions

	3.2 Addition and subtraction • Add and subtract 3-digit and 1-digit numbers (not crossing and crossing 10) • Add and subtract 3-digit and 2-digit numbers (not crossing and crossing 100) • Add and subtract 100s • Add and subtract 3-digit and 2-digit numbers (exchanging and no exchange) • Estimating answers Builds on 2.2 **3.3 Multiplication and division** • Multiple and divide by 3, 4 and 8 • 3,4 and 8 times-tables Builds on 2.3	**3.5 Measurement (Money)** • Converting pounds and pence • Add money • Subtract money • Give change Foundation for future topics. **3.6 Statistics** • Bar charts • Tables Builds on 2.5 **3.7 Measurement (Length and perimeter)** • Equivalent lengths (m and cm) • Equivalent lengths (mm and cm) • Adding and subtracting lengths • Measure and calculate perimeter Builds on 2.10 **3.8 Fractions** Recap from 2.7 to prepare for 3.9	• Comparing fractions • Ordering fractions • Adding and subtracting fractions with the same denominator Builds on 3.8 **3.10 Measurement (Time)** • Months and years • Hours in a day • Time to 5 minutes and the minute • A.m and P.m • 24-hour clock • Measuring time in seconds Builds on 2.11 **3.11 Geometry (Properties of shape)** • Turns and angles • Right angles • Horizontal and vertical • Parallel and perpendicular Builds on 2.6 and 2.9 **3.12 Measurement (Mass and capacity)** • Measuring and comparing mass and capacity Builds on 2.11
Year 4	**4.1 Place Value** • Round to the nearest 10 and 100 • Count in 1,000s • Partitioning • Number Line to 10,000 • 1,000 more and less • Count in 25s • Negative numbers • Roman numerals Builds on 3.1 **4.2 Addition and subtraction** • Subtracting 4-digit and 4-digit numbers (exchanges and no exchanges) • Adding 4-digit and 4-digit numbers (more than one exchange) • Efficient subtraction • Estimate answers Builds on 3.2 **4.4 Multiplication and division** • Multiple and divide by 10 and 100	**4.6 Multiplication and division** • 11 and 12 times-table • Multiply 3 numbers • Efficient multiplication • Multiplication written methods • Multiply 2-digit by 1-digit • Multiply 3-digits by 1-digit • Divide 2-digit by 1-digit • Divide 2-digits by 1-digit • Divide 3-digits by 1-digit Builds on 4.4 **4.7 Measurement (Length and perimeter)** • Kilometres • Perimeter of a rectangle • Perimeter of rectilinear shapes Builds on 3.7 **4.8 Measurement (Area)** • Introduction to area • Counting squares	**4.9 Decimals** • Write, compare and order decimals • Round decimals • Halves and quarters Builds on 4.8 **4.10 Measurement (Money)** • Ordering money • Estimating money Builds on 3.5 **4.11 Measurement (Time)** • Hours, minutes and seconds • Years, months, weeks and days • Analogue to digital Builds on 3.10 **4.12 Statistics** • Interpret charts • Line graphs Builds on 3.6 **4.14 Geometry (Position and direction)** • Describing positions

	• Multiple by 1 and 0 • Divide by 1 and itself • 6, 7 and 9 time-tables and division facts Builds on 3.4 **4.5 Geometry (Properties of shape)** • Identify angles • Triangles • Quadrilaterals • Symmetry Builds on 3.11	• Comparing area Builds on 3.7 and 4.7 **4.7 Fractions** • Equivalent fractions • Fractions greater than 1 • Count in fractions • Add 2 or more fractions • Subtract 2 fractions • Subtract fractions from the whole • Fractions of a quantity Builds on 3.9 **4.8 Decimals** • Tenths as decimals • Tenths on a number line • Divide 1 or 2-digits by 10 • Hundredths • Divide 1 or 2 digits by 100 Foundation for future topics.	• Movement on a grid Builds on 2.9
Year 5	**5.1 Place Value** • Numbers to 10,000 • Rounding to 10,100 and 1,000 • Numbers to 100,000 and a million • Negative numbers • Roman numerals Builds on 4.1 **5.2 Addition and subtraction** • Add whole numbers with more than 4-digits (formal methods) • Subtract whole numbers with more than 4-digits (formal methods) • Round to estimate • Inverse operations Builds on 4.2 **5.3 Multiplication and division** • Factors and multiples • Common Fractions • Prime numbers • Square numbers • Cube numbers • Multiple and divide by 10, 100 and 1,000 Builds on 4.6	**5.5 Multiplication and division** • Multiple 4-digits by 1-digit • Multiply 2, 3 and 4-digits by 2-digits • Divide 4-digits by 1-digit Builds on 5.4 **5.6 Decimals and percentages** • Decimals to 2 d.p • Thousandths • Rounding decimals • Fraction, decimal and percentage equivalents Builds on 4.8 **5.7 Measurement (Perimeter and area)** • Measuring and calculating perimeter • Area of rectangles • Area of compound and irregular shapes Builds on 4.7 and 4.8 **5.8 Statistics** • Line graphs • Tables • Two-way tables • Timetables Builds on 4.12	**5.9 Geometry (Position and direction)** • Measuring angles • Using protractors • Angles on a straight line • Angles around a point Builds on 4.14 **5.10 Decimals** • Adding and subtracting decimals • Multiplying decimals by 10,100 and 1,000 • Dividing decimals by 10, 100, 1,000 Builds on 4.8 **5.11 Measurement (Converting units)** • Kgs and Kms • Imperial and metric units • Converting units of time • Timetables Builds on 4.7 **5.12 Measurement (Volume)** • Comparing volume • Estimating volume • Estimating capacity Builds on 3.12

	5.4 Fractions • Equivalent fractions • Improper to mixed fractions • Compare and order fractions • Add and subtract fractions • Multiply unit fractions • Fractions of an amount Builds on 4.7		
Year 6	**6.1 Place Value** • Numbers to 10 million • Comparing and ordering • Rounding • Negative numbers Builds on 5.1 **6.2 Four operations** • Consolidation of prior learning • Short and long division • Common factors and multiples • Primes to 100 • Order of operations Builds on 5.2 and 5.5 **6.3 Fractions** • Simplifying fractions • Comparing and ordering fractions • Adding and subtracting fractions • Multiply and dividing fractions by integers • Fractions of amounts Builds on 5.4	**6.4 Decimals** • Three decimals places • Multiply and divide by 10,100 and 1,000 • Decimals as fractions • Fractions to decimals Builds on 5.6 and 6.3 **6.5 Percentages** • Fractions to percentages • Fraction, decimal and percentage equivalent • Percentages of amounts Builds on 5.6 **6.6 Algebra** • Forming expressions • Substitution • Formulae • Forming equations • Solving two-step equations Foundation for future topics. **6.7 Measurement (Converting units)** • Metric measures • Converting and calculating metric measures • Miles and Kilometres • Imperial measures Builds on 5.11 **6.8 Measurement (Perimeter, area and volume)** • Area and perimeter • Area of triangles • Volume of a cuboid Builds on 5.7 and 5.12 **6.9 Ratio** • Calculating ratio • Calculating scale factors Foundation for future topics.	**6.10 Geometry (Position and direction)** • First quadrant • Four quadrants • Translation • Reflection Builds on 5.9 **6.11 Statistics** • Line graphs • Circles • Pie charts • The mean Builds on 5.8 **6.12 Geometry (Properties of shape)** • Protractors • Vertically opposite angles • Angles in a triangle • Angles in regular polygons Builds on 4.5