# East Park Primary School Mathematics Progression Document

| Place Value: Counting | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Verbally count beyond 20, recognising the pattern of the counting system. | Count to and across 100, forwards and backwards, beginning with 0 or 1 or from any given number.<br><br>Count numbers to 100 in numerals; count in multiples of twos, fives and tens. | Count in steps of 2,3,5 from 0 and in tens from any number forwards and backwords. | Count from 0 in multiples of 4,8,50 and 100; find 10 or 100 more or less than a given number. | Count in multiples of 6,7,9,25 and 1000<br><br>Count backwards through zero to include negative numbers. | Count forwards or backwards in steps of powers of 10. For any given number up to 1,000,000<br><br>Count forwards and backwards for positive and negative whole numbers including through zero. | Count forwards or backwards in steps of powers of 10. For any given number up to 10,000,000<br><br>Count forwards and backwards for positive and negative whole numbers including through zero. |

| Place Value: Use Place Value and Compare | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Have a deep understanding of number to 10, including the composition of each number.<br><br>Compare quantities up to 10 | Given a number, identify one more and one less. | Recognise the place value of each digit in a two-digit number (tens, ones).<br><br>Compare and order numbers from 0 up to 100; | Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). | Find 1000 more or less than given number.<br><br>Recognise the place value of each digit in a four-digit number (thousands, | (read, write), order and compare numbers up to 1, 000 000 and determine the value of each digit. | (read, write), order and compare numbers up to 10, 000 000 and determine the value of each digit. |

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| in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.<br><br>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. | | use <, > and = signs. | Compare and order numbers up to 1000. | hundreds, tens and ones)<br><br>Order and compare numbers beyond 1000. | | |

| Place Value: Problems and Rounding | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Shows an interest in number problems | Use place value and number facts to solve problems. | Use place value and number facts to solve problems. | Solve number problems and practical problems involving these ideas. | Round any number to the nearest 10, 100 or 1000. | Interpret negative numbers in context.<br><br>Round any number up to 1000 000 to the | Round any whole number to a required degree of accuracy. |

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| | | | | Solve number and practical problems that involve all of the above and with increasingly large positive numbers. | nearest 10, 100, 1000, 10 000 and 100 000.<br><br>Solve number problems and practical problems that involve all of the above. | Use negative numbers in context, and calculate intervals across zero.<br><br>Solve number and practical problems that involve all of the above. |

| Addition and Subtraction: Recall, Represent and Use | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Explore the composition of numbers to 10.<br><br>Automatically recall number bonds to 5 and some number bonds to 10, including double facts<br><br>Finds the total number of objects in 2 groups by counting them | Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs.<br><br>Represent and use number bonds and related subtraction facts within 20 and within 50. | Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100.<br><br>Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. | Estimate the answer to a calculation and use inverse operations to check answers. | Estimate and use inverse operations to check answers to a calculation. | Use Rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. | Use Rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy. |

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| Add and subtract two single digit numbers and count back to find the answer.<br><br>Subtracts smaller numbers from larger numbers by counting the number of objects that are left. | | Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. | | | | |

| Addition and Subtraction: Calculations | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Compare quantities up to 10 in different context<br><br>Automatically recall number | Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: | Add and subtract numbers mentally, including:<br><br>A two-digit number and ones | Add and subtract numbers mentally, including:<br><br>A three-digit number and ones | Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition | Add and subtract whole numbers with more than 4 digits, including formal written methods (columnar addition and subtraction). | Perform mental calculations, including with mixed operations and large numbers. |

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| bonds for numbers 0–5 and some to 10.<br><br>Add and subtract two single digit numbers and count back to find the answer.<br><br>Subtracts smaller numbers from larger numbers by counting the number of objects that are left. | A two-digit number and ones<br><br>A two-digit number and a multiple of ten<br><br>Two two-digit multiples of 10 numbers<br><br>Adding three one-digit numbers. | A two-digit number and tens<br><br>Two two-digit multiples<br><br>Add and subtract numbers with up to two digits, using formal written methods of columnar addition and subtraction. | A three-digit number and tens<br><br>A three-digit number and hundreds<br><br>Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. | and subtraction where appropriate. | Add and subtract numbers mentally with increasingly large numbers. | Use their knowledge of the order of operations to carry out calculations involving the four operations. |

| Addition and Subtraction: Solve Problems | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Automatically recall (without | Solve one step problems that | Solve problems that involve addition and | Solve problems including missing | Solve addition and subtraction two- | Solve addition and subtraction two- | Solve addition and subtraction multi- |

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| reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. | involve addition and subtraction using concrete objects and pictorial representations. Also use missing number problems e.g. 7 = ? + 2 | subtraction using concrete objects and pictorial representations including numbers, quantities and measures. Apply knowledge of mental calculation methods. | number problems, using number facts, place value and more complex addition and subtraction | step problems in contexts deciding which operations and methods to use and why. | step problems in contexts deciding which operations and methods to use and why. Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the equals sign. | step problems in contexts deciding which operations and methods to use and why. |

| Multiplication and Division: Recall, Represent and Use | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Finds the doubles of numbers to 10 | Counting in multiples of 2, 5 and 10. | Recall and use multiplication and division facts for the 2,5 and 10 multiplication tables, including recognising odd and even numbers. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot. | Recall and use multiplication and division facts for the 3,4 and 8 multiplication tables, | Recall and use multiplication and division facts for the multiplication tables up to 12 x 12. Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers. Recognise and use factor pairs and commutativity in mental calculations. | Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers<br>know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers<br>establish whether a number up to 100 is prime and recall prime numbers up to 19.<br>Recognise and use square numbers and cube numbers, and the notation for squared ($^2$) and cubed ($^3$) | Identify common factors, common multiples and prime numbers.<br>Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. |

| Multiplication and Division: Calculations | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Counting in multiples of 1 to 10 and then to 20. | Counting in multiples of 2,5 and 10.<br><br>Finding the multiple before and after. | Calculate mathematical statements for multiplication and division within the multiplication tables and write then using the multiplication (×) division (÷) and equals (=) signs. | Write and calculate mathematical statements for multiplication tables that they know, including for two-digit numbers times one-digit numbers using mental and progressing to formal written methods. | Multiply two-digit and three-digit numbers by a one-digit number using formal written layout. | Multiply numbers up to 4 digits by a one or two-digit number using formal written method, including long multiplication for two-digit numbers.<br><br>Multiply and divide numbers mentally drawing upon known facts.<br><br>Divide numbers up to 4 digits by and one-digit number using the formal written method of short division and interpret remainders appropriately for the context. | Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication.<br><br>Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders, fractions, or by rounding, as appropriate for the context.<br><br>Perform mental calculations, including with mixed |

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| | | | | | Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. | operations and large numbers. |

| Multiplication and Division: Solve Problems | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Solve problems involving doubling, halving and sharing.<br><br>Solve practical problems that involve combining groups of 2, 5 or 10.<br><br>Share in equal groups. | 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. | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context. | Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. | Solve problems involving multiplying and adding, including using the distribute law to multiply two-digit numbers by one digit. Integer scaling problems such as n objects are connected to m objects. | Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes.<br><br>Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates. | Solve problems involving addition, subtraction, multiplication and division. |

| Multiplication and Division: Combined Operations | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **N/A**<br>**Years 5 and 6 only** | | | | | Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign. | **(BIDMAS)**<br>Use their knowledge of the order of operations to carry out calculations involving the four operations. |

# East Park Primary School Mathematics Progression Document

# East Park Primary School Mathematics Progression Document

| Fractions: Recognise and Write | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Share in equal groups. | Recognise, find and name a half as one of two equal parts of an object, shape or quantity. | Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of length, shape, set of objects or quantity. | Count up and down in tenths; recognise that tenths arise from diving an object into 10 equal parts and in dividing one-digit numbers or quantities by 10<br><br>Recognise, find and write fractions of a discrete set of objections: unit fractions and non-unit fractions with small denominators.<br><br>Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. | Count up and down in hundredths; recognise that hundreds arise when dividing an object by one hundred and dividing tenths by ten. | Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths.<br><br>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number (for example, 2/5+4/5+6/5+1 1/5) | Identify, name, and write equivalent fractions of a given fraction, represented visually, including tenths, hundredths and thousandths.<br>Use common factors to simplify fractions; use common multiples to express fractions in the same denomination<br>Compare and order fractions, including fractions >1<br>Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number (for example, 2/5+4/5+6/5+1 1/5) |

# East Park Primary School Mathematics Progression Document

| Fractions: Compare | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Consider and find how quantities can be shared equally. | Finding half of an amount and comparing that they are the same e.g. half of 10 objects will always be 5 whatever the object is. | Recognise the equivalence of 2/4 and 1/2. | Recognise and show, using diagrams, equivalent fractions with small denominators.<br><br>Compare and order unit fractions, and fractions with the same denominators. | Recognise and show, using diagrams, families of common equivalent fractions. | Compare and order fractions whose denominators are all multiples of the same number. | Use common factors to simplify fractions; use common multiples to express fractions in the same denomination.<br><br>Compare and order fractions, including fractions >1 |

| Fractions: Calculations | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |

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| Consider and find how quantities can be shared equally. | Write simple fractions for example, ½ and find ½ of a concrete amount by sharing. | Write simple fractions for example, ½ Of 6 = 3. Also find ¼ of an amount. | Add and subtract fractions with the same denominator within one whole (for example 5/7+1/7=6/7). | Add and subtract fractions with the same denominator. | Add and subtract fractions with the same denominators that are multiples of the same number.<br><br>Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. | Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions.<br><br>Multiply simple pairs of proper fractions, writing the answer in the simplest form (for example, ¼ x ½ = 1/8)<br><br>Divide proper fractions by whole numbers (for example, 1/3 ÷ 2 = 1/6). |

| Fractions: Solve Problems | | | | | | |
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| EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |

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| Consider and find how quantities can be shared equally in a problem-solving context. | Solve problems and reason which involve all of the above. | Solve problems and reason which involve all of the above. | Solve problems that involve all of the above. | Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. | Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. | Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. |

| Decimals: Recognise and Write | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **N/A**<br>**To these year groups** | | | | Recognise and write decimal equivalents of any number of tenths or hundredths.<br><br>Recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$. | Read and write decimal numbers as fractions (for example, 0.71= 71/100)<br><br>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents. | Identify the value of each digit in numbers given to three decimal places. |

| Decimals: Compare | | | | | | |
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| EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| N/A to these year groups. | | | | Round decimals with one decimal place to the nearest whole number.<br><br>Compare numbers with the same number of decimal places up to two decimal places. | Round decimals with two decimal places to the nearest whole number and to one decimal place.<br><br>Read, write, order and compare numbers with up to three decimal places. | Round decimals with three decimal places to the nearest whole number and to one decimal place.<br><br>Read, write, order and compare numbers with up to three decimal places. |

| Decimals: Calculations and Problems | | | | | | |
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| EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| N/A to these year groups | | | | Find the effect of dividing a one or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. | Solve problems involving number up to three decimal places. | Multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places.<br><br>Multiply one-digit numbers with up to two decimal places by whole numbers.<br><br>Use written division methods in cases where the answer has up to two decimal places.<br><br>Solve problems which require answers to be rounded to specified degrees of accuracy. |

| Fractions, Decimals and Percentages | | | | | | |
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| EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| N/A to these year groups. | | | | Solve simple measure and money problems involving fractions and decimals to two decimal places. | Recognise the percent symbol (%) and understand that percent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal.<br><br>Solve problems which require knowing percentage and decimal equivalents of 1/2 , 1/4, 1/5, 2/5,4/5 and those fractions with a denominator of a multiple of 10 or 25. | Associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375) for a simple fraction (for example, 3/8)<br><br>Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts. |

| Ratio and Proportion | | | | | | |
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| | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| Year 6 only | | | | | | Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.<br><br>Solve problems involving the calculations of percentages (for example, of measures, and such as 15% of 360) and the use of percentages for comparison.<br><br>Solve problems involving similar shapes where the scale factor is known or can be found. |

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| | Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples. |

| Note- although algebraic notion is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3. | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Consider what needs to be added to another number when making number bonds to 5 and 10. | Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = _ - 9. | Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. | Solve problems, including missing number problems. | Solve problems, including missing number problems. | Solve problems, including missing number problems. | Use simple formulae<br><br>Generate and describe linear number sequences.<br><br>Express missing number problems algebraically.<br><br>Find pairs of numbers that satisfy an equation with two unknowns.<br><br>Enumerate possibilities of combinations of two variables. |

# East Park Primary School Mathematics Progression Document

| Measurement: Using Measures | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Compare length, weight and capacity using non-standard measures.<br><br>Uses vocabulary related to weight, length and capacity | Compare, describe and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half)<br><br>Mass/weight (for example, heavy/light, heavier than, lighter than).<br><br>Capacity and volume for example full/empty, more than, less than, half, half full, quarter).<br><br>Time (for example quicker, slower, earlier, later).<br><br>Measure and begin to record the following:<br>Lengths and heights<br>Mass/weight<br>Capacity and volume<br>Time (hours, minutes, seconds). | 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><br>Compare and order lengths, mass, volume/capacity and record the results using >,v < and =. | Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). | Covert between different units of measure (for example, kilometre to metre; hour to minute)<br><br>Estimate, compare and calculate different measures. | Convert between different units of metric measure (for example, kilometre and metre; centimetre and millimetre; gram and kilogram; litre and millimetre).<br><br>Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints.<br><br>Use all four operations to solve problems involving measure (for example, length, mass, volume, money) using decimal notation including scaling. | Solve problems involving the calculation and conversation of units of measure, using decimal notion up to three places where appropriate.<br><br>Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation up to three decimal places.<br><br>Convert between miles and kilometres. |

# East Park Primary School Mathematics Progression Document

| Measurement: Money | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Uses everyday language relating to money such as: shops, shopping, purse, coins, pence, pennies, cost, most and least. | Recognise and know the value of different denominations of coins and notes. | Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.<br><br>Find different combinations of coins that equal the same amounts of money.<br><br>Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. | Add and subtract amounts of money to give change, using both £ and p in practical contexts. | Estimate, compare and calculate different measures, including money in pounds and pence. | Use all four operations to solve problems involving measure (for example, money). | Use all four operations to solve problems involving measure (for example, money). |

# East Park Primary School Mathematics Progression Document

| Measurement: Time | | | | | | |
|---|---|---|---|---|---|---|
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Consider the sequence of events in the day when at school.<br>Discuss the differences between day and night. | Sequence events in chronological order using language (for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening)<br><br>Recognise and use language relating to dates, including days of the week, weeks, months and years.<br><br>Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. | Compare and sequence intervals of time.<br><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><br>Know the number of minutes in an hour and the number of hours in a day. | Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24- hour clocks.<br><br>Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p/m., morning, afternoon, noon and midnight.<br><br>Know the number of seconds in a minute and the number of days in each month, year and leap year.<br><br>Compare durations of events (for example to calculate the time | Read, write and covert time between analogue and digital 12- and 24- hour clocks.<br><br>Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. | Solve problems involving converting between units of time. | Use, read, write and convert between standard units, converting measurements of time from a smaller unit of measure to a larger unit, and vice versa. |

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| | | | taken by particular events or tasks). | | | |

| Measurement: Perimeter, Area and Volume | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Considering the lengths of objects using non-standard measures such as hands and feet.<br><br>Comparing sizes of objects in relation to one another. Who is the tallest in the class?<br><br>Comparing the capacity of how much things will hold through sand and water play. Using language such as more than / less than. | Measure lengths using non-standard measures.<br><br>Compare lengths using non-standard measures.<br><br>Compare and order objects in terms of how many cubes they will hold. | Measure lengths using cm and metres<br><br>Using liquids to find the capacity with litres of given objects.<br><br>Comparing and ordering the capacity of an object. | Measure the perimeter of simple 2-D shapes.<br><br>Finding the capacity using liquids with litres and millilitres. | Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres.<br><br>Find the area of rectilinear shapes by counting squares. | Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. Calculate and compare the area of rectangles (including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes.<br><br>Estimate volume (for example, using 1 cm3 blocks to build cuboids (including cubes)) and capacity (for example, using water). | Recognise that shapes with the same areas can have different perimeters and vice versa.<br><br>Recognise when it is possible to use formulae for area and volume of shapes.<br><br>Calculate the area of parallelograms and triangles.<br><br>Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units (for example, mm3 and km3). |

# East Park Primary School Mathematics Progression Document

| Geometry: 2D Shapes | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.<br><br>Identifies common 2D shapes.<br><br>Describes the properties of 2D shapes. | Recognise and name common 2-D shapes (for example rectangles (including squares), circles and triangles). | Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line.<br><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><br>Compare and sort common 2-D shapes and everyday objects. | Draw 2-D shapes. Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them | Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes.<br><br>Identify lines of symmetry in 2-D shapes presented in different orientations. | Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.<br><br>Use the properties of rectangles to deduce related facts and find missing lengths and angles. | Draw 2-D shapes using given dimensions and angles.<br><br>Compare and classify geometric shapes based on their properties and sizes.<br><br>Illustrate and name parts of circles including radius, diameter and circumference and know that the diameter is twice the radius. |

# East Park Primary School Mathematics Progression Document

| Geometry: 3D Shapes | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.<br><br>Identifies common 3D shapes.<br><br>Describes the properties of 3D shapes. | Recognise and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres). | Recognise and name common 3-D shapes (for example, cuboids (including cubes), pyramids and spheres).<br><br>Compare and sort common 3-D shapes and everyday objects. | Make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. | Identify 3-D shapes, including cubes and other cuboids, from 2-D representations. | Identify 3-D shapes, from 2-D representations. | Recognise, describe and build simple 3-D shapes, including making nets. |

# East Park Primary School Mathematics Progression Document

| Geometry: Angles and Lines | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Point to and recognise the corners of a shape.<br><br>Find the corner of the classroom.<br><br>Find the reading corner.<br><br>Describe movement as forwards and backwards.<br><br>Create patterns which are the repeated. | Recognise that shapes have corners.<br><br>Recognise that lines can be straight, wavy or curved.<br><br>Recognise a straight line in different orientations.<br><br>Be able to describe a movement as a full turn or half of a turn.<br><br>Create patterns which are the same in relation to a designated line. | Recognise corners as vertices of a shape.<br><br>Count and describe the number of corners in a 2D and 3D shape.<br><br>Describe lines as being straight or curved and identify these within a 2D shape.<br><br>Use the language of turn, full-turn, half-turn, clockwise and anti-clockwise to describe how something moves (link to Beebots in Computing) | Recognise angles as a property of shape or a description of a turn.<br><br>Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.<br><br>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. | Identify acute and obtuse angles and compare and order angles up to two right angles by size.<br><br>Identify lines of symmetry in 2-D shapes presented in different orientations.<br><br>Complete a simple symmetric figure with respect to a specific line of symmetry. | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles.<br><br>Draw given angles, and measure them in degrees.<br><br>Identify:<br><br>Angles at a point and one whole turn (total 360°)<br><br>Angles at a point on a straight line and $\frac{1}{2}$ a turn (total 180°)<br><br>Other multiples of 90° | Find unknown angles in any triangles, quadrilaterals, and regular polygons.<br><br>Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles. |

| Geometry: Position and Direction | | | | | | |
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| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Select, rotate and manipulate shapes in order to develop spatial reasoning skills.<br><br>Uses positional language.<br><br>Recreates a simple pattern | Describe position, direction and movement, including whole, half, quarter and three-quarter turns. | Order and arrange combinations of mathematical objects in patterns and sequences.<br><br>Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise). | **N/A for this year group (Properties of shapes only)**<br><br>Know the eight points of a compass (Geography link) | Describe positions on a 2-D grid as coordinates in the first quadrant.<br><br>Describe movements between positions of a given unit to the left/right and up/down.<br><br>Plot specified points and draw sides to complete a given polygon. | Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. | Describe positions on the full coordinate grid (all four quadrants)<br><br>Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |

# East Park Primary School Mathematics Progression Document

| Statistics: Present and Interpret | | | | | | |
|---|---|---|---|---|---|---|
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Counting objects up to 20 to find out how many. | Counting objects to find given totals.<br><br>Organising objects into hoops to show preferences. | Interpret and construct simple pictograms, tally charts, block diagrams and simple tables. | Interpret and present data using bar charts, pictograms and tables. | Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. | Complete, read and interpret information in tables, including timetables. | Interpret and construct pie charts and line graphs and use these to solve problems. |

| Statistics: Solve Problems | | | | | | |
|---|---|---|---|---|---|---|
| **EYFS** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| Counting objects up to 20 to find out how many. | Counting objects to find given totals.<br><br>Discuss what each total shows using language such as most / least | Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.<br><br>Ask and answer questions about totalling and comparing categorical data. | Solve one-step and two-step questions (for example, 'How many more?' and 'How many fewer?') using information presented in scaled bar charts and pictograms and tables. | Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. | Solve comparison, sum and difference problems using information presented in a line graph. | Calculate and interpret the mean as an average. |

| End Points | |
|---|---|
| **EYFS** | Children in Reception will have a deep understanding of number to 10, including the composition of each number; 14. They will know and understanding how to Subitise (recognise quantities without counting) up to 5. They will be able to 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. Children will be able to verbally count beyond 20, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Children will also be able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally. |
| **Year 1** | Children in Year 1 should be able to count to thirty and identify number bonds to ten and twenty. They should be able to add and subtract two groups and write number sentences to show this. They should be able to use resources to show their reasoning. Children should be able to identify a range of simple 2D and 3D shapes and recall basic properties (e.g. corners, faces). They can divide objects into groups and draw simple arrays. They can identify coins and measure simple lengths, heights, capacities and volumes. |
| **Year 2** | Children in Year 2 will be able to count to 100 and beyond. They will use place value to add and subtract a 2digit and a 2digit number beginning to show exchange and carrying. They know their 2,5, and 10 times table They can name and describe common 2d and 3d shapes. They can show mastery in the way that they use their written methods and understand word problems. They will be confident using bar models and part-part whole models. They understand the fractions halves quarters and thirds. They recognize and use coins. They can tell the time to the nearest 15 minutes. |
| **Year 3** | Children in Year 3 have a secure understanding of place value to 3-digit numbers, are able to use the column method confidently to add and subtract 3 numbers. They will have a secure knowledge of the 3,4- and 8-times tables and will be able to use written methods for multiplication and division. |
| **Year 4** | Children in Year 4 have a growing confidence with place value, using these skills within both written and mental calculations for all four operations. Children have developed a better understanding of mathematical reasoning. |
| **Year 5** | Children in Year 5 are prepared for KS2 SATS through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of vocabulary. |
| **Year 6** | Children in Year 6 are prepared for transition to KS3 through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of vocabulary |