**Whole School Maths Progression Map**



**EYFS – Early Learning Goals (ELG)**

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| **Place Value** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Place Value:**  **Counting** | • develop fast recognition of up to 3 objects, without having to count them individually (‘subsidising’)  • recite numbers past 5  • say one number for each item in order: 1, 2, 3, 4, 5  • know that the last number reached when counting a small set of objects tells you how many there are in total (‘cardinal principal’) | • count objects, actions and sounds, up to 10  • subitise with patterns, 5 and 10 frames, dots on dice, fingers, etc (up to 10)  • count beyond ten  • have a deep understanding of number to 10, including the composition of each number  • subitise (recognise quantities without counting) up to 5  • 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  • count numbers to 100 in numerals; count in multiples of twos, fives and tens | • count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward | • 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  • count backwards through zero to include negative numbers | • count forwards and backwards in steps of powers of 10 for any given number up to 1,000,000  • count forwards and backwards with positive and negative whole numbers, including through zero |  |

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| **Place Value** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Place Value:**  **Represent** | • show ‘finger numbers’ up to 5  • experiment with their own symbols and marks as well as numerals  • link numerals and amounts [for example, showing the right number of objects to match the numeral, up to 5] | • link the number symbol (numeral) with its cardinal number value, up to 10 | • identify and represent numbers using objects and pictorial representations  • read and write numbers to 100 in numerals  • read and write numbers from 1 to 20 in numerals and words | • read and write numbers to at least 100 in numerals and in words  • identify, represent and estimate numbers using different representations, including the number line | • read and write numbers to at least 1000 in numerals and in words  • identify, represent and estimate numbers using different representations | • identify, represent and estimate numbers using different representations  • read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value | • read, write (order and compare) numbers to at least 1,000,000 and determine the value of each digit  • read Roman numerals to 1000 (M) and recognise years written in Roman numerals | • read, write (order and compare) numbers to at least 10,000,000 and determine the value of each digit |

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| **Place Value** | | | |
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| **Place Value:**  **Use PV and Compare** | • compare quantities using language: ‘more than’, ‘fewer than’ | • compare numbers using vocabulary: ‘more than’, ‘less than’, ‘fewer’, ‘the same as’, ‘equal to’  • understand the ‘one more than/one less than’ relationship between consecutive numbers  • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity | • given a number, identify one more and one less | • recognise the place value of each digit in a two-digit number  • compare and order numbers from 0 up to 100; use <, > and = signs | • recognise the place value of each digit in a three-digit number (hundreds, tens, ones)  • compare and order numbers up to 1000 | • find 1000 more or less than a given number  • recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, ones)  • order and compare numbers beyond 1000 | • (read, write) order and compare numbers to at least 1,000,000 and determine the value of each digit | • (read, write) order and compare numbers to at least 10,000,000 and determine the value of each digit |

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| **Place Value** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Place Value:**  **Problem & Rounding** |  |  |  | • 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  • solve number and practical problems that involve all of the above with increasingly large positive numbers | • interpret negative numbers in context  • round any number up to 1,000,000 to the nearest 10, 100, 1000, 10 000 and 100 000  • solve number and practical problems that involve all of the above | • round any whole number to a required degree of accuracy  • use negative numbers in context, and calculate intervals across zero  • solve number and practical problems that involve all of the above |

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| **Addition & Subtraction** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Addition & Subtraction:**  **Recall, Represent, Use** |  | • explore the composition of numbers to 10  • automatically recall number bonds for numbers 0–10  • 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 | • read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs  • represent and use number bonds and related subtraction facts within 20 | • recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100  • show the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot  • recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems | • estimate the answer to the 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 |  |

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| **Addition & Subtraction** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Addition & Subtraction:**  **Calculations** |  |  | • add and subtract one-digit and two-digit numbers to 20, including zero | • add and subtract numbers using concrete objects, pictorial representations, and mentally, including:   * a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers | • add and subtract numbers mentally, including:   * a three-digit number and ones * a three-digit number and tens * a three-digit number and hundreds   • add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction | • add and subtract numbers with up to 4 digits using formal written methods of columnar addition and subtraction where appropriate | • add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction)  • add and subtract numbers mentally with increasingly large numbers | • perform mental calculations, including with mixed operations and large numbers  • use their knowledge of the order of operations to carry out calculations involving the four operations |

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| **Addition & Subtraction** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Addition & Subtraction:**  **Solve Problems** | • solve real world mathematical problems with numbers up to 5 | • solve real world mathematical problems with numbers up to 10 | • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = Square PNG, Square Transparent Background - FreeIconsPNG - 9 | • solve problems with addition and subtraction:   * using concrete objects and pictorial representations, including those involving numbers, quantities and measures * applying their increasing knowledge of mental and written methods | • solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction | • solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why | • solve addition and subtraction multi-step problems and 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 meaning of the equal sign | • solve addition and subtraction multi-step problems and contexts, deciding which operations and methods to use and why |

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| **Multiplication & Division** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Multiplication & Division:**  **Recall, Represent, Use** |  | • explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally | • count in 2s, 5s and 10s up to 100 | • 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 any other cannot | • recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables | • recall multiplication and division facts for 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 numbers, and common factors of two numbers  • know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers  • establish whether a number up to 100 is prime and recall prime numbers up to 19  • 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  • use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy |

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| **Multiplication & Division** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Multiplication & Division:**  **Calculations** |  |  |  | • calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs | • write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including 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 a formal written method, including long multiplication for two-digit numbers  • multiply and divide numbers mentally drawing upon known facts  • divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context  • multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 | • multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication  • divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context  • divide numbers up to four digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context  • perform mental calculations, including with mixed operations and large numbers |

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| **Multiplication & Division** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Multiplication & Division:**  **Solve Problems** |  |  | • 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 using multiplication and division, using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts | • 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 distributive law to multiply two numbers by one digit, integer scaling problems and harder correspondence 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  • 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 & Division:**  **Combined Operations** |  |  |  |  |  |  | • solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equal sign | • use their knowledge of the order of operations to carry out calculations involving the four operations |

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| **Fractions, Decimals & Percentages** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Fractions:**  **Recognise and Write** |  |  | • recognise, find and name a half as one of two equal parts of an object, shape or quantity  • recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | • recognise, find, name and write fractions 1/3, ¼, 2/4 and ¾ of a length, shape, set of objects or quantity | • count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and dividing one-digit numbers or quantities by 10  • recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators  • recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators | • count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten | • identify, name and write equivalent fractions of a give fraction, represented visually, including tenths and hundredths  • 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] |  |
| **Fractions:**  **Compare** |  |  |  | • recognise the equivalence of 2/4 and ½ | • recognise and show, using diagrams, equivalent fractions with small denominators  • 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  • compare and order fractions, including fractions >1 |

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| **Fractions, Decimals & Percentages** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Fractions:**  **Calculations** |  |  |  | • write simple fractions for example, ½ of 6 = 3 | • 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 denominator and denominators that are multiples of the same number  • 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  • multiply simple pairs of proper fractions, writing the answer in its simplest form [for example, ¼ x ½ = 1/8]  • divide proper fractions by whole numbers [for example, 1/3 **÷** 2 = 1/6] |
| **Fractions:**  **Solve Problems** |  |  |  |  | • 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 |  |  |

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| **Fractions, Decimals & Percentages** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Decimals:**  **Recognise and Write** |  |  |  |  |  | • recognise and write decimal equivalents of any number of tenths or hundredths  • recognise and write decimal equivalents to ¼, ½, ¾ | • read and write decimal numbers as fractions [for example, 0.71 = 71/100]  • 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** |  |  |  |  |  | • round decimals with one decimal place to the nearest whole number  • 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  • read, write order and compare numbers with up to three decimal places |  |

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| **Fractions, Decimals & Percentages** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Decimals:**  **Calculations and Problems** |  |  |  |  |  | • find the effect of dividing a one- of two-digit number by 10 and 100, identifying the value of 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  • multiply one-digit numbers with up to two decimal places by whole numbers  • use written division methods in cases where the answer has up to two decimal places  • solve problems which require answers to be rounded to specified degrees of accuracy |

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| **Fractions, Decimals & Percentages** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Fractions, Decimals and Percentages** |  |  |  |  |  | • 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  • solve problems which require knowing percentage and decimal equivalents of ½, ¼, 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]  • recall and use equivalences between simple fractions, decimals and percentages, including in different contexts |

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| **Ratio & Proportion** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Ratio and Proportion** |  |  |  |  |  |  |  | • solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts  • solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison  • solve problems involving similar shapes where the scale factor is known or can be found  • solve problems involving unequal sharing and grouping using knowledge of fractions and multiples |

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| **Algebra** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Algebra** |  |  | • solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = Square PNG, Square Transparent Background - FreeIconsPNG - 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 |  |  | • use simple formulae  • generate and describe linear number sequences  • express missing number problems algebraically  • find pairs of numbers that satisfy an equation with two unknowns  • enumerate possibilities of combinations of two variables |

Note – although algebraic notation 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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| **Measurement** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Measurement:**  **Using Measures** | • make comparisons between objects relating to size, length, weight and capacity | • compare length, weight and capacity by making predictions and using vocabulary ‘than’ [for example, “This is heavier than that.”] | • compare, describe and solve practical problems for:   * lengths and heights [eg., long/short, longer/shorter, tall/short, double/half] * mass/weight [eg. heavy/light, heavier/lighter, lighter than] * capacity and volume [e.g, full/empty, more than, less than, half, half full, quarter] * time [e.g, quicker, slower, earlier, later]   • measure and begin to record the following:   * lengths and heights * mass/weight * capacity and volume * 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 (oC); capacity (litres, ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels  • compare and order lengths, mass, volume/capacity and record the results using >, < and = | • measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) | • Convert between different units of measure [for example, kilometre to metre; hour to minute]  • estimate, compare and calculate different measures | • convert between different units of metric measure (for example, kilometre and metre; centimetre and metre, centimetre and millimetre; gram and kilogram; litre and millilitre)  • understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints  • 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 conversion of units of measure, using decimal notation up to three decimal places where appropriate  • 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 to up to three decimal places  • convert between miles and kilometres |

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| **Measurement** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Measurement:**  **Money** |  |  | • 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  • find different combinations of coins that equal the same amounts of money  • 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 changes, 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] |  |

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| **Measurement** | | | | | | | | |
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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Measurement:**  **Time** | • begin to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then...’ |  | • sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening]  • recognise and use language relating to dates, including days of the week, weeks, months and years  • 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  • 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  • 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  • 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  • know the number of seconds in a minute and the number of days in each month, year and leap year  • compare durations of events [for example to calculate the time taken by particular events or tasks] | • read, write and convert time between analogue and digital 12- and 24- hour clocks  • 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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| **Measurement** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Measurement:**  **Perimeter, Area, Volume** |  |  |  |  | • measure the perimeter of simple 2-D shapes | • measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres  • 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 squares), and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes  • 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  • recognise when it is possible to use formulae for area and volume of shapes  • calculate the area of parallelograms and triangles  • 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] |

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| **Geometry** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Geometry:**  **2-D Shapes** | • talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: ‘sides’, ‘corners’; ‘straight’, ‘flat’, ‘round’. | • select, rotate and manipulate shapes in order to develop spatial reasoning skills  • compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can | • recognise and name common 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  • identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid]  • compare and sort common 2-D shapes and everyday objects | • draw 2-D shapes | • compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes  • 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  • use the properties of rectangles to deduce related facts and find missing lengths and angles | • draw 2-D shapes using given dimensions and angles  • compare and classify geometric shapes based on their properties and sizes  • illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius |
| **Geometry:**  **3-D Shapes** | • select shapes appropriately: flat surfaces for building, a triangular prism for a roof etc.  • combine shapes to make new ones - an arch, a bigger triangle etc. | • select, rotate and manipulate shapes in order to develop spatial reasoning skills | • 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]  • 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 | • recognise, describe and build simple 3-D shapes, including making nets |

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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Geometry:**  **Angles & Lines** |  |  |  |  | • recognise angles as a property of shape of a description of a turn  • 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  • 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  • identify lines of symmetry in 2-D shapes presented in different orientations  • complete a simple symmetric figure with respect to a specific line of symmetry | • know angles are measure in degrees: estimate and compare acute, obtuse and reflex angles  • draw given angles, and measure them in degrees  • identify:   * angles at a point and one whole turn (total 360o) * angles at a point on a straight line and ½ a turn (total 180o) * other multiples of 90o | • find unknown angles in any triangles, quadrilaterals, and regular polygons  • recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles |

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|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Geometry:**  **Position & Direction** | • understand position through words alone – for example, “The bag is under the table,” – with no pointing  • describe a familiar route  • discuss routes and locations, using words like ‘in front of’ and ‘behind’  • talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like ‘pointy’, ‘spotty’, ‘blobs’ etc.  • extend and create ABAB patterns – stick, leaf, stick, leaf  • notice and correct an error in a repeating pattern | • continue, copy and create repeating patterns [including AB, ABB and ABBC] | • describe position, direction and movement, including whole, half, quarter and three-quarter turns | • order and arrange combinations of mathematical objects in patterns and sequences  • 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) |  | • describe positions on a 2-D grid as coordinates in the first quadrant  • describe movements between positions as translations of a given unit to the left/right and up/down  • 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)  • draw and translate simple shapes on the coordinate plane, and reflect them in the axes |

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| **Statistics** | | | | | | | | |
|  | **EYFS** | | **KS1** | | **KS2** | | | |
|  | **3-4 Years** | **Reception** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Statistics:**  **Present & Interpret** |  |  |  | • 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** |  |  |  | • ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity  • 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 different 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 |