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| **Year 1 Maths** |
| Vocabulary: (new to the year):  Numeral, forwards, backwards, equivalent to, most, least, many, multiple of, half-way between, above, below, roughly, addition, near double, halve, subtracts, equals, is the same as, number bonds, pairs, multiplication, multiply, division, dividing, grouping, array, fraction, equal part, measurement, centimetre, ruler, metre stick, kilogram, litre, capacity, volume, more than, less than, Months, Seasons, earlier, later, hour, minute, change, total, symmetry, point, cuboid, cylinder, underneath, centre, quarter turn, three-quarter turn, problem solving, mental, explain.  Twenty-one, Twenty-two…one hundred |
| People:  Robert Recorde. |
| Places:  Wales |
| Events: The equals sign (=) was invented in 1557 by a Welsh mathematician named Robert Recorde. |
| Knowledge:  Autumn:   * Number and Place Value: Numbers to 10 * Calculations: Addition and subtraction * Geometry: Positions * Number and Place Value: Numbers to 20 * Calculations: addition and subtraction within 20   Spring:   * Calculations: addition and subtraction within 20 * Geometry: Properties of shapes * Measurement: Length and Height * Number and Place value: Numbers to 40. * Calculations: addition and subtraction * Calculations: Multiplication   Summer:   * Calculations: Multiplication * Calculations: Division * Fractions * Number and Place Value to 100 * Measurement: Time * Measurement: Money * Measurement: Volume and Capacity * Measurement: Mass * Geometry: Space |
| Skills:   * Develop confidence and mental fluency with whole numbers, counting and place value * Using practical resources to model understanding * Recognise, draw, describe, compare and sort different shapes * Describe and compare different quantities e.g length, mass, capacity, time, volume, money * Begin to speak using mathematical vocabulary confidently especially for four operations |

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| Year 2 Maths |
| Vocabulary (new to the year):  One hundred…one thousand, sequence, continue, predict, rule < greater then, > less than, hundreds, digit, exchange, tens boundary, groups of, times, repeated addition, share equally, left over, row, column, multiplication table, multiplication fact, equivalent fraction, mixed number, numerator, denominator, two halves, two quarters, three quarters, one third, measuring scale, gram, millilitre, contain, temperature, degree, fortnight, minutes past, digital, analogue, clock, watcher, timer, surface, line symmetry, rectangular, circular, triangular, pentagon, hexagon, octagon, clockwise, anticlockwise, right angle, straight line, tally, most popular/common  Show how you…explain your method…describe the pattern….describe the rule…investigate….mental calculation, written calculation. |
| People:  Pythagoras, Euclid and Archimedes |
| Places:  Greece, Rome, Egypt, India |
| Events:  Roman Numerals- number system. Tallys for numbers. It is believed that Ancient Egyptians used complex mathematics such as algebra, arithmetic and geometry as far back as 3000 BC. Indian- first used Zero and other numerals. |
| Knowledge:  Autumn:  Number and place value: Numbers to 100  Calculation: addition and subtraction  Calculations: Multiplication of 2,5 and 10  Calculations: Multiplication and Division of 2,5 and 10  Measurement: Length  Measurement: Mass  Measurement: Temperature  Spring:  Statistics: Picture Graphs  Calculations: More word problems  Measurement: Money  Geometry: 2D shapes  Geometry: 3D Shapes  Fractions  Summer:  Measurement: Time  Measurement: Volume  Revision for SATS. |
| Skills:   * Known number bonds to 20 * Precision in understanding and using place value * Read and spell mathematical vocabulary and speak with increasing confidence. * Asking their own questions * Development of reasoning skills and the steps involved in breaking down a worded problem. * Verbal reasoning -partner discussion of ideas * Range of methods being considered. |

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| Year 3 Maths |
| Vocabulary (new to the year):  Factor of, relationship, roman numerals, one hundred more/less, approximately, round, product, hundreds boundary, remainder, sixths, sevenths, eights, tenths, millimetre, kilometre, mile, distance apart/between, perimeter, centigrade, century, calendar, earliest, latest, a.m, p.m, pentagonal, hexagonal, octagonal, quadrilateral, right-angled, parallel, perpendicular, hemisphere, prism, compass point, north, south, east, west, horizontal, vertical, diagonal, acute, obtuse angle, bar chart, frequency table, Carroll diagram, Venn diagram, axis, axes, greatest value, least value, |
| People:  Eucid- “father of geometry” |
| Places:  Greece |
| Events:  He is most famous for his works in geometry, inventing many of the ways we conceive of space, time, and shapes. |
| Knowledge:  Autumn:  Number and Place Value: Numbers to 1000  Calculations: Addition and Subtraction  Calculations: Multiplication and Division  Calculations: Further Multiplication and Division  Spring:  Measurement: Length  Measurement: Mass  Measurement: Volume  Measurement: Money  Measurement: Time  Summer:  Statistics: Picture and Bar Graphs  Fractions, decimals and percentages  Geometry: Angles  Geometry: Lines and Shapes  Measurement: Perimeter of figures. |
| Skills:   * Increased fluency with whole numbers and four operations * Confidence in expressing number facts and concept of place value * Efficient written and mental methods * Performing calculations accurately with increasingly large numbers * Develop their ability to solve a range of problems including with fractions and decimals * Drawing with accuracy * Using measuring instruments with accuracy and make connections between measure and number. * Develop mathematical reasoning- through discussions and journaling. * Analyse shapes and their properties. * Understanding of rounding and estimating * How to show information/data in a range of ways. |

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| **Year 4 Maths** |
| Vocabulary (new to the year):  Tenths, hundredths, Decimal (places), Round (to nearest) Thousand, more/less than, Negative, integers, Count through zero, Roman numerals (I to C), Multiplication facts (up to 12x12), Division facts, Inverse, Derive, Coordinates, Translation, Quadrant x-axis, y-axis, Perimeter and area, Quadrilaterals, Triangles, Right angle, acute and obtuse angles, Equivalent decimals and fractions, Continuous data Line graph, Convert. |
| People:  Sir Isaac Newton |
| Places:  London |
| Events: The London mint assay was created by Sir Isaac Newton in 1702 |
| Knowledge:  Autumn:   * Place Value - Numbers to 10,000 * Calculations - Addition and Subtraction within 10,000 * Calculations - Multiplication and Division * Calculations - Further Multiplication and Division   Spring:   * Statistics – Graphs * Calculations – Fractions * Measurement – time * Calculations - Decimals   Summer:   * Calculations – Money * Measurement – Mass, volume and length * Measurement - Area of figures * Geometry – angles, triangles, quadrilaterals, symmetry * Geometry – Position and Movement * Calcuations – Roman Numerals |
| Skills:   * Develop confidence and mental fluency with 6, 7, 9, 11 and 12 times tables. * Increased fluency with whole numbers and four operations * Confidence in expressing number facts and concept of place value * Efficient written and mental methods * Performing calculations accurately with increasingly large numbers * Develop their ability to solve a range of problems including with fractions and decimals * Drawing with accuracy * Using measuring instruments with accuracy and make connections between measure and number. * Develop mathematical reasoning- through discussions and journaling. * Analyse shapes and their properties. * Understanding of rounding and estimating * How to show information/data in a range of ways. * Using practical resources to model understanding * Use their mathematical vocabulary every day. |

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| **Year 5 Maths** |
| Vocabulary (new to the year):  Powers of 10 Efficient written method Factor pairs Composite numbers, prime number, prime factors, square number, cubed number Formal written method Volume Imperial units, metric units Reflex angle Dimensions Regular and irregular Polygons Proper fractions, improper fractions, mixed numbers Percentage Half, quarter, fifth, two fifths, four fifths |
| People:  Carl Friedrich Richard Foerster and Euclidean and Archimedes |
| Places:  Berlin, Warsaw, Greece |
| Events: During his time at the University of Breslau he invented the photometer and perimeter  The inventors of area |
| Knowledge:  Autumn:   * Place Value - Numbers to 1,000,000 * Calculations - Addition and Subtraction within 1,000,000 * Calculations – Whole numbers - Multiplication and Division including squared and cubed numbers * Calculations – Multiplication and Division word problems * Statistics – Graphs   Spring:   * Calculations – Fractions * Calculations – Decimals * Calculations – Percentages * Statistics – Graphs * Geometry – Position and Movement   Summer:   * Geometry - Area and Perimeter * Measurement – Converting units of length, mass and time * Measurement - Volume * Geometry – Position and Movement * Calcuations – Roman Numerals |
| Skills:   * Develop mental fluency with 6, 7, 9, 11 and 12 times tables. * Increased fluency with whole numbers and four operations * Confidence in expressing number facts and concept of place value * Efficient written and mental methods * Performing calculations accurately with increasingly large numbers * Develop their ability to solve a range of problems including with fractions and decimals * Drawing with accuracy * Using measuring instruments with accuracy and make connections between measure and number. * Develop mathematical reasoning- through discussions and journaling. * Analyse shapes and their properties. * Understanding of rounding and estimating * How to show information/data in a range of ways. * Using practical resources to model understanding * Use their mathematical vocabulary every day. |

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| **Year 6 Maths** |
| Vocabulary (new to the year):  Numbers to ten million Order of operations Order of operations Common factors, common multiples Four quadrants (for coordinates) Vertically opposite (angles) Circumference, radius, diameter, Degree of accuracy, Simplify, Linear, number sequence, Substitute, Variables, Symbol, Known values, Mean, Pie chart, Construct, ratio and proportion, algebra |
| People: Muhammad Ibn Musa Al-Khawarizmi and Rene Decartes |
| Places: Middle East, Czech Republic |
| Events: The father of Algebra in the 5th Century. The creator of modern algebra |
| Knowledge:  Autumn:   * Place Value - Numbers to 10,000,000 * Calculations - Addition and Subtraction within 10,000,000 * Calculations – Whole numbers - Multiplication and Division including squared and cubed numbers * Measurement – Converting units of length, mass, volume and time * Calculations – Word problems   Spring:   * Calculations – Fractions, Decimals and Percentages * Calculations – Ratio and algebra * Geometry – Area and Perimeter * Geometry – Positon and Movement * Revision for SAT’s   Summer:   * Calculations - Negative Numbers * Calculations – Word Problems |
| Skills:   * Develop confidence and mental fluency with 6, 7, 9, 11 and 12 times tables. * Increased fluency with whole numbers and four operations * Confidence in expressing number facts and concept of place value * Efficient written and mental methods * Performing calculations accurately with increasingly large numbers * Develop their ability to solve a range of problems including with fractions and decimals * Drawing with accuracy * Using measuring instruments with accuracy and make connections between measure and number. * Develop mathematical reasoning- through discussions and journaling. * Analyse shapes and their properties. * Understanding of rounding and estimating * How to show information/data in a range of ways. * Using practical resources to model understanding * Use their mathematical vocabulary every day. |