

Year 7

| Topic Outline | Students should know and understand | Students should be able to |
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| Number 1 | <ul style="list-style-type: none"> place value and its links with decimals, fractions and negative numbers. | <ul style="list-style-type: none"> I can understand and use place value for decimals and integers I can understand and use place value for measures I can order negative and positive numbers I can order decimals and fractions I can use a numbers line to problem solve I can use the symbols \neq $<$ $>$ \leq \geq |
| Number 1 | <ul style="list-style-type: none"> different types of numbers e.g. Prime, factors, multiples. | <ul style="list-style-type: none"> I can find factors, multiples, common factors and common multiples I can find highest common factors I can find lowest common multiples I can find prime factors, including product notation |
| Number 1 | <ul style="list-style-type: none"> how to use the four operations and have formal method. | <ul style="list-style-type: none"> I can use the four operations, including formal written methods applied to integers I can use the four operations, including formal written methods using positive and negative numbers |
| October Half term | | |
| Data | <ul style="list-style-type: none"> describe, and interpret graphs and charts. find and use averages | <ul style="list-style-type: none"> I can interpret and compare graphs of discrete data I can compare and interpret graphs showing continuous and grouped data I can find the mean for a set of data I can find the median for a set of data I can find the mode for a set of data I can find the range for a set of data I can compare two data sets using an average and a measure of spread I can recognise and describe outliers |

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| | | <ul style="list-style-type: none"> • I can construct and interpret frequency tables • I can construct bar charts for discrete data • I can construct bar charts for grouped data • I can construct and interpret pictograms • I can construct a pie chart • I can interpret and compare pie charts • I can construct and interpret a vertical/bar line chart |
| Algebra 1 | <ul style="list-style-type: none"> • use algebraic notation and know to simplify • writing expressions including formulae. | <ul style="list-style-type: none"> • I can use algebraic notation • I can write coefficients as fractions instead of decimals • I can write algebraic notation using brackets • I can substitute values into formulae and expressions • I can tell the difference between an expression and equation • I can collect like terms • I can multiply a single term over a bracket • I can take out common factors • I can expand a bracket |
| Spring term | | |
| Ratio 1 | <ul style="list-style-type: none"> • convert units, use ratio notation and problem solve with ratios | <ul style="list-style-type: none"> • I can convert between units of time • I can convert between units of length • I can convert between units of area • I can convert between units of volume and capacity • I can convert between units of mass • I can express one amount as a fraction of another • I can use ratio notation • I can simplify a ratio • I can divide a quantity into parts using a given ratio • I can find the missing part of a ratio given the whole • I can compare amounts using ratios • I can convert a ratio to a fraction and vice versa |
| Number 2 | <ul style="list-style-type: none"> • how to use the four operations and have formal method. | <ul style="list-style-type: none"> • I can use the four operations, including formal written methods applied to proper and improper fractions and mixed numbers • I can find values using BIDMAS • I can find values using BIDMAS including powers and roots |

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| | | <ul style="list-style-type: none"> • I can use inverses to problem solve |
| Number 2 | <ul style="list-style-type: none"> • round numbers and measures. | <ul style="list-style-type: none"> • I can round numbers to decimal places • I can round numbers to significant figures |
| Number 2 | <ul style="list-style-type: none"> • use standard units of measure | <ul style="list-style-type: none"> • I can convert and problem solve with units of mass and length • I can convert and problem solve with time • I can problem solve with money |
| End of term exam week | | |
| Summer term | | |
| Shape 1 | <ul style="list-style-type: none"> • how to find the areas and volumes of key 2D and 3D shapes • find missing angles using key facts | <ul style="list-style-type: none"> • I can find areas of triangles • I can find areas of parallelograms • I can find the areas of a trapezium • I can find the perimeter of a variety of 2D shapes • I can find the volume of a cuboid • I can find the volume of a cube • I can find the volume of a cylinder • I can find the perimeter of a circle • I can find the area of compound shapes • I can draw and measure lines accurately • I can draw and measure angles accurately • I can find angles at a point • I can find angles on straight lines • I can find and recognise vertically opposite angles • I can understand the relationship between parallel lines • I can find alternate angles • I can find corresponding angles • I can derive that sum of the angles in a triangle |
| Algebra 2 | <ul style="list-style-type: none"> • use formulae linked to science • work with coordinates in all four quadrants • find and use sequences | <ul style="list-style-type: none"> • I can use scientific formulae • I can write formulae • I can plot coordinates in all four quadrants • I can generate a sequence from a term-to-term rule • I can generate a sequence from a term-to-position rule |

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| | | <ul style="list-style-type: none">• I can find the nth term• I can find terms in a geometric sequence |
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YEAR 8 DELTA SET 1

| Topic Outline | Students should know and understand | Students should be able to |
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| NUMBER powers and indices | <ul style="list-style-type: none"> • How to use factors, powers and indices laws. • Prime factor decomposition • Powers of 10 | <ul style="list-style-type: none"> • Write the prime factor decomposition of a number. • Use prime factor decomposition to find the HCF or LCM of two numbers. • Work out the laws of indices for positive powers. • Show that any number to the power of zero is 1. • Use the laws of indices for multiplying and dividing. • Use and understand powers of 10. • Use the prefixes associated with powers of 10. • Understand the effect of multiplying and dividing by any integer power of 10. • Calculate with powers. • Round to a number of significant figures. |
| ALGEBRA powers and expressions | <ul style="list-style-type: none"> • Simplify expressions • Expanding and simplifying • Substituting and solving | <ul style="list-style-type: none"> • Simplify expressions involving powers and brackets. • Understand the meaning of an identity • Use the index laws in algebraic calculations and expressions. • Simplify expressions with powers. • Write and simplify expressions involving brackets and powers. • Factorise an algebraic expression. • Substitute integers into expressions. • Construct and solve equations. |
| October Half term | | |
| SHAPE | <ul style="list-style-type: none"> • How to find areas and volumes of 2d and 3d shapes | <ul style="list-style-type: none"> • Use 2D representations of 3D solids. • Sketch nets of 3D solids. |

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| | <ul style="list-style-type: none"> • How to use Pythagoras' Theorem. | <ul style="list-style-type: none"> • Calculate the surface area of prisms. • Calculate the volume of right prisms. • Name the different parts of a circle. • Calculate the circumference. • Calculate the radius or diameter when you know the circumference. • Calculate the area of a circle. • Calculate the radius or diameter when you know the area. • Calculate the volume and surface area of a cylinder. • Use Pythagoras' theorem in right-angled triangles. |
| NUMBER and PROPORTION | <ul style="list-style-type: none"> • How to use graphs in a variety of forms and use them to problem solve. | <ul style="list-style-type: none"> • Recognise when values are in direct proportion. • Recognise when values are in direct proportion. • Interpret graphs from different sources. • Understand financial graphs. • Understand financial graphs. • Draw and interpret distance–time graphs. • Use distance–time graphs to solve problems. • Interpret graphs that are curved. • Interpret real-life graphs. • Understand when graphs are misleading. |
| END OF TERM | | |
| SHAPE and SPACE | <ul style="list-style-type: none"> • How to use transformations | <ul style="list-style-type: none"> • Describe and carry out translations. • Describe and carry out reflections. • Describe and carry out rotations. • Enlarge a shape. • Describe an enlargement. • Enlarge a shape using negative scale factors. • Enlarge a shape using fractional scale factors. |

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| | | <ul style="list-style-type: none"> • Transform 2D shapes using a combination of reflection, rotation, enlargement and translation. • Identify planes of reflection symmetry in 3D solids. • Find the perimeter and area of 2D shapes after enlargement. • Find the volume of 3D solids after enlargements. • |
| RATIO AND PROPORTION | <ul style="list-style-type: none"> • Work with percentages, fractions and proportional change | <ul style="list-style-type: none"> • Recognise fractional equivalents to important recurring decimals • Recognise which denominators of simple fractions produce recurring decimals • Change a recurring decimal into a fraction. • Calculate percentages • Work out an original quantity before a percentage increase or decrease • Calculate percentage change. • Calculate the effect of repeated percentage changes. |
| FEBRUARY HALF TERM | | |
| SHAPE AND SPACE | <ul style="list-style-type: none"> • Accurately construct triangles and 2d shapes using rulers, compasses and protractors. • Use construction skills and link with loci. | <ul style="list-style-type: none"> • Draw triangles accurately using a ruler and protractor. • Draw diagrams to scale. • Draw accurate nets of 3D solids. • Construct triangles using a ruler and compasses. • Construct nets of 3D solids using a ruler and compasses. • Bisect a line using a ruler and compasses. • Construct perpendicular lines using a ruler and compasses. • Bisect angles using a ruler and compasses. |

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| | | <ul style="list-style-type: none"> • Draw accurate diagrams to solve problems. • Draw a locus. • Use loci to solve problems. |
| END OF TERM | | |
| PROBABILITY | <ul style="list-style-type: none"> • The language of probability, and know how to predict the likelihood of an event happening | <ul style="list-style-type: none"> • Calculate and compare probabilities. • Decide if a game is fair. • Identify mutually exclusive outcomes and events. • Find the probabilities of mutually exclusive outcomes and events. • Find the probability of an event not happening. • Calculate the relative frequency of a value. • Use relative frequency to make estimates. • Use relative frequency to estimate the probability of an event. • Use estimated probability to calculate expected frequencies. • Carry out a probability experiment. • Estimate probability using data from an experiment. • Work out the expected results when an experiment is repeated. • List all the possible outcomes of one or two events in sample space diagrams or Venn diagrams. • Calculate probabilities of repeated events. • Use tree diagrams to find the probabilities of two or more events. |
| SHAPE AND SPACE | <ul style="list-style-type: none"> • How to use scale drawings, maps and plans And how similarity and congruence can be used to problem solve. | <ul style="list-style-type: none"> • Use scales in maps and plans. • Use and interpret maps. • Measure and use bearings. • Draw diagrams to scale using bearings. • Draw diagrams to scale. |

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| | | <ul style="list-style-type: none"> • Use and interpret scale drawings. • Identify congruent and similar shapes. • Use congruence to solve problems in triangles and quadrilaterals. • Use similarity to solve problems in 2D shapes. |
| HALF TERM | | |
| ALGEBRA | <ul style="list-style-type: none"> • How to use equations of graphs to plot and interpret linear graphs positions on axes | <ul style="list-style-type: none"> • Plot straight-line graphs. • Find the y-intercept of a straight-line graph. • Find the gradient of a straight-line graph. • Plot graphs using the gradient and y-intercept. • Use $y = mx + c$ • Find the equation of a straight-line graph. • Identify parallel and perpendicular lines. • Find the inverse of a linear function. • Plot and use non-linear graphs. |
| END OF YEAR | | |

YEAR 8 THETA SET 2 AND 3

| Topic Outline | Students should know and understand | Students should be able to |
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| NUMBER AND ALGEBRA | <ul style="list-style-type: none"> • How to apply number skills and facts to algebra using inverse, powers and the order of operations. | <ul style="list-style-type: none"> • Use written methods to add and subtract with decimals. • Calculate mentally. • Calculate with money. • Estimate answers to calculations. • Add, subtract, multiply and divide positive and negative numbers. • Calculate using squares, square roots, cubes and cube roots. • Use index notation for powers of numbers. • Estimate the square root of a number. • Use mental methods to calculate combinations of powers roots and brackets. • Use a calculator to check answers. • Substitute numbers into formulas involving power, roots and brackets. • Substitute into algebraic expressions involving powers. • Write expressions and formulae. • Change the subject of a formula. • Simplify expressions involving brackets, use rules for indices and factorise expressions. • Multiply out double brackets and collect like terms. • Use index notation. • Write a number as a product of its prime factors. |

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| | | <ul style="list-style-type: none"> • Use prime factor decomposition to find the HCF and LCM. |
| SHAPE AND SPACE | <ul style="list-style-type: none"> • Derive and use formulae to find areas and volumes of 2D and 3D shapes. | <ul style="list-style-type: none"> • Derive and use the formula for the area of a triangle. • Find areas of compound shapes. • Calculate areas of parallelograms and trapezia. • Calculate the volume of cubes and cuboids. • Sketch nets of 3D solids. • Calculate the surface area of cubes and cuboids. |
| October Half term | | |
| ALGEBRA | <ul style="list-style-type: none"> • The link between number and algebra and be able to apply these skills using key algebraic techniques. | <ul style="list-style-type: none"> • Understand and simplify algebraic powers. • Substitute values into formulas involving powers. • Expand brackets. • Make and simplify algebraic expressions. • Substitute into algebraic expressions involving powers. • Write expressions and formulae. • Change the subject of a formula. • Simplify expressions involving brackets, use rules for indices and factorise expressions. • Multiply out double brackets and collect like terms. • Factorise expressions. • Find the inverse of a function. • Solve simple equations using function machines. • Solve real life problems using equations. • Solve two-step equations using function machines. • Solve equations using the balancing method. • Solve equations with the unknown number on both sides. |

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| <p>DATA HANDLING AND PROPORTION</p> | <ul style="list-style-type: none"> • How to use different graphs to problem solve | <ul style="list-style-type: none"> • Reading values from conversion graphs. • Plotting conversion graphs from a table of data. • Interpreting distance-time graphs. • Plotting distance-time graphs from descriptive text. • Using distance-time graphs to solve problems. • Plotting line graphs from tables of data. • Interpreting line graphs. • Reading values from real-life graphs. • Describing trends and making predictions based on information presented graphically. • Draw, use and interpret conversion graphs. • Discuss and interpret linear and non-linear graphs. • Using graphs to solve problems and make predictions. |
| <p>END OF TERM</p> | | |
| <p>NUMBER</p> | <ul style="list-style-type: none"> • Understand the concept of a decimal both positive and negative and that the four operations can be applied. | <ul style="list-style-type: none"> • Rounding whole numbers and decimals. • Writing large numbers as a decimal number of millions. • Ordering positive and negative decimals. • Using the symbols $>$ and $<$ between two negative decimals. • Multiplying larger numbers. • Multiplying decimals with up to two decimal places. • Multiplying any number by 0.1 and 0.01. • Adding and subtracting decimals of any size. • Multiplying and dividing by decimals. • Dividing by 0.1 and 0.01. • Using ratios involving decimals. • Solving proportion problems involving decimals. • Solving engineering problems using ratio and proportion. |

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| SHAPE AND SPACE | <ul style="list-style-type: none"> • Use the properties of quadrilaterals and angles facts to problem solve. | <ul style="list-style-type: none"> • Using unit ratios. • Matching quadrilaterals to their descriptions. • Using known facts about quadrilaterals to solve problems. • Using alternate angles to find unknown angles. • Using reasoning to complete mathematical proofs. • Solving geometrical problems using side and angle properties of triangles and quadrilaterals. • Identifying corresponding angles. • Solving problems using properties of angles in parallel and intersecting lines. • Calculating the sum of the interior and exterior angles of a polygon. • Calculating the interior and exterior angles of a polygon. • Finding unknown angles by forming and solving equations. • Solving geometrical problems showing reasoning. |
| May half term | | |
| NUMBER AND PROPORTION | <ul style="list-style-type: none"> • Apply the four operations to fractions including mixed numbers. | <ul style="list-style-type: none"> • Adding and subtracting fractions with any size denominator. • Multiply integers and fractions by a fraction. • Use appropriate methods for multiplying fractions. • Convert fractions to decimals. • Write one amount as a fraction of another. • Find the reciprocal of a number. • Divide integers and fractions by a fraction. • Use strategies for dividing fractions. • Use the four operations with mixed numbers. |

| END OF TERM | | |
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| NUMBER AND PROPORTION | <ul style="list-style-type: none"> • Use proportional graphs and then see the links between linear graphs and their properties. | <ul style="list-style-type: none"> • Recognising when values are in direct proportion. • Plotting graphs and reading values to solve problems. • Plot a straight-line graph and work out its gradient. • Plot the graphs of linear functions. • Find midpoints of line segments. • Write the equations of straight line graphs in the form $y = mx + c$ • Identify and describe practical examples of direct proportion. • Solve problems involving direct proportion with or without a graph. |
| FRACTIONS, DECIMALS AND PERCENTAGES | <ul style="list-style-type: none"> • Use fractions in contexts and be able to apply number strategies. | <ul style="list-style-type: none"> • Recall equivalent fractions and decimals. • Recognise recurring and terminating decimals. • Order fractions by converting them to decimals or equivalent fractions. • Recall equivalent fractions, decimals and percentages. • Use different methods to find equivalent fractions, decimals and percentages. • Use the equivalence of fractions, decimals and percentages to compare proportions. • Working out one number as a percentage of another. • Working out percentage increase and decrease. • Use a multiplier to calculate percentage increase and decrease. • Use the unitary method to solve percentage problems. |

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| | | <ul style="list-style-type: none"> • Use strategies for calculating fractions and decimals of a given number. • Use mental strategies of conversion and equivalence of fractions, decimals and percentages to solve word problems mentally. |
| Summer half term | | |
| DATA HANDLING | <ul style="list-style-type: none"> • Design, interpret and construct a varies of diagrams including, pie charts, scatter graphs and line graphs. • Compare sets of data using averages. | <ul style="list-style-type: none"> • Identify sources of primary and secondary data. • Choose a suitable sample size and what data to collect. • Identify factors that may affect data collection and plan to reduce bias. • Design a good questionnaire. • Design and use data collection sheets and tables. • Interpret simple pie charts. • Calculate angles and draw pie charts. • Drawing and interpreting two-way tables. • Calculating the mean from a simple frequency table. • Tallying data into a grouped frequency table, designing a grouped frequency table, using $a \leq x < b$ notation, finding modal class and estimating range. • Drawing and interpreting stem and leaf diagrams with different stem values. • Finding mode, median and range from stem and leaf diagrams, and comparing them for different data sets. • Compare data using averages and range, including mean calculated from frequency table. |

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| | | <ul style="list-style-type: none">• Compare data using the shape of a line graph or pie chart.• Draw line graphs to compare sets of data.• Decide on the most appropriate average to use.• Draw scatter graphs.• Describe types of correlation.• Draw a line of best fit by eye on a scatter graph.• Identify graphs and charts that are misleading because of the scales used and missing axis labels, mainly in financial contexts. |
| END OF YEAR | | |

Year 8 set 4 and 5

| Topic Outline | Students should know and understand | Students should be able to |
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| NUMBER AND RATIO | <ul style="list-style-type: none"> The link between numbers and their size. The use of BIDMAS, and negative numbers. | <ul style="list-style-type: none"> Add and subtract larger numbers. Multiply larger numbers. Use brackets. Add and subtract with negative numbers. Multiply and divide negative numbers. Work with ratios. Find equivalent ratios. Solve simple word problems involving ratio. Understand the relationship between ratio and proportion. Use proportion to solve simple problems. |
| SHAPE AND SPACE | <ul style="list-style-type: none"> Properties of 2D and 3D shapes, including nets, surface area and volume. | <ul style="list-style-type: none"> Recognise and name 3D shapes. Count faces edges and vertices. Deduce properties of 3D shapes from 2D representations. Identify nets of 3D solids including cubes and cuboids. Draw nets of 3D solids using a ruler and protractor. Calculate the surface area of cubes and cuboids. Find the volume of a cube or cuboid by counting cubes. Know the formula for calculating the volume of a cube or cuboid. Solve problems involving units of length, area and capacity. Convert between cm^3 and litres. |
| October Half term | | |
| HANDLING DATA | <ul style="list-style-type: none"> How to collect data, interpret data and use to compare data sets. | <ul style="list-style-type: none"> Plan and collect data. Design a data collection sheet. Group data into equal class intervals. Interpret complex bar charts. Draw bar charts for more than one set of data. |

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| | | <ul style="list-style-type: none"> • Interpret pie charts. |
| | <ul style="list-style-type: none"> • How to use algebraic notation and symbols, simplify terms and use brackets. | <ul style="list-style-type: none"> • Simplify expressions by collecting like terms. • Find outputs and inputs of function machines. • Construct functions. • Solve simple equations and check the solution is correct. • Understand the difference between an expression and an equation, and identify the unknown in an equation. • Use brackets with numbers and letters. |
| END OF TERM | | |
| NUMBER | <ul style="list-style-type: none"> • How to use decimals in all four operations. Order, round and problem solve with decimals in context. | <ul style="list-style-type: none"> • Add and subtract decimal numbers. • Multiply decimals. • Round decimals. • Order decimals. • Solve problems involving decimals. |
| SHAPE AND SPACE | <ul style="list-style-type: none"> • How to find missing angles using measuring and then key parallel line facts. • Construct accurately using equipment. | <ul style="list-style-type: none"> • Use a protractor to measure and draw obtuse and reflex angles • Estimate the size of reflex angles. • Use vertically opposite angles. • Work out the size of unknown angles in a triangle. • Accurately draw triangles using a ruler and protractor. • Accurately draw a net of a 3D shape. • Investigate the sides of a right-angled triangle. |
| February half term | | |
| NUMBER | <ul style="list-style-type: none"> • Squares, square roots, cubes and cube roots both recall and using a calculator. • Factors, multiples and primes. | <ul style="list-style-type: none"> • Calculate squares and square roots, mentally and using a calculator. • Calculate cubes and cube roots, mentally and using a calculator. • Carry out calculations involving brackets and square numbers. • Use the brackets keys on a calculator. • Use index notation. • Find the factor pairs of any whole number |

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| | | <ul style="list-style-type: none"> • Use the lowest common multiple (LCM) and highest common factor (HCF) to solve problems. • Find the prime factor decomposition of a number less than 100 • Use the lowest common multiple (LCM) and highest common factor (HCF) to solve problems. |
| PROPORTION AND RATIO | <ul style="list-style-type: none"> • How to use all four operations with fractions and how to use percentages to help compare | <ul style="list-style-type: none"> • Compare fractions. • Simplify fractions. • Identify equivalent fractions. • Calculate with fractions mentally. • Calculate fractions of quantities. • Multiply a fraction by a whole number. • Add and subtract fractions. • Write a number as a fraction of another number. • Change between fractions and percentages. • Calculate percentages. • Compare proportions using percentages. • Write one number as a percentage of another number. |
| May half term | | |
| HANDLING DATA AND PROBABILITY | <ul style="list-style-type: none"> • Use the language of probability and be able to describe the outcome of an event. | <ul style="list-style-type: none"> • Use the language of probability. • Use a probability scale with words and numbers. • Write probabilities as fractions, decimals and percentages. • Find all the possible outcomes of an event. • Use equally likely outcomes to calculate probabilities. • Learn and use probability notation. • Calculate the probability of an event not happening. |

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| | | <ul style="list-style-type: none">• Find all the possible outcomes of two simple events.• Use data from an experiment to estimate probabilities.• Collect data from an experiment, and make calculations based on results.• Compare and interpret probabilities. |
| END OF YEAR | | |

YEAR 9 FOUNDATION

| Topic Outline | Students should know and understand | Students should be able to |
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| NUMBER RECAP PRE GCSE | <ul style="list-style-type: none"> The key number skills required for the start of the GCSE course. | <ul style="list-style-type: none"> Solve problems by adding and subtracting. Add and subtract decimal numbers Multiply numbers including decimals Use multiplicative reasoning to multiply numbers. Divide by a decimal number. Multiply and divide with negative numbers. Know all square numbers to 16^2 Find all positive and negative square roots of square numbers. Use mental methods to find cubes and cube roots. Work out calculations involving squares and brackets. Work out calculations involving brackets, squares, cubes and square roots. Estimate answers. Write recurring decimals as fractions. |
| NUMBER 1 | <ul style="list-style-type: none"> How to use all the key number skills to problem solving. | <ul style="list-style-type: none"> Use priority of operations with positive and negative numbers Simplify calculations by cancelling. Use inverse operations. Round to a given number of decimal places. Multiply and divide decimal numbers. Write decimal numbers of millions. Round to a given number of significant figures. Estimate answers to calculations. |

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| | | <ul style="list-style-type: none"> • Use one calculation to find the answer to another. • Recognise 2-digit prime numbers. • Find factors and multiples of numbers. • Find common factors and common multiples of two numbers. • Find the HCF and LCM of two numbers by listing. • Find square roots and cube roots. • Recognise powers of 2, 3, 4 and 5. • Understand surd notation on a calculator. • Find square roots and cube roots. • Write a number as the product of its prime factors. • Use prime factor decomposition and Venn diagrams to find the HCF and LCM. |
| October Half term | | |
| ALGEBRA | <ul style="list-style-type: none"> • How to follow the number processes using algebraic notation and principles | <ul style="list-style-type: none"> • Use correct algebraic notation. • Write and simplify expressions. • Use the index laws. • Multiply and divide expressions. <p>Substitute numbers into expressions.</p> <ul style="list-style-type: none"> • Recognise the difference between a formula and an expression. • Substitute numbers into a simple formula. • Expand brackets. • Simplify expressions with brackets. • Substitute numbers into expressions with brackets and powers. • Recognise factors of algebraic terms. • Factorise algebraic expressions. • Use the identity symbol \equiv and the not equals symbol \neq • Write expressions and simple formulae to solve problems. |

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| | | <ul style="list-style-type: none"> • Use maths and science formulae. |
| END OF TERM | | |
| DATA | <ul style="list-style-type: none"> • How to interpret and compare data sets. They can use a variety of charts and diagrams clearly and efficiently. | <ul style="list-style-type: none"> • Designing tables and data collection sheets. • Reading data from tables. • Use data from tables. • Design and use two-way tables. • Draw and interpret comparative and composite bar charts. • Interpret and compare data shown in bar charts, line graphs and histograms. • Plot and interpret time series graphs. • Use trends to predict what might happen in the future. • Construct and interpret stem and leaf and back-to-back stem and leaf diagrams. • Draw and interpret pie charts. • Plot and interpret scatter graphs. • Determine whether or not there is a relationship between sets of data. • Draw a line of best fit on a scatter graph. • Plot and interpret scatter graphs. • Determine whether or not there is a relationship between sets of data. • Draw a line of best fit on a scatter graph. • Use the line of best fit to predict values. |
| FEBUARY HALF TERM | | |
| FRACTIONS, DECIMALS AND PERCENTAGES | <ul style="list-style-type: none"> • Manipulate fractions using all four operations, convert between fractions, decimals and percentages and use percentages to compare. | <ul style="list-style-type: none"> • Compare fractions. • Add and subtract fractions. • Use fractions to solve problems. • Find a fraction of a quantity or measurement. • Use fractions to solve problems. |

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| | | <ul style="list-style-type: none"> • Multiply whole numbers, fractions and mixed numbers. • Simplify calculations by cancelling. • Divide a whole number by a fraction. • Divide a fraction by a whole number or a fraction. • Convert fractions to decimals and vice versa. • Use decimals to find quantities. • Write one number as a fraction of another. • Convert percentages to fractions and vice versa. • Write one number as a percentage of another. • Convert percentages to decimals and vice versa. • Find a percentage of a quantity. • Use percentages to solve problems. • Calculate simple interest. • Calculate percentage increases and decreases. • Use percentages in real-life situations. • Calculate VAT (value added tax). |
| ALGEBRA 2 | <ul style="list-style-type: none"> • Use algebra to problem solve and using the ideas of solving, including inequalities and formulae. | <ul style="list-style-type: none"> • Understand and use inverse equations. • Rearrange simple linear equations. <p>Solve simple linear equations.</p> <ul style="list-style-type: none"> • Solve two-step equations. • Solve linear equations with brackets. • Solve equations with unknowns on both sides. • Use correct notation to show inclusive and exclusive inequalities. • Solve simple linear inequalities. • Write down whole numbers which satisfy an inequality. • Represent inequalities on a number line. <p>Solve two-sided inequalities.</p> |

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| | | <ul style="list-style-type: none"> • Substitute values into formulae and solve equations. <p>Change the subject of a formula.</p> <ul style="list-style-type: none"> • Know the difference between an expression, an equation, a formula and an identity. • Recognise and extend sequences. • Use the nth term to generate terms of a sequence. <p>Find the nth term of an arithmetic sequence.</p> <ul style="list-style-type: none"> • |
| END OF TERM | | |
| | <ul style="list-style-type: none"> • | <ul style="list-style-type: none"> • Calculate the mean from a list and from a frequency table. • Compare sets of data using the mean and range. • Find the mode, median and range from a stem and leaf diagram. • Identify outliers. • Estimate the range from a grouped frequency table. • Recognise the advantages and disadvantages of each type of average. • Find the modal class. • Find the median from a frequency table. • Estimate the mean of grouped data. • Understand the need for sampling. • Understand how to avoid bias. |
| MAY HALF TERM | | |
| | <ul style="list-style-type: none"> • | <ul style="list-style-type: none"> • Calculate the perimeter and area of rectangles, parallelograms and triangles. • Estimate lengths, areas and costs. • Calculate a missing length, given the area. • Calculate the area and perimeter of trapezia. • Find the height of a trapezium given its area. |

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| | | <ul style="list-style-type: none">• Convert between area measures.• Calculate the perimeter and area of shapes made from triangles and rectangles.• Calculate areas in hectares, and convert between ha and m².• Calculate the surface area of a cuboid.• Calculate the surface area of a prism.• Calculate the volume of a cuboid.• Calculate the volume of a prism.• Solve problems involving surface area and volume.• Convert between measures of volume. |
| END OF YEAR | | |