

**Pre Year 7**

This course is studied in primary school.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 7</b>						
Topic	<p><b>NP1 (4 weeks) Place Value &amp; the Number Line</b> Writing integers and decimals Ordering positive and negative integers and decimals including placing on a number line Multiplying and Dividing by Powers of 10 Rounding to nearest integer, decimal and significant figure. Converting Metric Units Calculating the midpoint of two numbers and the median of a list of numbers Binary</p> <p><b>NP2 (2 weeks plus 2 weeks in AUT2) Addition &amp; Subtraction</b> Adding and Subtracting positive integers and decimals Understanding the commutative and associative laws</p>	<p><b>NP2 (2 weeks following on from AU1) Addition &amp; Subtraction</b> <u>Angles</u>- On a straight line, around a point, vertically opposite and in a triangle Calculating Mean and Range of a set of data Applying addition and subtraction to real life problems Addition and Subtraction in Binary</p> <p><b>NP3 (5 weeks) Multiplication &amp; Division</b> Calculating multiplication tables up to 12x12 Multiplying and Dividing positive integers and decimals Understanding the commutative, associative laws and distributive properties between multiplication and division</p>	<p><b>NP4 (3 weeks) Powers, Roots &amp; Primes</b> Understanding roots as an inverse of powers Prime Numbers Prime Factorisation and using this to find factors of numbers</p> <p><b>NP5 (3 weeks) Order of Operations</b> Using Order of Operations in Calculations Including Brackets, Indices, Roots, Fractions and Decimals</p>	<p><b>NP6 (3 weeks) Directed Numbers</b> Negative Numbers in Context Ordering Positive and Negative Numbers including on a Number Line Calculating with Negative Numbers Powers of Negative Numbers Order of Operations with Negative Numbers Applying Negative Numbers to Real Life Situations</p> <p><b>GM1 (3 weeks) Drawing, Measuring and Constructing</b> Learning how to use a Ruler, Protractor and Compass correctly to Measure and Draw Labelling Line Segments and Angles Correctly Constructing Triangles and Parallel Lines Perpendicular and Angle Bisectors Loci</p>	<p><b>NP7 (5 weeks) Fractions</b> Visual Representations of Fractions and Placing on a Number Line Proper, Improper and Equivalent Fractions Simplifying Fractions Calculating with Fractions including Improper Fractions and Mixed Numbers Order of Operations and Problem Solving with Fractions</p>	<p><b>A1 (2 weeks) Introduction to Algebraic Thinking</b> Substituting Numbers for Variables Finding Missing Value of Box or Symbol Addition and Subtraction of Linear Terms Placing Unknowns on a Number Line Using Inequalities</p> <p><b>A2 (2 weeks) Manipulating and Simplifying Expressions</b> Understanding Algebraic Notation Collecting Like Terms Simplifying Indices when Multiplying and Dividing Multiplication Rule for Indices (Power of a Power)</p>



The below grids for years 8 and 9 show the expected progression for pupils following the OAT KS3 curriculum. However, students will move through the curriculum at a rate that is appropriate for their learning.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 8 Sets 1 and 2</b>						
<b>Topic</b>	<p><b>GM1 (3 weeks) Drawing, Measuring and Constructing</b> Learning how to use a Ruler, Protractor and Compass correctly to Measure and Draw Labelling Line Segments and Angles Correctly Constructing Triangles and Parallel Lines Perpendicular and Angle Bisectors Loci- Fixed distance from a Point and a Line Equidistance from two points and two lines</p> <p><b>NP7 (3 weeks plus 2 weeks in AUT2) Fractions</b> Visual Representations of Fractions and Placing on a Number Line Proper, Improper and Equivalent Fractions Simplifying Fractions Calculating with Fractions including Improper Fractions and Mixed Numbers Order of Operations and Problem Solving with Fractions</p>	<p><b>NP7 (2 weeks following on from AUT1) Fractions</b> Calculating with Fractions including Improper Fractions and Mixed Numbers Order of Operations and Problem Solving with Fractions</p> <p><b>NP8 (4 weeks) Percentages</b> Visual Representations of Percentages including Percentages more than 100 Expression One Number as a Percentage of Another FDP Equivalence, Converting and Ordering Calculating Percentage of Amount (Non-Calculator and Calculator) Percentage and Fraction Increase and Decrease The Effect of Multiplying by Numbers between 0 and 1</p>	<p><b>NP9 (3 weeks) Estimation &amp; Use of a Calculator</b> Rounding Errors Upper and Lower Bounds Truncation Error Intervals Approximating Calculations including Powers and Roots Using Percentage Multipliers to Calculate a Percentage of Amount Calculations and Estimations of Time with and without a Calculator Understanding Timetables</p> <p><b>A2 (2 weeks) Manipulating and Simplifying Expressions</b> Understanding Algebraic Notation Collecting Like Terms Simplifying Indices when Multiplying and Dividing Multiplication Rule for Indices (Power of a Power)</p> <p><b>A3 (1 week plus 2 weeks in SPR2) Manipulating and Simplifying Expressions</b> Expanding Single Brackets including Adding or Subtracting them.</p>	<p><b>A3 (2 weeks following on from SPR1) Manipulating and Simplifying Expressions</b> Factorising into a Single Bracket Expanding Two Simple Binomials Writing more Complex Algebraic Expressions</p> <p><b>NP10 (4 weeks) Proportional Reasoning</b> Calculating Simple Direct and Inverse Proportion Problems Numerically Comparing Quantities (Best Value for Money, Exchange Rates etc) Using Proportion to solve Scaling Up and Down Problems e.g. Recipes Portions, Enlargements of Shapes Converting between Units of Time, Length, Capacity and Mass Reading Scales in Context Percentage Increase and Decrease Finding a Percentage Change</p>	<p><b>NP11 (3 weeks) Ratio</b> Ratio Notation Expressing Relationships as Ratios Simplifying Ratios Apply Ratios to Scale Drawings and Maps Converting between Fractions and Ratios Finding the Value of Parts of a Ratio given other Parts or the Whole</p> <p><b>A4 (2 weeks plus 1 week in SUM2) Linear Equations</b> Understanding Equality and Balancing Solving One and Two Step Equations (including Brackets) Solving Equations with an Unknown on Both Sides (including Brackets) Solving Simple Equations when the Unknown is the denominator Forming and Solving Equations</p>	<p><b>A4 (1 week following on from SUM1) Linear Equations</b> Solving Simple Equations when the Unknown is the denominator Forming and Solving Equations</p> <p><b>GM2 (4 weeks) Polygons and Angles</b> Types of Angles Estimating Angles Finding angles and using Angles on a Straight Line, Around a Point and Vertically Opposite Angles to Solve Problems Interior and Exterior Angles Angles in parallel lines Bearings</p>

<p><b>Sequencing</b></p>	<p>Due to closing the gaps in some areas we felt there was value in spending longer in some topics in year 7 therefore NP7 was moved into the start of year 8. These follow on from topic areas taught in year 7.</p>	<p>Percentages follows on from Fractions and Decimals and enables pupils to identify the links between them.</p>	<p>Before moving onto more complicated Mathematical skills pupils need to understand how to manipulate and simplify expressions (A2) as this links into what pupils will learn in rest of Year 8.</p>	<p>A3 follows on and builds on the algebraic knowledge gained in A2 such as collecting like terms is used when expanding brackets.</p>	<p>NP11 follows and builds on the knowledge gained in NP10 and will link into angles and enlargement of shapes in GM2 and GM4.</p> <p>A4 follows on and builds on the algebraic knowledge gained in A3 as you will need to know how to expand and factorise brackets to solve equations.</p>	
<p><b>Extended Learning</b></p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>
<p><b>Formal Assessment</b></p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 8 Set 3</b>						
<b>Topic</b>	<p><b><u>GM1 (3 weeks) Drawing, Measuring and Constructing</u></b> Learning how to use a Ruler, Protractor and Compass correctly to Measure and Draw Labelling Line Segments and Angles Correctly Constructing Triangles and Parallel Lines Perpendicular and Angle Bisectors Loci- Fixed distance from a Point and a Line Equidistance from two points and two lines</p> <p><b><u>NP6 (3 weeks) Directed Numbers</u></b> Negative Numbers in Context Ordering Positive and Negative Numbers including on a Number Line Calculating with Negative Numbers Powers of Negative Numbers Order of Operations with Negative Numbers</p>	<p><b><u>NP7 (4 weeks) Fractions</u></b> Visual Representations of Fractions and Placing on a Number Line Proper, Improper and Equivalent Fractions Simplifying Fractions Calculating with Fractions including Improper Fractions and Mixed Numbers Order of Operations and Problem Solving with Fractions Calculating with Fractions including Improper Fractions and Mixed Numbers Order of Operations and Problem Solving with Fractions</p> <p><b><u>A1 (2 weeks) Introduction to Algebraic Thinking</u></b> Substituting Numbers for Variables Finding Missing Value of Box or Symbol Addition and Subtraction of Linear Terms Placing Unknowns on a Number Line Using Inequalities</p>	<p><b><u>NP8 (4 weeks) Percentages</u></b> Visual Representations of Percentages including Percentages more than 100 Expression One Number as a Percentage of Another FDP Equivalence, Converting and Ordering Calculating Percentage of Amount (Non-Calculator and Calculator) Percentage and Fraction Increase and Decrease The Effect of Multiplying by Numbers between 0 and 1</p> <p><b><u>NP9 (2 weeks plus 1 week in SPR2) Estimation &amp; Use of a Calculator</u></b> Rounding Errors Upper and Lower Bounds Truncation Error Intervals Approximating Calculations including Powers and Roots Using Percentage Multipliers to Calculate a Percentage of Amount</p>	<p><b><u>NP9 (1 week following on from SPR1) Estimation &amp; Use of a Calculator</u></b> Calculations and Estimations of Time with and without a Calculator Understanding Timetables</p> <p><b><u>A2 (2 weeks) Manipulating and Simplifying Expressions</u></b> Understanding Algebraic Notation Collecting Like Terms Simplifying Indices when Multiplying and Dividing Multiplication Rule for Indices (Power of a Power)</p> <p><b><u>A3 (3 weeks) Manipulating and Simplifying Expressions</u></b> Expanding Single Brackets including Adding or Subtracting them. Factorising into a Single Bracket Expanding Two Simple Binomials Writing more Complex Algebraic Expressions</p>	<p><b><u>NP10 (4 weeks) Proportional Reasoning</u></b> Calculating Simple Direct and Inverse Proportion Problems Numerically Comparing Quantities (Best Value for Money, Exchange Rates etc) Using Using Proportion to solve Scaling Up and Down Problems e.g. Recipes Portions, Enlargements of Shapes Converting between Units of Time, Length, Capacity and Mass Reading Scales in Context Percentage Increase and Decrease Finding a Percentage Change</p> <p><b><u>NP11 (1 week plus 2 weeks in SUM2) Ratio</u></b> Ratio Notation Expressing Relationships as Ratios Simplifying Ratios</p>	<p><b><u>NP11 (1 week plus 2 weeks in SUM2) Ratio</u></b> Apply Ratios to Scale Drawings and Maps Converting between Fractions and Ratios Finding the Value of Parts of a Ratio given other Parts or the Whole</p> <p><b><u>A4 (3 weeks) Linear Equations</u></b> Understanding Equality and Balancing Solving One and Two Step Equations (including Brackets) Solving Equations with an Unknown on Both Sides (including Brackets) Solving Simple Equations when the Unknown is the denominator Forming and Solving Equations Solving Simple Equations when the Unknown is the denominator Forming and Solving Equations</p>



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 9 Set 1</b>						
<b>Topic</b>	<p><b><u>SP2 (2 weeks) Bivariate Data &amp; Time Series</u></b>            Draw a scatter graph. Understand the different types of correlation. Draw and use a line of best fit. Instruct and interpret a time series graph. Calculate and use a moving average.</p> <p><b><u>A5 (2 weeks) Formulae</u></b>            Function Machines Inputs and Outputs            Evaluating Expressions and Formulae by Substitution            Writing Formulae in Words and Letters            Generating Sequences from Formulae            Rearranging Linear and Non-Linear Formulae including Powers and Roots</p> <p><b><u>NP11 (2 weeks plus 1 week in AUT2) Ratio</u></b>            Ratio Notation            Expressing Relationships as Ratios            Simplifying Ratios            Apply Ratios to Scale Drawings and Maps            Converting between Fractions and Ratios</p>	<p><b><u>NP11 (2 weeks plus 1 week in AUT2) Ratio</u></b>            Finding the Value of Parts of a Ratio given other Parts or the Whole</p> <p><b><u>A6 (5 weeks) The Cartesian Grid</u></b>            Drawing an accurate Cartesian Grid            Plotting and Identifying Co-ordinates            Introduction to Two Dimensional Vectors            Finding the Mid-Point of a Line Segment            Expressing Number Relationships Algebraically            Plotting linear and quadratic relationships            Writing the equation of a linear graph            Identifying equations of lines that are parallel</p>	<p><b><u>A7 (3 weeks) Sequences</u></b>            Be able to find missing values in sequences. Know the 4 types of sequence. Find and use the nth term of a linear sequence. Relate sequences to graphs and real life</p> <p><b><u>A8 (3 Weeks) Linear Inequalities</u></b>            Representing inequalities on a number line. Finding values that satisfy an inequality. Setting up inequalities in context. Solving inequalities. Representing regions on graphs.</p>	<p><b><u>NP12 (3 weeks) Standard Form</u></b>            Writing numbers in standard form. Carrying out calculations in standard form. Understand SI prefixes in engineering form</p> <p><b><u>A9 (3 weeks) Real Life Graphs</u></b>            Conversion graphs            Real life graphs            Distance time graphs            Speed, Distance and Time Velocity Time Graphs            Linking Inequality Regions to Real Life on a Graph</p>	<p><b><u>SP3 (4 weeks) Introduction to Probability</u></b>            Systematic Listing            Writing probability as a fraction, decimal, and percentage. Know that probability adds up to 1.            Sample Spaces            Two Way Tables            Simple Venn Diagrams            Measures of spread            Comparing Data</p> <p><b><u>GM4 (1 week plus 4 weeks in SUM2) Congruency and Similarity</u></b>            Congruency            Transformations of shapes            Reflection            Translation            Rotation            Enlargement including a negative scale factor            Similarity in shapes            Conditions of congruent triangles            Tessellation</p>	<p><b><u>GM4 (4 weeks following on from SUM2) Congruency and Similarity</u></b>            Transformations of shapes            Reflection            Translation            Rotation            Enlargement including a negative scale factor            Similarity in shapes            Conditions of congruent triangles            Tessellation</p> <p><b><u>GM5 (4 weeks) Right-Angled Triangles</u></b>            Pythagoras Theorem            Trigonometry in Right Angled Triangles</p>

<p><b>Sequencing</b></p>	<p>A5 follows and builds on the knowledge and skills gained in A4.</p> <p>NP11 follows and builds on the knowledge gained in GM2, GM3 and NP10 as ratio links to angles, enlargement of shapes and direct proportion.</p>		<p>A7 follows and builds on the knowledge and skills gained in A6 as the equation of a line links to the nth term and pattern of sequences.</p> <p>A8 follows on and builds in the knowledge gained in previous units based such as those that contain number lines, solving equations and plotting linear graphs.</p>	<p>Expanded form using standard form has been explored through year 7 and 8. NP12 now focuses on writing numbers in standard form and calculating in standard form.</p>	<p>GM4 follows and builds on knowledge and skills gained in previous units that explore vectors, the cartesian grid, scale factors and multiplying numbers.</p>	<p>GM5 follows on builds on knowledge and skills gained in previous units that explore ratio, angles, square numbers and bearings.</p>
<p><b>Extended Learning</b></p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Knowledge Organiser homework quizzes to remember and understand key words.</p> <p>Dr Frost Maths homework for revision and extension</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>
<p><b>Formal Assessment</b></p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters for next term</p>



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 9 Set 2</b>						
<b>Topic</b>	<p><b>GM3 (3 weeks) Area</b> Calculating Area by Counting Squares Calculate the Area of Triangles, Quadrilaterals, Rectilinear Shapes, Circles and Compound Shapes Problem Solve involving Area</p> <p><b>SP2 (2 weeks) Bivariate Data &amp; Time Series</b> Draw a scatter graph. Understand the different types of correlation. Draw and use a line of best fit. Instruct and interpret a time series graph. Calculate and use a moving average.</p> <p><b>A5 (1 week plus 1 week in AUT2) Formulae</b> Function Machines Inputs and Outputs Evaluating Expressions and Formulae by Substitution</p>	<p><b>A5 (1 week following on from AUT1) Formulae</b> Writing Formulae in Words and Letters Generating Sequences from Formulae Rearranging Linear and Non-Linear Formulae including Powers and Roots</p> <p><b>NP11 (3 weeks) Ratio</b> Ratio Notation Expressing Relationships as Ratios Simplifying Ratios Apply Ratios to Scale Drawings and Maps Converting between Fractions and Ratios Finding the Value of Parts of a Ratio given other Parts or the Whole</p> <p><b>A6 (2 weeks plus 3 weeks in SPR1) The Cartesian Grid</b> Drawing an accurate Cartesian Grid Plotting and Identifying Co-ordinates Introduction to Two Dimensional Vectors Finding the Mid-Point of a Line Segment</p>	<p><b>A6 (3 weeks following on from AUT2) The Cartesian Grid</b> Expressing Number Relationships Algebraically Plotting linear and quadratic relationships Writing the equation of a linear graph Identifying equations of lines that are parallel</p> <p><b>A7 (3 weeks) Sequences</b> Be able to find missing values in sequences. Know the 4 types of sequence. Find and use the nth term of a linear sequence. Relate sequences to graphs and real life</p>	<p><b>A8 (3 Weeks) Linear Inequalities</b> Representing inequalities on a number line. Finding values that satisfy an inequality. Setting up inequalities in context. Solving inequalities. Representing regions on graphs.</p> <p><b>NP12 (3 weeks) Standard Form</b> Writing numbers in standard form. Carrying out calculations in standard form. Understand SI prefixes in engineering form</p>	<p><b>A9 (3 weeks) Real Life Graphs</b> Conversion graphs Real life graphs Distance time graphs Speed, Distance and Time Velocity Time Graphs Linking Inequality Regions to Real Life on a Graph</p> <p><b>SP3 (2 weeks plus 2 weeks in SUM 2) Introduction to Probability</b> Systematic Listing Writing probability as a fraction, decimal, and percentage. Know that probability adds up to 1.</p>	<p><b>SP3 (2 weeks plus 2 weeks in SUM 2) Introduction to Probability</b> Sample Spaces Two Way Tables Simple Venn Diagrams Measures of spread Comparing Data</p> <p><b>GM4 (1 week plus 4 weeks in SUM2) Congruency and Similarity</b> Congruency Transformations of shapes Reflection Translation Rotation Enlargement including a negative scale factor Similarity in shapes Conditions of congruent triangles Tessellation</p>



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 9 Set 3</b>						
<b>Topic</b>	<p><b><u>GM1 (3 weeks) Drawing, Measuring and Constructing</u></b> Learning how to use a Ruler, Protractor and Compass correctly to Measure and Draw Labelling Line Segments and Angles Correctly Constructing Triangles and Parallel Lines Perpendicular and Angle Bisectors Loci</p> <p><b><u>A3 (2 weeks) Manipulating and Simplifying Expressions</u></b> Expanding Single Brackets including Adding or Subtracting them. Factorising into a Single Bracket Expanding Two Simple Binomials Writing more Complex Algebraic Expression</p> <p><b><u>A4 (1 week plus 2 weeks in AUT2) Linear Equations</u></b> Understanding Equality and Balancing Solving One and Two Step Equations (including Brackets)</p>	<p><b><u>A4 (1 week plus 2 weeks in AUT2) Linear Equations</u></b> Solving Equations with an Unknown on Both Sides (including Brackets) Solving Simple Equations when the Unknown is the denominator Forming and Solving Equations Solving Simple Equations when the Unknown is the denominator Forming and Solving Equations</p> <p><b><u>NP10 (4 weeks) Proportional Reasoning</u></b> Calculating Simple Direct and Inverse Proportion Problems Numerically Comparing Quantities (Best Value for Money, Exchange Rates etc) Using Using Proportion to solve Scaling Up and Down Problems e.g. Recipes Portions, Enlargements of Shapes Converting between Units of Time, Length, Capacity and Mass Reading Scales in Context Percentage Increase and Decrease Finding a Percentage Change</p>	<p><b><u>GM2 (4 weeks) Polygons and Angles</u></b> Types of Angles Estimating Angles Finding angles and using Angles on a Straight Line, Around a Point and Vertically Opposite Angles to Solve Problems Interior and Exterior Angles Angles in parallel lines Bearings</p> <p><b><u>SP1 (2 weeks plus 2 weeks in SPR2) Discrete Data</u></b> The data handling cycle Qualitative data Frequency Tables Graphical representations of qualitative data Quantitative data Ungrouped and Grouped Frequency Tables Graphical representations of quantitative data Mean, median and mode from lists and frequency tables Comparing Data</p>	<p><b><u>SP1 (2 weeks following on from SPR1) Discrete Data</u></b> The data handling cycle Qualitative data Frequency Tables Graphical representations of qualitative data Quantitative data Ungrouped and Grouped Frequency Tables Graphical representations of quantitative data Mean, median and mode from lists and frequency tables Measures of spread Comparing Data</p> <p><b><u>GM3 (4 weeks) Area</u></b> Calculating Area by Counting Squares Calculate the Area of Triangles, Quadrilaterals, Rectilinear Shapes, Circles and Compound Shapes Problem Solve involving Area</p>	<p><b><u>NP11 (3 weeks) Ratio</u></b> Ratio Notation Expressing Relationships as Ratios Simplifying Ratios Apply Ratios to Scale Drawings and Maps Converting between Fractions and Ratios Finding the Value of Parts of a Ratio given other Parts or the Whole</p> <p><b><u>A5 (2 weeks) Formulae</u></b> Function Machines Inputs and Outputs Evaluating Expressions and Formulae by Substitution Writing Formulae in Words and Letters Generating Sequences from Formulae Rearranging Linear and Non-Linear Formulae including Powers and Roots</p>	<p><b><u>A6 (5 weeks) The Cartesian Grid</u></b> Drawing an accurate Cartesian Grid Plotting and Identifying Co-ordinates Introduction to Two Dimensional Vectors Finding the Mid-Point of a Line Segment Expressing Number Relationships Algebraically Plotting linear and quadratic relationships Writing the equation of a linear graph Identifying equations of lines that are parallel</p> <p><b><u>SP2 (2 weeks) Bivariate Data &amp; Time Series</u></b> Draw a scatter graph. Understand the different types of correlation. Draw and use a line of best fit. Instruct and interpret a time series graph. Calculate and use a moving average.</p>



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 10 – Higher- for pupils who will most likely take the Higher tier GCSE paper</b>						
<b>Qualification</b>	Pearson Edexcel GCSE Mathematics 9-1					
<b>Topic</b>	<p><b><u>A8 (3 Weeks) Linear Inequalities</u></b> Inequalities on a Number Line. Solving Inequalities including Compound Inequalities Writing Inequalities Inequalities on a Graph</p> <p><b><u>NP12 (3 weeks) Standard Form</u></b> Writing numbers in standard form. Carrying out calculations in standard form. Understand SI prefixes in engineering form</p> <p><b><u>A9 (2 weeks plus 1 week in AUT2) Real Life Graphs</u></b> Conversion graphs Real life graphs Distance time graphs Speed, Distance and Time</p>	<p><b><u>A9 (1 week following on from AUT1) Real Life Graphs</u></b> Velocity Time Graphs Linking Inequality Regions to Real Life on a Graph</p> <p><b><u>SP3 (4 weeks) Introduction to Probability</u></b> Systematic Listing Writing probability as a fraction, decimal, and percentage. Know that probability adds up to 1. Sample Spaces Two Way Tables Simple Venn Diagrams Measures of spread Comparing Data</p> <p><b><u>A10 (2 weeks plus 3 weeks in SPR1) Advanced Linear Graphs and Equations</u></b> Gradients Sketching Linear Graphs Parallel and Perpendicular Lines Finding Equations Given Two Points OR a Point and a Gradient</p>	<p><b><u>A10 (3 weeks following on from AUT2) Advanced Linear Graphs and Equations</u></b> Solve Simultaneous Equations- Graphically and Algebraically Form and Solve Simultaneous Equations Finding Regional Solutions to Linear Inequalities</p> <p><b><u>GM4 (4 weeks) Congruency and Similarity</u></b> Congruency Transformations of shapes Reflection Translation Rotation Enlargement including a negative scale factor Similarity in shapes Conditions of congruent triangles Tessellation</p>	<p><b><u>GM5 (4 weeks) Right-Angled Triangles</u></b> Pythagoras Theorem Trigonometry in Right Angled Triangles</p> <p><b><u>NP13 (2 week plus 2 weeks in SUM1) Advanced Proportion and Rates of Change</u></b> Reverse Percentages Original Value Simple Interest Direct Proportion</p>	<p><b><u>NP13 (2 week following on from SPR2) Advanced Proportion and Rates of Change</u></b> Inverse proportion Density Pressure Speed Value for Money Ratio Problems</p> <p><b><u>GM6 (3 weeks) Circles</u></b> Circle Parts and Properties Circumference Area Problem Solving Length of Arc Area of Sector Circle Theorems</p>	<p><b><u>GM7 (3 weeks) Advanced Drawing, Measuring and Constructing</u></b> Interior and Exterior Angles Converting between 2D and 3D Units of Measurement Drawing 3D Shapes Nets, Plans and Elevations Planes of Symmetry Loci</p> <p><b><u>SP4 (3 weeks) Continuous Data</u></b> Grouped Data- mean, median, mode Cumulative Frequency Boxplots Measures of Spread Comparing Data</p>

<p><b>Sequencing</b></p>	<p>A8 builds on knowledge and skills from previous units containing solving equations, number lines and plotting linear graphs.</p> <p>Expanded form using standard form has been explored through year 7 and 8. NP12 now focuses on writing numbers in standard form and calculating in standard form.</p>	<p>A10 builds on the knowledge and skills used in A6, A7 and A9</p>	<p>GM4 follows and builds on knowledge and skills gained in previous units that explore vectors, the cartesian grid, scale factors and multiplying numbers.</p>			
<p><b>Extended Learning</b></p>	<p>Paper homework that is grade focused for revision and extension.</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Paper homework that is grade focused for revision and extension.</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Paper homework that is grade focused for revision and extension.</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Paper homework that is grade focused for revision and extension.</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Paper homework that is grade focused for revision and extension.</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>	<p>Paper homework that is grade focused for revision and extension.</p> <p>DIRT key skills tasks to identify gaps in knowledge for revision.</p>
<p><b>Formal Assessment</b></p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters</p>	<p>Topic Tests to identify knowledge retained and inform retrieval starters</p>	<p>Full mock series to identify knowledge retained and inform planning for year 11.</p>

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 10 – Cross over- for pupils who may take the Higher or Foundation tier GCSE paper</b>						
<b>Qualification</b>	Pearson Edexcel GCSE Mathematics 9-1					
<b>Topic</b>	<p><b><u>NP4-9 Essentials (4 weeks)</u></b>            Powers and Roots            Index Laws            Prime Factors            Order of Operations            Calculating with Fractions            Finding a Fraction of an Amount            FDP equivalents            Recurring and Terminating Decimals            Percentage of Amounts            Percentage Increase and Decrease            Rounding            Error Intervals            Estimation</p> <p><b><u>A3-8 Essentials (4 weeks)</u></b>            Expand and Factorise            Single Brackets            Solve Equations            Form and Solve Equations            Substitution            Writing Formulae            Rearranging Formulae            Midpoint of a Line            Plotting Linear Graphs            Writing the Equation of a Line            Parallel Lines            Plot a Quadratic Graph            Generate Terms of a Sequence            Nth Term of a Linear Sequence</p>	<p><b><u>NP10/11 Essentials (4 weeks)</u></b>            Using Ratio Tables for Direct and Inverse Proportion            Value for Money            Exchange Rates            Recipes            Decimal Multipliers            Finding a Percentage            Change            Simplifying Ratios            1:n and n:!            Ratios and Fractions            Finding the Value using Ratios</p> <p><b><u>GM1-3 Essentials (3 weeks)</u></b>            Constructing and Drawing Triangles            Bisecting Lines and Angles            Perpendicular Lines            Loci            Interior angles in Triangles, Quadrilaterals and Polygons            Angles in Parallel Lines            Form and Solve Equations using Angles            Bearings            Area of a Parallelogram            Area of a Trapezium            Mixed Area and Perimeter            Area of a Circle</p>	<p><b><u>NP12 (3 weeks) Standard Form</u></b>            Writing numbers in standard form.            Carrying out calculations in standard form.            Understand SI prefixes in engineering form</p> <p><b><u>NP13 (3 weeks) Advanced Proportion and Rates of Change</u></b>            Reverse Percentages            Original Value            Simple Interest            Direct Proportion            Inverse proportion            Density            Pressure            Speed            Value for Money            Ratio Problems</p>	<p><b><u>GM4 (3 weeks) Congruency and Similarity</u></b>            Congruency            Transformations of shapes            Reflection            Translation            Rotation            Enlargement            Similarity in shapes            Tessellation</p> <p><b><u>A9 (3 weeks) Real Life Graphs</u></b>            Conversion graphs            Real life graphs            Distance time graphs            Speed, Distance and Time            Velocity Time Graphs            Linking Inequality Regions to Real Life on a Graph</p>	<p><b><u>A10 (3 weeks) Advanced Linear Graphs and Equations</u></b>            Gradients            Sketching Linear Graphs            Parallel and Perpendicular Lines            Solve Simultaneous Equations- Graphically and Algebraically            Form and Solve Simultaneous Equations</p> <p><b><u>SP3 (3 weeks) Introduction to Probability</u></b>            Systematic Listing            Writing probability as a fraction, decimal, and percentage.            Know that probability adds up to 1.            Sample Spaces            Two Way Tables            Simple Venn Diagrams            Measures of spread            Comparing Data</p>	<p><b><u>GM5 (4 weeks) Right-Angled Triangles</u></b>            Pythagoras Theorem            Trigonometry in Right Angled Triangles</p> <p><b><u>GM6 (2 weeks) Circles</u></b>            Circle Parts and Properties            Circumference            Area            Problem Solving            Length of Arc            Area of Sector</p>

	Inequalities on a Number line Solve Inequalities Inequalities on a Graph					
<b>Sequencing</b>	These are the areas that pupils need to be secure in, they should have already studied much of this content in KS3. Pupils have a chance to revisit and embed this material. The time spent on each unit may vary class to class.	These are the areas that pupils need to be secure in, they should have already studied much of this content in KS3. Pupils have a chance to revisit and embed this material. The time spent on each unit may vary class to class.	Expanded form using standard form has been explored through year 7 and 8. NP12 now focuses on writing numbers in standard form and calculating in standard form.	GM4 follows and builds on knowledge and skills gained in previous units that explore vectors, the cartesian grid, scale factors and multiplying numbers.	A10 builds on the knowledge and skills used in A6, A7 and A9	
<b>Extended Learning</b>	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.
<b>Formal Assessment</b>	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Full mock series to identify knowledge retained and inform planning for year 11.



	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 10- Foundation- for pupils who will absolutely take the Foundation tier GCSE paper</b>						
<b>Qualification</b>	Pearson Edexcel GCSE Mathematics 9-1					
<b>Topic</b>	<p><b><u>NP1-3 Essentials (4 weeks)</u></b>            Writing Integers in Words            Integers and Decimals on a Number Line            Ordering Positive and Negative Integers and Decimals            Multiplying and Dividing by Powers of 10            Rounding to Decimal Places and Significant Figures            Addition and Subtraction with Integers and Decimals            Zero Pairs            Multiplying and Dividing Integers and Decimals            Multiples including LCM            Factors including HCF</p> <p><b><u>NP4-7 Essentials (3 weeks plus 1 week in AUT2)</u></b>            Writing and Evaluating Powers            Squares and Cubes            Index Laws            Prime Numbers            Prime Factors            Order of Operations            Calculating with Negative Numbers            Fractions smaller than and greater than 1            Improper and Mixed Fractions</p>	<p><b><u>NP4-7 Essentials (1 week following on from AUT1)</u></b>            Simplifying Fractions            Calculations with Fractions including Finding a Fraction of an Amount</p> <p><b><u>A1-5 essentials (4 weeks)</u></b>            Simplifying Expressions including Collecting Like Terms            Basic Substitution            Expressions- adding, subtracting, multiplying and dividing            Writing Expressions            Expand and Factorise            Single Brackets            Solving Equations            Form and Solve Equations            Using Formulae            Rearranging Formulae</p> <p><b><u>GM1-3 essentials (2 weeks plus 2 weeks in SPR1)</u></b>            Measuring and Naming Angles            Constructing and Drawing Triangles            Bisecting Lines and Angles            Angles-            Around a point            On a Straight Line            In Triangles            In Quadrilaterals</p>	<p><b><u>GM1-3 essentials (2 weeks following on from AUT2)</u></b>            Properties of Quadrilaterals            Interior Angles in Polygons            Area-            Rectangles            Parallelograms            Triangles            Trapeziums            Circles</p> <p><b><u>SP1-2 essentials (4 weeks)</u></b>            Collecting Data            Processing Data            Stem and Leaf Diagrams            Pie Charts            Mode, Median, Range and Mean            Statistics from a Table on a Calculator            Scatter Graphs            Time Series Graphs</p>	<p><b><u>NP8-10 essentials (5 weeks)</u></b>            Converting between Fractions, Decimals and Percentages            Percentage of an Amount            Decimal Multipliers            Increasing and Decreasing by a Percentage            Using the Calculator            Rounding            Error Intervals            Estimation            Direct Proportion            Inverse Proportion            Value for Money            Exchange Rates</p> <p><b><u>A6-8 essentials (1 week plus 3 weeks in SUM1)</u></b>            Co-ordinates            Midpoint of a Line            Horizontal and Vertical Lines</p>	<p><b><u>A6-8 essentials (3 weeks following on from SPR1)</u></b>            Plot Linear Graph            Finding Gradient and Y-intercept            Plot Quadratic Graph            Missing numbers in a Sequence            Term to Term Rules            Generating Terms            Nth Term of a Linear Sequence            Picture Sequences            Inequality Symbols            Comparative Inequalities            Restrictive Inequalities            Solve Linear Equations</p> <p><b><u>GM4 (2 weeks plus 2 weeks in SUM2)</u></b>  <b><u>Congruency and Similarity</u></b>            Congruency            Transformations of shapes            Reflection            Translation</p>	<p><b><u>GM4 (2 weeks following on from SUM1)</u></b>  <b><u>Congruency and Similarity</u></b>            Rotation            Enlargement            Similarity in shapes            Tessellation</p> <p><b><u>SP3 (3 weeks)</u></b>  <b><u>Introduction to Probability</u></b>            Systematic Listing            Writing probability as a fraction, decimal, and percentage.            Know that probability adds up to 1.            Sample Spaces            Two Way Tables            Simple Venn Diagrams            Measures of spread            Comparing Data</p>

<b>Sequencing</b>	These are the areas that pupils need to be secure in, they should have already studied much of this content in KS3. Pupils have a chance to revisit and embed this material. The time spent on each unit may vary class to class.	These are the areas that pupils need to be secure in, they should have already studied much of this content in KS3. Pupils have a chance to revisit and embed this material. The time spent on each unit may vary class to class.	These are the areas that pupils need to be secure in, they should have already studied much of this content in KS3. Pupils have a chance to revisit and embed this material. The time spent on each unit may vary class to class.	These are the areas that pupils need to be secure in, they should have already studied much of this content in KS3. Pupils have a chance to revisit and embed this material. The time spent on each unit may vary class to class.	These are the areas that pupils need to be secure in, they should have already studied much of this content in KS3. Pupils have a chance to revisit and embed this material. The time spent on each unit may vary class to class.	GM4 follows and builds on knowledge and skills gained in previous units that explore vectors, the cartesian grid, scale factors and multiplying numbers.
<b>Extended Learning</b>	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.
<b>Formal Assessment</b>	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Topic Tests to identify knowledge retained and inform retrieval starters	Full mock series to identify knowledge retained and inform planning for year 11.

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<b>Year 11</b>						
<b>Qualification</b>	Pearson Edexcel GCSE Mathematics 9-1					
<b>Topic</b>	<u>11X1/2- Higher Curriculum</u> Percentage challenge. Compound measure, speed distance and time. Laws of indices. Vectors and translations. Transformations (reflections, rotations, enlargements and describing). Direct and inverse proportion.  <u>11X3/4- Crossover Curriculum</u> Product of Primes- HCF and LCM Estimation Upper and Lower Bounds Averages from tables Scatter Graphs Two Way Tables Frequency Trees Time Series Graphs Pie Charts Probability Trees Venn Diagrams  <u>11X5</u> Ordering and Comparing Positive and Negative Integers, Decimals and Fractions	<u>11X1/2- Higher Curriculum</u> Loci. Properties of 3D shapes. Bearings. Scale Drawings. Symmetry. Constructions. Parallel lines. Circle Theorems.  <u>11X3/4- Crossover Curriculum</u> Percentages Reverse Percentages Depreciation and Decay Fractions Ratio Index Laws Factorisation Forming and Solving Equations Inequalities Pythagoras Trigonometry including non-right angles triangles Perimeter and Area of: Triangles Rectangles and Squares Parallelograms Trapeziums Transformations Vectors  <u>11X5</u> Time	Curriculum will be adapted according to results from November Mock to meet the needs of individual classes.	Curriculum will be adapted according to results from November Mock to meet the needs of individual classes.	Curriculum will be adapted according to results from November Mock to meet the needs of individual classes.	

	Calculations with Positive and Negative Integers, Decimals and Fractions Multiples and Factors Prime Numbers Rounding Percentage of an Amount Money problems	Converting between units of time Working out Intervals in Time Timetables Perimeter and Area of: Squares Rectangles Compound Shapes Triangles Volume				
<b>Sequencing</b>	Year 11 follow a bespoke curriculum to capture the needs within the class	Year 11 follow a bespoke curriculum to capture the needs within the class	Year 11 follow a bespoke curriculum to capture the needs within the class	Year 11 follow a bespoke curriculum to capture the needs within the class	Year 11 follow a bespoke curriculum to capture the needs within the class	
<b>Extended Learning</b>	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	Paper homework that is grade focused for revision and extension.  DIRT key skills tasks to identify gaps in knowledge for revision.	
<b>Formal Assessment</b>		November Mock- Full Series		February Mock- Full Series		

**Useful websites:**

**Dr Frost Maths:** <https://www.drfrost.org/>

**CorbettMaths** <https://corbettmaths.com/>

**Hannah Kettle Maths (Half Paper Revision on Thursdays)** <https://www.hannahkettlemaths.co.uk/gcse-revision>

**Maths Pad** <https://www.mathspad.co.uk/>