



Maths	Autumn 1 (Half term 1)	Autumn 2 (Half term 2)	Spring 1 (Half term 3)	Spring 2 (Half term 4)	Summer 1 (Half term 5)	Summer 2 (Half term 6)
Year 8S	<p>Curriculum (S)</p> <p>1 Number Properties 1</p> <ul style="list-style-type: none"> Consolidate use of written and mental methods of calculation including addition, subtraction, multiplication and division. Understand how to complete calculations involving the addition and subtraction of negative numbers and simple fractions. Develop an understanding of place value including both integers and decimals and the size of simple fractions and decimals. Understand that the rules of BIDMAS apply to all calculations. Understand how to order decimals, integers and directed numbers. <p>2 Geometry & Measures</p> <ul style="list-style-type: none"> Understand and apply the properties of angles at a point, angles at a point on a straight line, vertically opposite angles and the angles and other properties of special triangles. Understand and use standard units of measurement, time and money. <p>3 Number Properties 2</p> <ul style="list-style-type: none"> Understand factors, multiples and primes, HCF and LCM Understand square numbers and square roots and triangular numbers. Use simple tests of divisibility. 	<p>Curriculum (S)</p> <p>4 Algebra 1</p> <ul style="list-style-type: none"> Start to use and interpret algebraic notation. Collect like terms and simplify simple algebraic expressions. Understand how to substitute numerical values into formulae and expressions using BIDMAS, understanding that algebraic operations follow the rules of arithmetic. <p>5 Fractions, decimals, %</p> <ul style="list-style-type: none"> Understand how to simplify fractions and convert between improper and mixed fractions. Understand that fractions, decimals and percentages can be interchanged and this can be used to compare their size. Understand methods for calculating fractions and percentages of amounts. Express one quantity as a percentage of another. Understand how to multiply a fraction by an integer. <p>6 Approximation</p> <ul style="list-style-type: none"> Understand that rounding may be necessary when working with numbers and know how to round to a given number of decimal places, Round to the nearest whole numbers and to significant figures. Use these methods as appropriate to estimate calculations and to round measurements. 	<p>Curriculum (S)</p> <p>7 Algebra 2</p> <ul style="list-style-type: none"> Understand and use the vocabulary of expression, equation and term. Collect like terms when simplifying algebraic expressions including those numbers, letters including some negatives. Understand how to expand a single bracket with number outside bracket, i.e. $3(2a + 5)$. Understand how to Solve simple linear equations with unknown represented as a letter. Know and use the formula for the area of a rectangle; calculate the area and perimeter of simple 2D shapes and shapes made from rectangles. Understand how to calculate the volume and surface area of cuboids. <p>8 Collecting & Interpreting Data</p> <ul style="list-style-type: none"> Understand how to construct and interpret different graphs and charts including interpreting Pie charts. Understand and explain different types of data. Understand and be able to find the averages of mean, mode and median from a list of numbers. <p>9 Sequences and Graphs</p> <ul style="list-style-type: none"> Understand how to generate a sequence by spotting a pattern/using a rule given algebraically or in words. Understand how to find a position-to-term rule for simple arithmetic sequences and recognise and name special sequences. Understand that coordinate pairs that satisfy a simple rule can be generated and use these to plot the graphs of simple linear functions. 	<p>Curriculum (S)</p> <p>10 Proportion 1</p> <ul style="list-style-type: none"> Understand what a ratio actually means. Reduce a ratio to its simplest form. Understand the relationship between ratio and proportion including linking ratios to fractions. Work with ratios including sharing quantities in a given ratio. Solve problems involving ratio and proportion. <p>11 Ratio and Scale</p> <ul style="list-style-type: none"> Understand how to measure and draw accurately line segments and angles. Measure distances on maps and use this on simple scaled maps to work out actual distances. <p>12 Shape Properties</p> <ul style="list-style-type: none"> Name and identify the properties of 2D shapes and types of angles. Understand geometric conventions for labelling diagrams and properties of shapes. Extend drawing of 3D shapes to 2D representations on isometric paper. <p>13 Algebra 3</p> <ul style="list-style-type: none"> Understand how to substitute values into expressions and standard formulae including areas, volumes and other simple scientific formula. Understand how to change the subject of (re-arrange) simple formula. Be able to represent algebraic expressions using function machines. 	<p>Curriculum (S)</p> <p>14 Transformations</p> <ul style="list-style-type: none"> Understand the language associated with transformation of reflections, translations and rotations in order to carry out simple transformations. <p>15 Probability</p> <ul style="list-style-type: none"> Understand the probability scale and use appropriate words to describe the probabilities. Understand how to represent probability events in sample space diagrams. Calculate simple probabilities using the fact that probabilities add to 1 and using data contained in Venn diagrams. <p>16 Triangles & Construction</p> <ul style="list-style-type: none"> Understand how to use standard equipment and construction techniques to accurately construct a triangle and nets for some 3D shapes. <p>17 Interpreting Data</p> <ul style="list-style-type: none"> Be able to interpret and compare graphs, charts and tables representing data and draw simple conclusions Understand how to compare two simple distributions given statistics and make simple statements and draw simple conclusions. <p>18 Circles</p> <ul style="list-style-type: none"> Draw and describe parts of a circle recalling all relevant terminology. 	<p>Curriculum (S)</p> <p>Time and Measures</p> <ul style="list-style-type: none"> Telling the time 24h / 12h. Understand how to read Timetables. Understand TV Programme Guides. Understand and convert between metric measurements. Measure angles and distance. Understand GMT and World Times. <p>19 Proportion 2</p> <ul style="list-style-type: none"> Understand and solve problems related to direct proportion in a variety of contexts including using conversion graphs. <p>20 Solving equations and inequalities</p> <ul style="list-style-type: none"> Understand and use the balance method to solve simple linear equations up to two-step and include brackets (including solving word based problems) <p>21 Plotting and sketching graphs</p> <ul style="list-style-type: none"> Understand how to generate coordinate pairs from a simple linear rule where y is given explicitly in terms of x. Plot simple linear graphs from coordinates and recognise the equations of linear graphs parallel to the x or y axis. Plot simple linear graphs from real life situations such as conversion graphs working out an appropriate scale.