

<b>MATHS – YEAR 8</b>	
<b>AUTUMN TERM</b>	
<p>Pupils will have the opportunity to develop the following skills:</p> <p><b>Ratio and Scale</b></p> <ul style="list-style-type: none"> <li>• Understand ratio and its link to multiplication</li> <li>• Use ratio notation</li> <li>• Reduce ratios to simplest form</li> <li>• Solve ratio problems</li> </ul> <p><b>Multiplicative Change</b></p> <ul style="list-style-type: none"> <li>• Use scale factors, linking to ratio, to solve simple direct proportion problems</li> <li>• Scale diagrams and maps</li> </ul> <p><b>Multiplying and dividing fractions</b></p> <ul style="list-style-type: none"> <li>• Multiplying and dividing a fraction by an integer</li> <li>• Multiplying and dividing a fraction by a fraction</li> </ul> <p><b>Working in the Cartesian plane</b></p> <ul style="list-style-type: none"> <li>• Plotting and interpreting straight line graphs</li> <li>• Equations of lines parallel to the axes (e.g. <math>y=2</math> and <math>x=3</math>)</li> <li>• Finding the equation of a straight line (<math>y=mx+c</math>)</li> <li>• Model situations by translating them into expressions, formulae and graphs</li> </ul> <p><b>Representing data</b></p> <ul style="list-style-type: none"> <li>• Scatter graphs and correlation</li> <li>• Designing and using one and two-way tables</li> <li>• Listing outcomes</li> </ul> <p><b>Probability</b></p> <ul style="list-style-type: none"> <li>• Using sample space diagrams</li> <li>• Using tables</li> </ul>	<p>Pupils will have the opportunity to develop their knowledge about:</p> <p><b>Ratio and Scale</b></p> <ul style="list-style-type: none"> <li>• Know the link between ratio and multiplication</li> </ul> <p><b>Multiplicative Change</b></p> <p>Understand and use scale drawings and maps</p> <p><b>Working in the Cartesian plane</b></p> <ul style="list-style-type: none"> <li>• Know how to use equations with graphs</li> </ul> <p><b>Multiplying and dividing fractions</b></p> <ul style="list-style-type: none"> <li>• Know strategies for dividing fractions by fractions</li> </ul> <p><b>Representing data</b></p> <ul style="list-style-type: none"> <li>• Knowing which graphs are appropriate in which situations</li> </ul> <p><b>Probability</b></p> <ul style="list-style-type: none"> <li>• Recognise the different probability diagrams</li> </ul>
<b>SPRING TERM</b>	
<p>Pupils will have the opportunity to develop the following skills:</p> <p><b>Brackets, equations and inequalities</b></p> <ul style="list-style-type: none"> <li>• Multiplying out single brackets</li> <li>• Forming and using expressions, formulae and identities</li> <li>• Forming and solving equations and inequalities with and without brackets</li> </ul>	<p>Pupils will have the opportunity to develop their knowledge about:</p> <p><b>Brackets, equations and inequalities</b></p> <ul style="list-style-type: none"> <li>• Know how to use brackets in algebraic equations</li> </ul> <p><b>Indices</b></p>

<p><b>Sequences</b></p> <ul style="list-style-type: none"> <li>•Using more complex rules e.g. with brackets and squared terms</li> </ul> <p><b>Indices</b></p> <ul style="list-style-type: none"> <li>● Using the appropriate rules</li> <li>● Writing and simplifying expressions with powers</li> <li>●</li> </ul> <p><b>Fractions and percentages</b></p> <ul style="list-style-type: none"> <li>•Fraction, decimal and percentage equivalence</li> <li>•One number as a percentage of another</li> </ul> <p><b>Standard Index Form</b></p> <ul style="list-style-type: none"> <li>● Conversion between numbers in ordinary and standard form (large and small)</li> <li>● Comparing numbers in standard form</li> </ul> <p><b>Number sense</b></p> <ul style="list-style-type: none"> <li>•Developing mental strategies</li> <li>•Measures and units</li> <li>•Estimation, including rounding to a given number of decimal places</li> </ul>	<ul style="list-style-type: none"> <li>● Understand how to use powers in any calculation</li> </ul> <p><b>Fractions and percentages</b></p> <p>Know the equivalent fractions, percentage and decimal equivalent of given numbers.</p> <p><b>Standard Index Form</b></p> <ul style="list-style-type: none"> <li>● Understand and use Standard Index Form</li> </ul> <p><b>Number sense</b></p> <ul style="list-style-type: none"> <li>● Know the rules for Order of Operations</li> </ul>
<p><b>SUMMER TERM</b></p>	
<p>Pupils will have the opportunity to develop the following skills:</p> <p><b>Angles in parallel lines and polygons</b></p> <ul style="list-style-type: none"> <li>•Identify parallel lines and angles</li> <li>•Consolidate geometric notation</li> <li>•Find angles in special quadrilaterals</li> <li>•Find angles in a polygon</li> </ul> <p><b>Area of a trapezia and circles</b></p> <ul style="list-style-type: none"> <li>•Find area of a trapezium</li> <li>•Find area of a circle and parts of a circle</li> <li>•Use significant figures</li> <li>•Find area of compound shapes</li> </ul>	<p>Pupils will have the opportunity to develop their knowledge about:</p> <p><b>Angles in parallel lines and polygons</b></p> <ul style="list-style-type: none"> <li>● Understand rules for finding angles in parallel lines, polygons and special quadrilaterals</li> </ul> <p><b>Area of a trapezia and circles</b></p> <ul style="list-style-type: none"> <li>● Know strategies for finding area of trapezia and compound shapes.</li> </ul> <p><b>Line symmetry and reflection</b></p> <ul style="list-style-type: none"> <li>● Recognise and identify lines of symmetry</li> </ul>

**Line symmetry and reflection**

- Identify line symmetry in polygons and other shapes
- Reflect shapes in horizontal, vertical and diagonal lines

**The data handling cycle**

- Collecting data
- Interpreting statistical diagrams
- Understanding dual bar charts
- Constructing and interpreting pie charts

**Measures of location and dispersion**

- Finding median and mean, including finding the total using inverse
- Finding mean for grouped data
- Finding the mode
- Choosing the appropriate average
- Finding the range
- Comparing distributions

**The data handling cycle**

- Interpret and construct dual bar charts

**Measures of location and dispersion**

- Know when each measure of average is appropriate and make sensible decisions when choosing measures
- Know how to compare sets of data using measures of average