

## Subject: Mathematics – Summer Term

	Progress objective 2 Algebra	Progress objective 3: Geometry	Progress objective 4: Ration and Proportion
Pathway 1	<ul style="list-style-type: none"> <li>• Generate terms of a linear sequence</li> <li>• Find a term given its position in a sequence</li> <li>• Describe the nth term in an arithmetic sequence</li> <li>• Recognise geometric sequences</li> <li>• Find the term-to-term rule for geometric sequences and continue to the next few terms</li> <li>• Read and plot x and y co-ordinates in all four quadrants</li> <li>• Find the midpoint of a line segment</li> <li>• Generate four quadrant coordinate pairs of simple linear functions</li> <li>• Plot and recognise graphs of <math>y = x</math> and <math>y = -x</math> and graphs parallel to x or y axis</li> </ul>	<ul style="list-style-type: none"> <li>• Use a formula to calculate the area of triangles</li> <li>• Find the area of a parallelogram or trapezium</li> <li>• Calculate the perimeter and area of shapes made from rectangles</li> <li>• Sketch nets of 3D solids</li> <li>• Find the volume of cubes or cuboids or solids made from cuboids</li> <li>• Find the surface area of simple cuboids</li> <li>• Convert <math>\text{cm}^3</math> to ml and litres and vice versa</li> <li>• Convert between area measures</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce a ratio to its simplest form</li> <li>• Convert between measures</li> <li>• Simplify a ratio expressed in different units</li> <li>• Compare ratios by changing them to the form 1:m or m:1</li> <li>• Divide a quantity into 2 or more parts in a given ratio</li> <li>• Simplify or write ratios using fractions, decimals or percentages</li> <li>• Solve word problems involving proportion</li> <li>• Use the unitary method to solve simple word problems involving ratio and proportion</li> </ul>
Pathway 2	<p><b>Progress objective 2 Algebra</b></p> <ul style="list-style-type: none"> <li>• Generate and describe simple and more complex sequences including nth term.</li> <li>• Identify and plot coordinates in all four quadrants.</li> <li>• Recognise and plot straight line graphs.</li> <li>• Make links between graphs, sequences and functions.</li> </ul>	<p><b>Progress objective 3: Geometry</b></p> <ul style="list-style-type: none"> <li>• Identify and label angles and lines.</li> <li>• Use properties of 2D shapes.</li> <li>• Estimate, measure and draw angles.</li> <li>• Draw triangles accurately.</li> <li>• Solve problems involving angles.</li> <li>• Understand properties, angle facts and problems involving quadrilaterals.</li> <li>• Describe congruence.</li> <li>• Find enlargements and scale factors.</li> <li>• Identify line, rotational and planes of symmetry.</li> <li>• Describe reflections.</li> <li>• Describe rotations.</li> <li>• Describe translations.</li> <li>• Combine transformations.</li> </ul>	
Pathway 3	<p><b>Progress objective 1 Number</b></p> <ul style="list-style-type: none"> <li>• Order fractions</li> <li>• Relate fractions to division and parts of shapes.</li> <li>• Identify equivalent fractions</li> <li>• Change an improper fraction to a mixed number</li> <li>• Find simple fractions of whole number quantities</li> <li>• Add and subtract simple fractions</li> <li>• Understand a percentage as the number of parts per 100</li> <li>• Convert a percentage to a number of hundredths or tenths</li> <li>• Write a percentages as a fraction or decimal</li> <li>• Find simple percentages of whole number quantities</li> </ul>	<p><b>Progress objective 3: Geometry</b></p> <ul style="list-style-type: none"> <li>• Give the names of regular polygons</li> <li>• Classify triangles</li> <li>• Recognise properties of squares and rectangles</li> <li>• Calculate perimeters of rectangles and regular polygons</li> <li>• Calculate the perimeter and area of shapes made from rectangles</li> <li>• Use a formulae to calculate the area of squares and rectangles</li> <li>• Describe the symmetry of triangles and other shapes</li> <li>• Solve problems using line symmetry</li> <li>• Solve problems involving the perimeter of squares and rectangles</li> <li>• Understand reflections and reflect a shape in a mirror line</li> </ul>	

## KS3 Assessment – Year 7 Progress Grid

- Understand translation and translate a shape
- Draw and describe rotations
- Understand the term 'congruent' and identify congruent shapes