



HALF TERM 3 JAN-FEB	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	
TOPIC (S)	Trigonometry (recap Pythagoras' Theorem)	Trigonometry	Further Perimeter and Area	Further Perimeter and Area	Further Circumference and Area	Further Circumference and Area	
Knowledge & Skills development	<p><b>Trigonometry</b></p> <ul style="list-style-type: none"> <li>know and use the trigonometric ratios:</li> <li><math>\sin\theta = \text{opposite/hypotenuse}</math></li> <li><math>\cos\theta = \text{adjacent/hypotenuse}</math></li> <li><math>\tan\theta = \text{opposite/adjacent}</math></li> <li>apply them to find angles and lengths in right-angled triangles in two dimensional figures</li> <li>compare lengths using ratio notation</li> </ul> <p><b>Further Perimeter and Area</b></p> <ul style="list-style-type: none"> <li>identify properties of the faces, surfaces, edges and vertices of: cubes, cuboids, prisms, cylinders, pyramids, cones and spheres</li> <li>calculate the perimeter of a 2D shape and composite shapes</li> <li>know and apply formulae to calculate area of:                             <ul style="list-style-type: none"> <li>triangles</li> <li>parallelograms</li> <li>trapezia</li> </ul> </li> <li>calculate the area composite shapes</li> <li>find the surface area of pyramids and composite solids</li> </ul> <p><b>Further Circumference and Area</b></p> <ul style="list-style-type: none"> <li>identify and apply circle definitions and properties, including: centre, radius, chord, diameter, circumference, tangent, arc, sector and segment</li> <li>know the formulae:                             <ul style="list-style-type: none"> <li>circumference of a circle = <math>2\pi r = \pi d</math></li> <li>area of a circle = <math>\pi r^2</math></li> </ul> </li> <li>calculate the perimeters of 2D shapes, including circles and composite shapes</li> <li>calculate areas of circles and composite shapes</li> <li>calculate the surface area of spheres, cones and composite solids</li> <li>calculate arc lengths, angles and areas of sectors of circles</li> <li>calculate exactly with multiples of <math>\pi</math></li> </ul>						

<b>Assessment / Feedback Opportunities</b>	Topic assessments	Self-assessment sheets	Homework (written and online)	Formative teacher assessment - verbal	Retrieval practice	
<b>Cultural Capital</b>	Use of Trigonometry in real life situations Application of area and perimeter in problem solving ( material required)					
<b>SMSC / Promoting British Values</b> (Democracy, Liberty, Rule of Law, Tolerance & Respect)	Willingness to participate in, and respond to mathematical opportunities. Use of social skills in different contexts, including working and socialising with pupils from different religious, ethnic and socio-economic backgrounds.					
<b>Reading opportunities</b>	What's the point of maths? Murderous Maths, Marvellous Maths, Launch a rocket into space, Humble Pi.					
<b>Key Vocabulary</b>	Pythagoras, Theorem, Hypotenuse, Opposite, Adjacent, Square, Trigonometry, Sine, Cosine, Tangent, Right-angled, Solid, Net, Faces, Edges, Vertices, Area, Perimeter, Formula, Perpendicular, Compound, Circumference, Radius, Diameter, Tangent, Chord, Sector, Segment, Pi					
<b>Digital Literacy</b>	Geogebra					
<b>Careers</b>	Engineering, Business, Architecture, Building, Gaming.					