

KEVICC Key Stage 4 Curriculum Subject: Mathematics		Key Vocabulary and notation.																																																										
<b>Summer Half-Term</b>																																																												
<b>Term:</b> Year 9 Summer Term – Block Six	<b>Topic:</b> 2D and 3D Representation																																																											
<b>What is the essential knowledge from this unit?</b> <b>What do students need to remember and understand?</b>																																																												
	<table border="1"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 40%;">Specification content</th> <th style="width: 50%;">Specification notes</th> </tr> </thead> <tbody> <tr> <td>G13</td> <td><u>Construct and</u> interpret plans and elevations of 3D shapes</td> <td></td> </tr> </tbody> </table>		Specification content	Specification notes	G13	<u>Construct and</u> interpret plans and elevations of 3D shapes																																																						
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<p>Students should be able to:</p> <ul style="list-style-type: none"> <li>use 2D representations of 3D shapes</li> <li>draw nets and show how they fold to make a 3D solid</li> <li>analyse 3D shapes through 2D projections and cross sections, including plans and elevations</li> <li>understand and draw front and side elevations and plans of shapes made from simple solids, for example a solid made from small cubes</li> <li>understand and use isometric drawings.</li> </ul>		<table border="0"> <tr><td>Faces</td><td>Sector</td></tr> <tr><td>Surfaces</td><td>Segment</td></tr> <tr><td>Vertices</td><td>Semi-circle</td></tr> <tr><td>Edges</td><td><math>\pi</math></td></tr> <tr><td>Cubes</td><td>Net</td></tr> <tr><td>Cuboids</td><td>Surface</td></tr> <tr><td>Prisms</td><td>area</td></tr> <tr><td>Cylinders</td><td>Cross</td></tr> <tr><td>Pyramids</td><td>section</td></tr> <tr><td>Cones</td><td>Draw</td></tr> <tr><td>Spheres</td><td>Front</td></tr> <tr><td>Plan</td><td>Side</td></tr> <tr><td>Elevations</td><td>Plan</td></tr> <tr><td>Square</td><td>Elevation</td></tr> <tr><td>Kite</td><td>Projections</td></tr> <tr><td>Rhombus</td><td>Fold</td></tr> <tr><td>Triangles</td><td>Cube</td></tr> <tr><td>Equilateral</td><td>Cuboid</td></tr> <tr><td>Isosceles</td><td>Prism</td></tr> <tr><td>Scalene</td><td>Cylinder</td></tr> <tr><td>Parallelograms</td><td>Pyramid</td></tr> <tr><td>Trapezia</td><td>Sphere</td></tr> <tr><td>Area</td><td>Tetrahedron</td></tr> <tr><td>Volume</td><td>Square</td></tr> <tr><td>Radius</td><td>based</td></tr> <tr><td>Diameter</td><td>pyramid</td></tr> <tr><td>Circumference</td><td>Triangular</td></tr> <tr><td>Tangent</td><td>Prism</td></tr> <tr><td>Arc</td><td>Isometric</td></tr> </table> <p>Mathematical questioning should be designed to unpick the structure of the maths and deepen the student's understanding. When students talk about mathematical concepts, they should develop the vital mathematical language that helps them explain their ideas fully.</p> <p>Students are expected and encouraged to use terminology during all discussions, verbal feedback and in written content.</p>	Faces	Sector	Surfaces	Segment	Vertices	Semi-circle	Edges	$\pi$	Cubes	Net	Cuboids	Surface	Prisms	area	Cylinders	Cross	Pyramids	section	Cones	Draw	Spheres	Front	Plan	Side	Elevations	Plan	Square	Elevation	Kite	Projections	Rhombus	Fold	Triangles	Cube	Equilateral	Cuboid	Isosceles	Prism	Scalene	Cylinder	Parallelograms	Pyramid	Trapezia	Sphere	Area	Tetrahedron	Volume	Square	Radius	based	Diameter	pyramid	Circumference	Triangular	Tangent	Prism	Arc	Isometric
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<b>What prior learning supports understanding of this content?</b> <ul style="list-style-type: none"> <li>Draw 2-D shapes using given dimensions and angles.</li> <li>Find unknown angles in any triangles, quadrilaterals, and regular polygons.</li> <li>Calculate and recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.</li> </ul>	<b>How does this content link to future learning?</b> <ul style="list-style-type: none"> <li>Apply and interpret limits of accuracy.</li> <li>Use standard units of measure and related concepts (length, area, volume / capacity, mass, time, money etc.).</li> <li>Change freely between related standard units (e.g. time, length, area, volume / capacity, mass) and compound units (e.g. speed, rates of pay, prices, density, and pressure) in numerical and algebraic contexts.</li> </ul>																																																											
<b>Reading:</b> <i>Where in the unit are students supported to read complex academic text?</i> <ul style="list-style-type: none"> <li>Reading and understanding mathematical questions and problems' – teacher input.</li> <li>Decoding complex examination questions - explain what they are asking the student to do' – teacher input.</li> <li>Following instructions to solve problems - break down the tasks – teacher input.</li> <li>Recognising terminology, numbers, and symbols.</li> </ul>	<b>Writing:</b> <i>Independent writing tasks and how they are structured</i> <ul style="list-style-type: none"> <li>Using the correct subject specific terminology for numbers and symbols – examination papers, class books.</li> <li>Responding to questions that ask for an explanation or a reason – examination papers, class books.</li> <li>Self-evaluation, reviewing, reflecting and analysis of own work – class books, personalised learning checklists and analysis.</li> <li>Creating notes that can be used later for revision purposes - class books, revision cards, mind maps etc.</li> </ul>																																																											
<b>Key assessments:</b> How will do students review the information learned? End of block assessments. AQA end of block assessments provide a quick progress check at the end of each block of learning to make sure students have understood the content being covered. These are available for both foundation and higher tiers. End of term/year assessments and mock examinations. End of term assessments assessing the students' progress towards targets and provide diagnostic information to modify future teaching. End of year 9 and 10 examinations assessing the students' progress towards targets and provide diagnostic information to modify future teaching.																																																												

Two mock examinations seasons take place during year 11 using previous years AQA 8300 examination papers. Students to experience the full suite of papers at both Foundation and higher tiers using Non-calculator and Calculator requirements. All examinations will explore the three examination papers at both foundation and higher tiers using non-calculator and calculator requirements.

**How will feedback be seen?**

Marked end of block, term assessments and mock examinations.

Personalised learning checklists for all assessments identifying strengths and areas of development.

Written teacher feedback and marking in compliance with faculty and College Marking Policies. Student responses to marking. Students self-mark using purple pen. Verbal feedback given every lesson from teacher and peers as appropriate. Teacher and student self-assessment of presentation of class books will be completed to ensure written work is of high standard and students are achieving their potential.