

KEVICC Key Stage 4 Curriculum Subject: Mathematics		Key Vocabulary and notation.																														
<b>Summer Half-Term</b>																																
<b>Term:</b> Year 9 Summer Term – Block Three	<b>Topic:</b> Scatter Graphs																															
<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></th> <th>Specification content</th> <th>Specification notes</th> </tr> </thead> <tbody> <tr> <td>S6</td> <td>           Use and interpret scatter graphs of bivariate data            Recognise correlation <u>and know that it does not indicate causation</u>  <u>Draw estimated lines of best fit</u>  <u>Make predictions</u>  <u>Interpolate and extrapolate apparent trends whilst knowing the dangers of doing so</u> </td> <td>           know and understand the terms positive correlation, negative correlation, no correlation, weak correlation, and strong correlation         </td> </tr> </tbody> </table>		Specification content	Specification notes	S6	Use and interpret scatter graphs of bivariate data Recognise correlation <u>and know that it does not indicate causation</u> <u>Draw estimated lines of best fit</u> <u>Make predictions</u> <u>Interpolate and extrapolate apparent trends whilst knowing the dangers of doing so</u>	know and understand the terms positive correlation, negative correlation, no correlation, weak correlation, and strong correlation																									
	Specification content	Specification notes																														
S6	Use and interpret scatter graphs of bivariate data Recognise correlation <u>and know that it does not indicate causation</u> <u>Draw estimated lines of best fit</u> <u>Make predictions</u> <u>Interpolate and extrapolate apparent trends whilst knowing the dangers of doing so</u>	know and understand the terms positive correlation, negative correlation, no correlation, weak correlation, and strong correlation																														
Students should be able to: <ul style="list-style-type: none"> <li>recognise and name positive, negative or no correlation as types of correlation</li> <li>recognise and name strong, moderate, or weak correlation as strengths of correlation</li> <li>understand that just because a correlation exists, it does not necessarily mean that causality is present</li> <li>draw a line of best fit by eye for data with strong enough correlation, or know that a line of best fit is not justified due to the lack of correlation</li> <li>understand outliers and make decisions whether or not to include them when drawing a line of best fit</li> <li>use a line of best fit to estimate unknown values when appropriate.</li> </ul>		<table border="0"> <tr><td>Variable</td><td>Estimate</td></tr> <tr><td>Relationship</td><td>Straight</td></tr> <tr><td>Origin</td><td>Extrapolate</td></tr> <tr><td>Scale</td><td>Outlier</td></tr> <tr><td>Coordinate</td><td>Variable</td></tr> <tr><td>Axis</td><td>Discrete</td></tr> <tr><td>Increase</td><td>Continuous</td></tr> <tr><td>Decrease</td><td>Measured</td></tr> <tr><td>Relationship</td><td>Counted</td></tr> <tr><td>Correlation</td><td>Qualitative</td></tr> <tr><td>Positive</td><td>Quantitative</td></tr> <tr><td>Negative</td><td>Frequency</td></tr> <tr><td>Strong</td><td>Total</td></tr> <tr><td>Weak</td><td>Subtotal</td></tr> <tr><td>Line of best fit</td><td>Group Equal</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>	Variable	Estimate	Relationship	Straight	Origin	Extrapolate	Scale	Outlier	Coordinate	Variable	Axis	Discrete	Increase	Continuous	Decrease	Measured	Relationship	Counted	Correlation	Qualitative	Positive	Quantitative	Negative	Frequency	Strong	Total	Weak	Subtotal	Line of best fit	Group Equal
Variable	Estimate																															
Relationship	Straight																															
Origin	Extrapolate																															
Scale	Outlier																															
Coordinate	Variable																															
Axis	Discrete																															
Increase	Continuous																															
Decrease	Measured																															
Relationship	Counted																															
Correlation	Qualitative																															
Positive	Quantitative																															
Negative	Frequency																															
Strong	Total																															
Weak	Subtotal																															
Line of best fit	Group Equal																															
<b>What prior learning supports understanding of this content?</b> <ul style="list-style-type: none"> <li>Understand and use primary and secondary data sources.</li> <li>Collect data, including questionnaires.</li> <li>Compare, interpret and construct tables, charts and diagrams including, for categorical data:               <ul style="list-style-type: none"> <li>Frequency tables.</li> <li>Bar charts.</li> <li>Pie charts.</li> <li>Pictograms.</li> <li>Vertical line charts for ungrouped discrete numerical data.</li> <li>Tables and line graphs for time series data.</li> </ul> </li> <li>Know their appropriate use.</li> <li>Identify misleading graphs.</li> </ul>	<b>How does this content link to future learning?</b> <ul style="list-style-type: none"> <li>Interpret, analyse, and compare the distributions of data sets from univariate empirical distributions through:               <ul style="list-style-type: none"> <li>Appropriate measures of central tendency (median, mean, mode and modal class).</li> </ul> </li> <li>Spread (range, including consideration of outliers)</li> <li>Apply statistics to describe a population.</li> <li>Infer properties of populations or distributions from a sample, whilst knowing the limitations of sampling.</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.