

KEVICC Key Stage 3 Curriculum Subject: Mathematics		Key Vocabulary and notation.	
Spring Half-Term 2 Developing Number		<div>Round Interest</div> <div>Significant Debit</div> <div>Power Credit</div> <div>Nearest Balance</div> <div>Integer Metric</div> <div>Number line Metre</div> <div>Decimal point Prefix</div> <div>Decimal place Kilo</div> <div>Significant figure Milli</div> <div>Estimate Centi</div> <div>Round Area</div> <div>Over/underestimate Perpendicular</div> <div>Root Units</div> <div>Discrete Square units</div> <div>Continuous Dimensions</div> <div>Bound Cubic units</div> <div>Operation 12-hour clock</div> <div>Order 24-hour clock</div> <div>Priority Week</div> <div>Index/indices Mont</div> <div>Change Year</div> <div>Deposit Leap year</div> <div>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.</div> <div>Students are expected and encouraged to use terminology during all discussions, verbal feedback and in written content.</div>	
Term: Year 8 Spring Term – Block Five	Topic: Standard Form		
<p>What is the essential knowledge from this unit? What do students need to remember and understand?</p> <p>This block provides a timely opportunity to revisit a lot of basic skills in a wide variety of contexts. Estimation is a key focus and the use of mental strategies will therefore be embedded throughout. We will also use conversion of metric units to revisit multiplying and dividing by 10, 100 and 1000 in context. The Higher strand will extend this to look at the conversion of area and volume units, as well as having an extra step on the use of error notation. We also look explicitly at solving problems using the time and calendar as this area is sometimes neglected leaving gaps in student knowledge.</p> <p>National curriculum content covered:</p> <ul style="list-style-type: none"> Use standard units of mass, length, time, money and other measures, including decimal quantities. Round numbers and measures to an appropriate degree of accuracy (for example, to a number of decimal places or significant figures). Use approximation through rounding to estimate answers and calculate possible resulting errors expressed using inequality notation $a < x \leq b$. Use a calculator and other technologies to calculate results accurately and then interpret them appropriately. <p>We know that breaking the curriculum down into small manageable steps should help students to understand concepts better. As a result, for each block of content in the scheme of learning we have provided the following 'small step' breakdown for this unit as follows:</p> <p>Lesson One - Round numbers to powers of 10 and 1 significant figure Lesson Two - Round numbers to a given number of decimal places Lesson Three - Estimate the answer to a calculation Lesson Four - Understand and use error interval notation (H) Lesson Five - Calculate using the order of operations Lesson Six - Calculate with money Lesson Seven - Convert metric measures of lengths Lesson Eight - Convert metric units of weight and capacity Lesson Nine - Convert metric units of area (H) Lesson Ten - Convert metric units of volume (H) Lesson Eleven - Solve problems involving time and the calendar</p> <p>Interleaving/Extension of previous work</p> <ul style="list-style-type: none"> Convert between units of area and volume. Convert between metric and imperial units of measurement. Use error interval notation. 			
<p>What prior learning supports understanding of this content?</p> <ul style="list-style-type: none"> Multiply by 10, 100 and 1000, 0.1 and 0.01, and convert metric units. Use mental and formal written methods of multiplication and division. Evaluate areas of triangles, rectangles, parallelograms, and trapezium. Use their knowledge of the order of operations to carry out calculations involving the four operations. 		<p>How does this content link to future learning?</p> <ul style="list-style-type: none"> Review area of shapes covered in Year 7 and 8 units of work. Calculate the area of a trapezium. Calculate the area of a circle, and the area of parts of a circle. Use significant figures. Calculate the area of compound shapes. Workout the volume and surface area of cuboids and cylinders. Workout the volume of any prism. Workout the missing lengths given area and/or volume. 	
<p>Reading: Where in the unit are students supported to read complex academic text?</p> <ul style="list-style-type: none"> Reading and understanding mathematical questions and problems' – teacher input. Decoding complex examination questions - explain what they are asking the student to do' – teacher input. Following instructions to solve problems - break down the tasks – teacher input. Recognising terminology, numbers, and symbols. Recognising patterns and relationships in mathematics. 		<p>Writing: Independent writing tasks and how they are structured</p> <ul style="list-style-type: none"> Using the correct subject specific terminology for numbers and symbols – examination papers, class books. Responding to questions that ask for an explanation or a reason – examination papers, class books. Self-evaluation, reviewing, reflecting and analysis of own work –, class books, personalised learning checklists and analysis. Creating notes that can be used later for revision purposes - class books, revision cards, mind maps etc. 	

Key assessments:

How will students review the information learned?

End of block assessments.

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 covered.

A Core paper – it is envisaged that all students will take this paper, to provide a direct comparison with the performance of the rest of the cohort. All topics from each term will be covered, and the use of a calculator is expected.

End of term assessments.

A Foundation paper – students who are working below national expectations will have the opportunity to show their understanding of the material with more straightforward questions. Non calculator paper.

A Higher paper – students who are working at or above national expectations will have the opportunity to tackle more challenging questions on the same material, plus the extra objectives indicated as "Higher" in our scheme of learning. Non calculator paper.

How will feedback be seen?

Marked end of block and term assessments.

Personalised learning checklists for end of term 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.