

KEVICC Key Stage 3 Curriculum Subject: Mathematics		Key Vocabulary and notation.																									
Autumn Half-Term 2 Representation																											
Term: Year 8 Autumn Term – Block Six	Topic: Probability																										
<p>What is the essential knowledge from this unit? 2 What do students need to remember and understand?</p> <p>Building on from the Year 7 unit, this short block reminds students of the ideas of probability, in particular looking at sample spaces and the use of tables to represent these.</p> <p>National curriculum content covered:</p> <ul style="list-style-type: none">Record, describe and analyse the frequency of outcomes of simple probability experiments involving randomness, fairness, equally and unequally likely outcomes, using appropriate language and the 0-1 probability scale.Generate theoretical sample spaces for single and combined events with equally likely, mutually exclusive outcomes and use these to calculate theoretical probabilities.Use language and properties precisely to analyse probability and statistics. <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 - Construct sample spaces for one or more events. Lesson Two - Find probabilities from a sample space. Lesson Three - Find probabilities from two-way tables. Lesson Four - Find probabilities from Venn diagrams. Lesson Five - Use the product rule for finding the total number of possible outcomes.</p> <p>Interleaving/Extension of previous work</p> <ul style="list-style-type: none">Revisiting Venn diagrams and set notation.Links to representing data and using graphs in other areas of the curriculum.Use the product rule for counting.		<table><tr><td>Outcomes</td><td>Probability</td></tr><tr><td>Sample space</td><td>Sample</td></tr><tr><td>Set</td><td>Denominator</td></tr><tr><td>Probability</td><td>Intersection</td></tr><tr><td>Systematic</td><td>And / Or</td></tr><tr><td>Chance</td><td>Union</td></tr><tr><td>Probability</td><td>Region</td></tr><tr><td>Event</td><td>Total</td></tr><tr><td>Equally likely</td><td>Possibilities</td></tr><tr><td>Unbiased</td><td>Product</td></tr><tr><td>P(event)</td><td>Table</td></tr><tr><td>Two-way table</td><td>Order</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>		Outcomes	Probability	Sample space	Sample	Set	Denominator	Probability	Intersection	Systematic	And / Or	Chance	Union	Probability	Region	Event	Total	Equally likely	Possibilities	Unbiased	Product	P(event)	Table	Two-way table	Order
Outcomes	Probability																										
Sample space	Sample																										
Set	Denominator																										
Probability	Intersection																										
Systematic	And / Or																										
Chance	Union																										
Probability	Region																										
Event	Total																										
Equally likely	Possibilities																										
Unbiased	Product																										
P(event)	Table																										
Two-way table	Order																										
<p>What prior learning supports understanding of this content?</p> <ul style="list-style-type: none">Understand and use set notation.Draw and interpret Venn diagrams.Understand and use the language of probability.Calculate the probability of a single event.Use the sum of probabilities of an event as 1.		<p>How does this content link to future learning?</p> <ul style="list-style-type: none">Review of a single event probability – comparing theoretical and experimental.Understand and work with mutually exclusive and independent events.Construct and interpret tree diagrams.Find probabilities from frequency trees, tables and Venn diagrams.																									
<p>Reading: <i>Where in the unit are students supported to read complex academic text?</i></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: <i>Independent writing tasks and how they are structured</i></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.