

	Curriculum Intent: “Enriching lives” In the Mathematics Department we are committed to enriching the students’ lives. We want students to develop the numerical skills to have the resilience to handle problems in the wider world. Through the knowledge and implicit skills developed in Mathematics student’s will develop their character to include problem solving and have the aspiration to change the world. Our Ethos is skills to solve problems, the will to tackle them and the thrill of knowing it could change their life.		
	<b>TOPICS</b> <i>Key Knowledge</i>	<b>RETRIEVAL/RECALL</b> <b>ACTIVITIES</b>	<b>ASSESSMENT/SKILLS</b>
<b>YEAR 12 - AS Level - Statistics</b>	<p><b>Curriculum Implementation:</b></p> <p><b>Autumn Term</b></p> <p>Students will learn statistical skills and how to apply new techniques in other subjects...</p> <p><b>Probability</b> – Building on GCSE to consider multiple events and dependent and independent scenarios of two or more.</p> <p><b>Introductions to Probability distributions</b> – Learning about statistical functions that describes all the possible values and likelihoods that a random variable can take within a given range.</p> <p><b>Bayes Theorem</b> – Bayes' theorem named after Thomas Bayes, describes the probability of an event, based on prior knowledge of conditions</p> <p><b>Numerical Measures, graphs and Diagrams</b> – How to create charts and evaluate the data for others.</p> <p><b>Population and Samples</b> – Learn how we use techniques to appropriately reduce massive populations for statistical calculations.</p> <p><b>Spring Term</b></p> <p><b>Binomial Distribution</b> – Learning when to apply this type of distribution and the parameters that need to be met</p> <p><b>Normal Distribution</b> – Learning when to apply this type of distribution and the parameters that need to be met</p> <p><b>Exponential and Poisson Distribution</b> – Learning when to apply this type of distribution and the parameters that need to be met</p>	<p>End of unit exam questions from Pearson Edexcel</p> <p>Complete Maths retrieval quizzes</p> <p>Complete Maths readiness quizzes</p> <p>Retrieval starters based on prior content</p>	<p><b>Curriculum Impact:</b></p> <p>Students will complete End of Unit tests based on topics in implementation.</p> <p>In addition they will have a termly Milestone test to gauge their ability recall skills</p> <p>End of Year Mock in preparation for Year 13</p> <p><b>Specific Skills:</b></p> <p><b>Use fluency and reasoning skills for all elements noted in Curriculum implementation</b> <b>Also, beginning to develop the modelling</b></p>

<p><b>Correlation and Linear Regression</b> - Correlation quantifies the strength of the linear relationship between a pair of variables, whereas regression expresses the relationship in the form of an equation.</p> <p><b>Contingency Tables</b> - How to create a contingency table which is a type of table in a matrix format that displays the (multivariate) frequency distribution of the variables.</p> <p><b>Summer Term</b></p> <p><b>Probability Distributions</b> – Building and strengthening knowledge learnt in the spring and summer term.</p> <p><b>Introduction to hypothesis testing</b> – method of statistical inference used to decide whether the data at hand sufficiently support a particular hypothesis.</p> <p><b>Experimental Design</b> – Looking at how you create an experiment and test the effectiveness of a hypothesis.</p> <p><b>Sampling, Estimates and Resampling</b> – Developing knowledge to see if samples used were appropriate and if additional samples should be collected.</p>		<p>skills for each of the topics stated.</p>
<b>Numeracy</b>	Reading and interpreting data in raw formats, reading and interpreting data in chart form, using probability to evaluate risk	
<b>Literacy/Reading</b>	A Comedy of Maths Errors: Matt Parker, The World According to Statistics. The 50 key ideas of Maths.	
<b>Cross Curricular Links</b>	Reading and interpreting data (Science, Psychology and Sociology), Multiplicative Reasoning (STEM), Statistics and Graphs (STEM and Psychology)	
<b>Career Links</b>	Scientists, Medical Sciences, Business Sector, Accountants, Actuaries, Statisticians, Teaching, Computing	

	Curriculum Intent: “Enriching lives” In the Mathematics Department we are committed to enriching the students’ lives. We want students to develop the numerical skills to have the resilience to handle problems in the wider world. Through the knowledge and implicit skills developed in Mathematics student’s will develop their character to include problem solving and have the aspiration to change the world. Our Ethos is skills to solve problems, the will to tackle them and the thrill of knowing it could change their life.		
	<b>TOPICS</b> <i>Key Knowledge</i>	<b>RETRIEVAL/RECALL</b> <b>ACTIVITIES</b>	<b>ASSESSMENT/SKILLS</b>
<b>YEAR 13 - A Level –</b> <b>Statistics</b>	<p><b>Curriculum Implementation:</b></p> <p><u>Autumn Term</u></p> <p>Students will learn statistical skills and how to apply new techniques in other subjects...</p> <p><b>Hypothesis Testing</b> – learning the methods of statistical inference used to decide whether the data at hand sufficiently support a particular hypothesis.</p> <p><b>Hypothesis Testing for 1 and 2 samples</b> – Developing hypothesis testing into non-standard examples</p> <p><b>One and Two Sample Non-Parametric Tests</b> – Learn how parametric tests are used to make assumptions about the parameters of the population distribution from which the sample is drawn</p> <p><b>Paired Tests</b> – Developing our parametric examples to consider effect of dependent samples.</p> <p><u>Spring Term</u></p> <p><b>Analysis of Variance</b> – how to use statistical models and their associated estimation procedures to analyse the differences among means.</p> <p><b>Effect Size</b> - how to measure the strength of the relationship between two variables on a numeric scale.</p> <p><b>Goodness of</b> - learning how statistical models describes how well it fits a set of observations.</p>	<p>End of unit exam questions from Edexcel topic groups</p> <p>Complete Maths retrieval quizzes</p> <p>Complete Maths readiness quizzes</p> <p>Retrieval starters based on prior content</p>	<p><b>Curriculum Impact:</b></p> <p>Students will complete End of Unit tests based on topics in implementation.</p> <p>In addition they will have a termly Milestone test to gauge their ability recall skills</p> <p>End of Year Mock in preparation for Year 13</p> <p><b>Specific Skills:</b></p> <p><b>Use fluency and reasoning skills for all elements noted in Curriculum implementation</b> <b>Also, beginning to develop the modelling</b></p>

<b>Therapy and Exam Fluency</b>	<p><b>Therapy and Exam Fluency</b> – To ensure that students are as prepared as possible to take their final exams.</p> <p><b>Summer Term</b></p> <p><b>Therapy and Exam Fluency</b> – To ensure that students are as prepared as possible to take their final exams.</p>	<b>skills for each of the topics stated.</b>
<b>Numeracy</b>	Reading and interpreting data in raw formats, reading and interpreting data in chart form, using probability to evaluate risk	
<b>Literacy/Reading</b>	A Comedy of Maths Errors: Matt Parker, The World According to Statistics. The 50 key ideas of Maths.	
<b>Cross Curricular Links</b>	Reading and interpreting data (Science, Psychology and Sociology), Multiplicative Reasoning (STEM), Statistics and Graphs (STEM and Psychology)	
<b>Career Links</b>	Scientists, Medical Sciences, Business Sector, Accountants, Actuaries, Statisticians, Teaching, Computing	