



## YEAR 12 FM Summer TERM 2

'An ambitious curriculum that meets the needs of all'

### Medium Term Planning – Differentiation key skills (from the maths course) in preparation for Core Pure 1 Differentiation

### Medium Term Planning – Further Stats 1: Ch 3, 5 Geometric and negative binomial distributions, Central Limit Theorem

#### Curriculum Intent

#### Further Stats 1: Ch 3 Geometric and negative binomial distributions

##### Skills/Assessment Objective Links

Chapter 3: Geometric and negative binomial distributions: **Chapter 3: Geometric and negative binomial distributions**

S11 I can understand and use the geometric distribution			
S12 I can calculate and use the mean and variance of the geometric distribution			
S13 I can understand and use the negative binomial distribution			
S14 I can calculate and use the mean and variance of the negative binomial distribution			

##### Prior knowledge

- Probability (Applied Y1 Ch5)
- Binomial Distribution (Applied Y1 Ch6)

#### Skills/Assessment Objective Links

##### Learning further developed in the future in:

- Central Limit Theorem (Further Stats 1 Ch5)
- Probability Generating Functions (Further Stats 1 Ch7)

#### Prior Knowledge

#### Current learning to be developed in the future

#### Further Stats 1: Ch 5 Central Limit Theorem

##### Skills/Assessment Objective Links

Chapter 5: Central limit theorem: **Chapter 5: Central limit theorem**

S19 I can understand and apply the central limit theorem to approximate the sample mean of a random variable			
S20 I can apply the central limit theorem to other distributions			

##### Prior knowledge

- Representations of data (Applied Y1 Ch3)
- DRV (Core Pure 1 Ch1)
- Geometric and negative binomial distributions (Core Pure 1 Ch3)

##### Learning further developed in the future in:

- Quality of tests (Further Stats 1 Ch8)

<b>Spiritual, moral, social, and cultural development</b>	<p><b>SMSC:</b> Making choices, looking for patterns which may reflect the natural world, supporting and collaborating with each other, realisation that mathematics is an international language and making cultural links as we explore the history of mathematics.</p> <p><b>PSHE/British Values:</b> Working collaboratively, being respectful during discussion and valuing contributions made by others</p> <p><b>Skills Builder:</b> Key skills in numeracy used in all topic areas.</p>
<b>Numeracy</b>	Focus on key skills.
<b>Literacy</b>	<p><b>Vocabulary Tier 2:</b> Command words displayed in the classroom and italicized/bold font used in shared resources/presentations. These are a constant focus in discussion and questioning,</p> <p><b>Vocabulary Tier 3:</b> Title slide in all shared resource presentations show the key vocabulary for each topic.</p> <p><b>Reading:</b> Underlining command words,</p> <p><b>Writing:</b> Modelling solutions</p> <p><b>Oracy:</b> Think, pair, share, discussion, verbal feedback (peer to peer), questioning, student modelling</p>
<b>Becoming future ready</b>	<p><b>Personal Skills:</b> As a Mathematics student you will learn many skills: you will gain opportunities to listen to others supportively and to use questioning to develop your own understanding, you will learn how to cope with challenging questions and how to build up your resilience, you will get the chance to work on your own and with others. You will develop problem solving skills and you will learn how to break a problem down into smaller more manageable steps. You will learn how to collaborate with others when solving problems and you will learn how to articulate your solution to a problem.</p> <p><b>Employability:</b> Mathematical skills are invaluable in the workplace. There are many transferable skills which are much valued by employers. Specific career paths for each topic are discussed at the beginning of each unit of work.</p>
<b>Adaptation</b>	<ul style="list-style-type: none"> <li>• By progressive questioning: exploring pupils' understanding through interactive dialogue.</li> <li>• By outcome: different learners will produce different outcomes.</li> <li>• By resource: worksheets are clearly presented and accessible.</li> <li>• By intervention: by providing different levels of supervision and support.</li> <li>• By offering optional activities: In class or as homework, to extend learning.</li> </ul>
<b>QFT/SEND Provision</b>	
<b>Implementation Curriculum Delivery</b>	See curriculum intent
<b>Learning Outcomes (Knowledge)</b>	
<b>Assessment</b>	Refer to assessment maps for formative and summative assessment opportunities.
<b>Impact</b>	Attainment and Progress – Refer to assessment results / data review documentation.