



YEAR 13 FM 2023-2024 Spring TERM 2

'An ambitious curriculum that meets the needs of all'

Medium Term Planning – Core Pure 2: Ch 4 Volume of Revolution

Medium Term Planning – Further Stats 1: Ch7, 8 Probability Generating Functions, Quality of Tests

Curriculum Intent

Core Pure 2: Ch 4 Volume of Revolution

Skills/Assessment Objective Links

Chapter 4: Volumes of revolution: **Chapter 4: Volumes of revolution**

FM16 I can find volumes of revolution around the x-axis			
FM17 I can find volumes of revolution around the y-axis			
FM18 I can find volumes of revolution for curves defined parametrically			
FM19 I can model real-life applications of volumes of revolution			

Prior knowledge

- Integration (Pure Y2 Ch11)
- Volumes of Revolution (Core Pure 1 Ch5)

Learning further developed in the future in:

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Skills/Assessment Objective Links

Prior Knowledge

Current learning to be developed in the future

Further Stats 1: Ch 7 Probability Generating Functions

Skills/Assessment Objective Links

Chapter 7: Probability generating functions: **Chapter 7: Probability generating functions**

S27 I can understand the use of probability generating functions			
S28 I can use probability generating functions for standard distributions			
S29 I can use probability generating functions to find the mean and variance of a distribution			
S30 I know the probability generating function of the sum of independent random variables			

Prior knowledge

- Differentiation (Pure Y2 Ch9)
- Poisson Distributions (Further Stats 1 Ch2)
- Geometric and Negative binomial Distributions (Further Stats 1 Ch3)

Learning further developed in the future in:

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Further Stats 1: Ch 8 Quality of Tests

Skills/Assessment Objective Links

	Chapter 8: Quality of tests: Chapter 8: Quality of tests			
	S31 I know about Type 1 and Type 11 errors			
	S32 I can find Type 1 and Type 11 errors using the normal distribution			
	S33 I can calculate the size and power of a test			
	S34 I can draw a graph of the power function for a test			
	Prior knowledge <ul style="list-style-type: none"> Hypothesis Testing (Applied Y2 Ch3) Central Limit Theorem (Further Stats 1 Ch 5) Learning further developed in the future in: <ul style="list-style-type: none"> 			
Spiritual, moral, social, and cultural development	SMSC: 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. PSHE/British Values: Working collaboratively, being respectful during discussion and valuing contributions made by others Skills Builder: Key skills in numeracy used in all topic areas.			
Numeracy	Focus on key skills.			
Literacy	Vocabulary Tier 2: Command words displayed in the classroom and italicized/bold font used in shared resources/presentations. These are a constant focus in discussion and questioning, Vocabulary Tier 3: Title slide in all shared resource presentations show the key vocabulary for each topic. Reading: Underlining command words, Writing: Modelling solutions Oracy: Think, pair, share, discussion, verbal feedback (peer to peer), questioning, student modelling			
Becoming future ready	Personal Skills: 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. Employability: 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.			
Adaptation	<ul style="list-style-type: none"> By progressive questioning: exploring pupils' understanding through interactive dialogue. By outcome: different learners will produce different outcomes. By resource: worksheets are clearly presented and accessible. By intervention: by providing different levels of supervision and support. By offering optional activities: In class or as homework, to extend learning. 			
QFT/SEND Provision				
Implementation Curriculum Delivery	See curriculum intent			
Learning Outcomes (Knowledge)				
Assessment	Refer to assessment maps for formative and summative assessment opportunities.			

Impact

Attainment and Progress – Refer to assessment results / data review documentation.