



YEAR 12 2023-2024 Spring TERM 2

'An ambitious curriculum that meets the needs of all'

Medium Term Planning – Unit 11 PURE Vectors

Medium Term Planning – Unit 9 APPLIED Constant Acceleration

Curriculum Intent

PURE UNIT 11: Vectors

Skills/Assessment Objective Links

Chapter 11: Vectors

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| T P62 I can use vectors in two dimensions |
| T P63 I can use column vectors and carry out arithmetic operations on vectors |
| T P64 I can calculate the magnitude and direction of a vector |
| T P65 I can understand and use position vectors |
| T P66 I can use vectors to solve geometric problems |
| T P67 I can understand vector magnitude and use vectors in speed and distance calculations |
| T P68 I can use vectors to solve problems in context |

Prior knowledge

- Translation vectors (GCSE)
- Ratios as fractions (GCSE)
- Sine and Cosine Rules (Y1 Pure Unit 9)

Learning further developed in the future in:

- Year 2 Pure Unit 12
- Year 2 Applied Unit 8

Skills/Assessment Objective Links

Prior Knowledge

Current learning to be developed in the future

APPLIED UNIT 9: Constant Acceleration

Skills/Assessment Objective Links

Chapter 9: Constant acceleration

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| T S36 I can understand and interpret displacement-time graphs |
| T S37 I can understand and interpret velocity-time graphs |
| T S38 I can derive the constant acceleration formulae and use them to solve problems |
| T S39 I can use the constant acceleration formulae to solve problems involving vertical motion under gravity |

Prior knowledge

- Gradient and area under a graph (GCSE)
- Speed calculations (GCSE)
- Solve simultaneous equations (Y1 Pure Unit 3)

Learning further developed in the future in:

- Year 2 Applied Unit 6
- Year 2 Applied Unit 8

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.

	<p>PSHE/British Values: Working collaboratively, being respectful during discussion and valuing contributions made by others</p> <p>Skills Builder: Key skills in numeracy used in all topic areas.</p>
Numeracy	Focus on key skills.
Literacy	<p>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,</p> <p>Vocabulary Tier 3: Title slide in all shared resource presentations show the key vocabulary for each topic.</p> <p>Reading: Underlining command words,</p> <p>Writing: Modelling solutions</p> <p>Oracy: Think, pair, share, discussion, verbal feedback (peer to peer), questioning, student modelling</p>
Becoming future ready	<p>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.</p> <p>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.</p>
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.