



## Archbishop Beck Catholic College

### KS5 Scheme of Work

### Year 13 Maths Applied



Lesson Sequencing	The High 5 Lesson : to be used throughout year	Further Challenge Opportunities
<p><b>Unit 4: Moments</b></p> <ul style="list-style-type: none"><li>4a. Forces' turning effect</li></ul> <p><b>Unit 2: Probability</b></p> <ul style="list-style-type: none"><li>2a. Using set notation for probability. Conditional probability</li><li>2b. Questioning assumptions in probability</li></ul> <p><b>Unit 5: Forces at any angle</b></p> <ul style="list-style-type: none"><li>5a. Resolving forces</li><li>5b. Friction forces (including coefficient of friction <math>\mu</math>)</li></ul> <p><b>Unit 3a: The Normal distribution</b></p> <ul style="list-style-type: none"><li>3a. Understand and use the Normal distribution</li><li>3b. Use the Normal distribution as an approximation to the binomial distribution. Selecting the appropriate distribution.</li></ul>	<p><b>Consolidation:</b> Tasks to support prior learning including past exam questions.</p> <p><b>Modelling:</b> Model examples for each topic when taught. Also exam questions to recap.</p> <p><b>Response and Feedback:</b> Q &amp; A, oral feedback to whole class and individuals, improvement tasks, extension tasks, peer assessment tasks, marking of homework and assessments in depth.</p> <p><b>Challenge:</b> use of exam questions and problem solving questions from text book. Mixed exercises also provide challenge questions.</p> <p><b>Independence:</b> Pupils to work through mixed exercises and review exercises in text book. tasks, condensing notes in mind maps. Self and peer assessment.</p>	<p><b>Extension Exam and problem solving questions</b> provided. Mixed exercises and review exercises provided to challenge HAP.</p> <p>Use of Advanced Maths Support Programme for problem solving days, STEP and AEA test preparation days.</p>

### Unit 6: Applications of kinematics

- 6a. Projectiles
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### Unit 7: Applications of forces

- 7a. Equilibrium and statics of a particle (including ladder problems)
- 7b. Dynamics of a particle

### Unit 8: Further kinematics

- 8a. Constant acceleration (equations of motion in 2D; the  $i, j$  system)
- 8b. Variable acceleration (use of calculus and finding vectors  $\dot{r}$  and  $\ddot{r}$  at a given time)

### Unit 3c: The Normal distribution

- 3c. Statistical hypothesis testing for the mean of the Normal distribution

**Consolidation:** Tasks to support prior learning including past exam questions.

**Modelling:** Model examples for each topic when taught. Also exam questions to recap.

**Response and Feedback:** Q & A, oral feedback to whole class and individuals, improvement tasks, extension tasks, peer assessment tasks, marking of homework and assessments in depth.

**Challenge:** use of exam questions and problem solving questions from text book. Mixed exercises also provide challenge questions.

**Independence:** Pupils to work through mixed exercises and review exercises in text book. tasks, condensing notes in mind maps. Self and peer assessment.

**Extension** Exam and problem solving questions provided. Mixed exercises and review exercises provided to challenge HAP.

Use of Advanced Maths Support Programme for problem solving days, STEP and AEA test preparation days.



