

## Long term plan

Subject: **Maths (11-13)** \*Mechanics (Yr12 and 13)

	Year 11 F	Year 11 H	Year 12	Year 13
<b>LC1</b>	<ul style="list-style-type: none"> <li>-Percentages and interest.</li> <li>-Plotting straight lines and solving linear simultaneous equations.</li> <li>-Algebra recap.</li> <li>-Pythagoras' Theorem and SOHCAHTOA.</li> <li>-Averages from tables and frequency polygons.</li> <li>-EXAMS</li> </ul>	<ul style="list-style-type: none"> <li>-Interest and surds.</li> <li>-Simultaneous equations recap and inequality regions.</li> <li>-Parallel and perpendicular lines. Tangents to circles.</li> <li>-Pythagoras' Theorem in 3D shapes. Laws of sine, cosine and area of a triangle.</li> <li>-Averages from tables and frequency polygons.</li> <li>-EXAMS</li> </ul>	<ul style="list-style-type: none"> <li>-Surds and indices.</li> <li>-Quadratic functions.</li> <li>-Polynomials.</li> <li>-Graphs and transformations.</li> <li>-Equations and inequalities.</li> <li>-Revision and problem solving.</li> <li>*Kinematics.</li> </ul>	<ul style="list-style-type: none"> <li>-Functions.</li> <li>-Radians and circular measure.</li> <li>-Trigonometric equations.</li> <li>-Trigonometric identities.</li> <li>-Revision of all trigonometry.</li> <li>-EXAMS.</li> <li>*Kinematics.</li> </ul>
<b>LC2</b>	<p>Gaps from paper analysis re-taught.</p>	<ul style="list-style-type: none"> <li>-Direct and inverse proportion.</li> <li>-Trigonometric graphs.</li> <li>-Rearranging formulae and simplifying algebraic fractions.</li> <li>-Functions.</li> <li>-Vectors.</li> </ul>	<ul style="list-style-type: none"> <li>-Coordinate geometry.</li> <li>-Differentiation.</li> <li>-Integration.</li> <li>-Revision and problem solving.</li> <li>*Forces.</li> </ul>	<ul style="list-style-type: none"> <li>-Further algebra.</li> <li>-Differentiation II.</li> <li>-Integration II.</li> <li>-EXAMS.</li> <li>*Forces and moments of forces.</li> </ul>
<b>LC3</b>	<p>Gaps from paper analysis re-taught.</p>	<p>Gaps from paper analysis re-taught.</p>	<ul style="list-style-type: none"> <li>-Exponentials and logarithms.</li> <li>-The binomial expansion.</li> <li>-Trigonometry.</li> <li>-Revision and problem solving.</li> <li>*Variable acceleration.</li> </ul>	<ul style="list-style-type: none"> <li>-Differential equations.</li> <li>-Proof and vectors</li> <li>-Sequences and series.</li> <li>-Parametric equations.</li> <li>-Numerical methods.</li> <li>-EXAMS.</li> <li>*Projectiles.</li> </ul>
<b>LC4</b>	<p>Exams</p>	<p>Exams</p>	<ul style="list-style-type: none"> <li>-Vectors.</li> <li>-Data collection.</li> <li>-Data analysis through graphs and calculations.</li> <li>-Binomial distribution.</li> <li>-Hypothesis testing.</li> <li>-Revision and problem solving.</li> <li>*Kinematics and forces recap.</li> </ul>	<ul style="list-style-type: none"> <li>-Probability.</li> <li>-Statistical distributions.</li> <li>-Statistical hypothesis testing.</li> <li>-The large data set.</li> <li>-Revision.</li> <li>*Friction and revision.</li> </ul>
<b>LC5</b>			<ul style="list-style-type: none"> <li>-Application to the large data set.</li> <li>-LC1 recap.</li> <li>-LC2 recap.</li> <li>-LC3 recap.</li> <li>-LC4 recap.</li> <li>*Variable acceleration recap.</li> </ul>	<p>Revision and exams</p>

