

Year 9 – Pathway C	Unit	Key Knowledge learnt Covid catch up	Cross Curricular Links	Real world applications
Half Term 1	Number	<ul style="list-style-type: none"> <li>• Place Value</li> <li>• Understanding Integers in worded problems</li> <li>• Add &amp; subtract</li> <li>• Multiple &amp; divide</li> <li>• Combined operations</li> <li>• Rounding to a given degree of accuracy</li> <li>• Squares, cubes &amp; roots</li> <li>• Factors &amp; multiples</li> <li>• Prime factorisation</li> <li>• HCF &amp; LCM</li> <li>• Application of ratio</li> <li>• Ratio of 3 quantities</li> <li>• Maps &amp; scales</li> </ul>	<p>School offsite trip – calculating how many students can fit on 1 school bus, and how many school busses will be needed in total to fit every one in.</p> <p>P.E – setting up teams with only a select amount of people in, what is the largest group number</p>	<p>Understanding what numbers are to help with weighing fruits, vegetables, meat, chicken, and others in market. Or even looking for the number of people who liked your post on Facebook.</p> <p>Calculating or estimating your daily budget for your food, transportation, and other expenses.</p> <p>Cooking, or baking anything that involves the idea of proportion</p>
Half Term 2	FDP	<ul style="list-style-type: none"> <li>• Equivalent &amp; compare fractions</li> <li>• Ordering fractions</li> <li>• Simplifying fractions</li> <li>• Convert improper and mixed fractions</li> <li>• Compare improper and mixed</li> <li>• Add &amp; subtract fractions</li> <li>• Multiply &amp; divide</li> <li>• Combined operations with fractions</li> <li>• Convert &amp; convert, fractions &amp; decimals</li> <li>• Rounding decimals</li> <li>• Add &amp; subtract decimals</li> <li>• Multiply &amp; divide decimals</li> <li>• Combine operations with decimals</li> <li>• Meaning of percentages</li> <li>• Percentages &amp; quantities</li> </ul>	<p>Homework - Understand the score you received as a percentage or as a fraction e.g., you got 38/51 questions correct. What would this be as a percentage?</p> <p>Use the radio or creating beats in music, with BMP or tuning into a station</p>	<p>Baking and cooking requires some mathematical skill as well. Every ingredient must be measured and sometimes you need to multiply or divide to get the exact amount you need. Whatever you do in the kitchen requires math. Even just using the stove is basic math skills in action</p> <p>Eating at a restaurant: Think about a time you go to a restaurant with friends and the waitress brings a single bill. To divide the total amongst the friends, you use fractions.</p>
Half Term 3	Geometry	<ul style="list-style-type: none"> <li>• Types &amp; properties of angles</li> <li>• Reflection &amp; Rotation symmetry</li> <li>• Parallel lines and angle properties</li> <li>• Angles in quadrilaterals &amp; polygons</li> </ul>	<p>Science – when looking at the organisation of the digestive system as a tube within a tube also ascertains the role of geometry.</p>	<p>You will find different geometrical shapes and patterns in leaves, flowers, stems, roots, bark, and the list goes on. The leaves on the trees are of varying shapes, sizes, and symmetries.</p>

Half Term 4	Algebra	<ul style="list-style-type: none"> <li>• <b>Substituting numbers to letters</b></li> <li>• <b>Writing algebraic expression</b></li> <li>• <b>Collecting like terms</b></li> <li>• Add &amp; subtract linear expressions</li> <li>• Patterns &amp; sequences</li> <li>• Expanding brackets</li> <li>• Factorisation</li> <li>• Equations with one variable</li> <li>• Inequalities</li> <li>• Cartesian coordinates</li> <li>• Graphs of linear functions</li> <li>• Gradients &amp; intercepts</li> </ul>	P.E – in football they need to calculate the force and distance to score a goal and sprinters estimate the speed required to cover the distance to reach the endpoint	Most of the times, physical and chemical sciences employ the basics of algebraic equations. In the case of computer sciences, the algorithms are based on the algebraic operations only. Moreover, algebra is involved in the field of art and architecture to calculate correct proportions to put forth a masterpiece.
Half Term 5	Geometry	<ul style="list-style-type: none"> <li>• <b>Perimeter &amp; area of 2d shapes</b></li> <li>• <b>Conversion of units</b></li> <li>• <b>Circumference &amp; area of a circle</b></li> <li>• Perimeter &amp; area problems of composite shapes</li> <li>• Volume and surface area of prisms &amp; cylinders</li> <li>• Nets of prisms &amp; cylinders</li> <li>• Volume &amp; surface area of 3d shapes</li> <li>• Nets of 3d shapes</li> </ul>	DT - Buildings or monuments have a close relationship with geometry. Before constructing architectural forms, mathematics and geometry help put forth the structural blueprint of the building.	Whether you are painting, doing the flooring, or just acquiring new furniture, you need math to make your sums add up or calculate the area or perimeter of a room. Everything you do inside or outside of your home needs math skills.
Half Term 6	Statistics & Probability	<ul style="list-style-type: none"> <li>• Equation in one variable</li> <li>• Writing equations to solve problems</li> <li>• Inequalities</li> <li>• Collection of data</li> <li>• Organising data</li> <li>• Line graphs, Scatter graphs, Pie charts</li> <li>• Mean, mode, median &amp; range</li> <li>• Probability of an event</li> <li>• Sets &amp; Venn diagrams</li> </ul>	<p>Science - Collection of data to group students by eye colour, hair colour to predict outcomes</p> <p>In a P.E match people use probability to decide the best possible strategy to pursue in a game.</p>	How do journalists use diagrams to show data in news stories? Display newspaper or online news reports showing a wide range of different charts. What is this chart all about? What kind of chart is it? Is it easy to understand?
Assessments		<ul style="list-style-type: none"> <li>• 4 x large exams per year (2 calc, 2 non calc)</li> <li>• X2 GL assessments</li> <li>• X6 End of term content tests</li> </ul>		