



## MATHS CURRICULUM PLAN

At CP Riverside we believe that strong key Mathematical skills offer a logical, structured way of interpreting the world. The language of Mathematics is international and the problem solving abilities it enhances are transferable and applicable to countless day to day scenarios.

Not only do strong number skills lead to greater employment prospects, but mathematical literacy is required to negotiate a large number of everyday tasks.

Throughout their Mathematical journey at CP Riverside, pupils develop key understanding and skills with number, algebra, geometry, probability, statistics and the data handling cycle as they advance through a pathway aimed at gaining aspirational outcomes on the AQA Functional Skills and GCSE qualifications. Entry Level Maths is also Available to those who require it. Throughout this they are encouraged to explore new concepts and then apply these to non-routine problems.

Due to the unique nature of the way students progress through education our curriculum is designed to be spiralling as opposed to linear- allowing students to revisit and build on existing knowledge and skills as well as fill in gaps in understanding. During each unit of work, links to future employment and relevant industries are drawn upon and highlighted to pupils.

Our intent in Mathematics is that our curriculum allows students the opportunity

- To become fluent in the fundamentals of mathematics so that students develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- To be able to solve problems by applying their Mathematics to a variety of problems with increasing sophistication, including in unfamiliar contexts and to model real-life scenarios.
- To reason mathematically by following a line of enquiry and develop and present a justification, argument or proof using mathematical language.
- To have an appreciation of number and number operations, which enables mental calculations and written procedures to be performed efficiently, fluently and accurately to be successful in mathematics and wider areas of life.
- To make and use connections between different parts of mathematics to solve problems
- To enable all learners to enjoy and succeed in mathematics.
- To think about **mathematics** beyond what is tested in national examinations and to be equipped with an understanding of mathematics that will be relevant and useful in their future studies and/or in the world of work.
- To be able to confidently communicate in mathematical language in both verbal and written form.
- To develop their character (including confidence, resilience and independence) so they can contribute positively to school, community and the wider environment.

Number

Ratio and Proportion

Algebra

Geometry

Probability

Statistics

	KS3	YEAR 10	YEAR 11
A U T U M N - I	<p>Factors and Multiples</p> <p>Powers and roots</p> <p>BIDMAS</p> <p>Introduction to Negative Numbers</p> <p>Introduction to Ratio</p>	<p>Properties of Numbers</p> <p>Problem Solving with Powers and Roots</p> <p>BIDMAS</p> <p>Calculating with Negative Numbers</p> <p>Simplifying and Sharing into Ratio</p> <p>Rounding and Estimating</p>	<p>Properties of Numbers Problem Solving</p> <p>BIDMAS (involving negatives)</p> <p>Standard Index Form</p> <p>Comparing Ratio Problems</p> <p>Algebraic Notation</p> <p>Simplifying Expressions</p> <p>Rounding and Estimating</p>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);"> <b>A U T U M N 2</b> </p>	<p>           Multiplying by 10/100/1000            Percentages            Equivalent Fractions            The Probability Scale            Properties of 2D Shapes            Area and Perimeter of basic 2D Shapes         </p>	<p>           Calculating FDP            Working with Probabilities            Sample Space Diagrams            Frequency Trees            Area and Perimeter of compound shapes            Volume and Surface Area         </p>	<p>           Exploring FDP            Exponential Growth and Decay            Probability Diagrams (including probability trees)            Venn Diagrams            Perimeter, Area, Surface Area and Volume of a range of shapes            Shape with Algebra  <b>MOCKS</b> </p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"> <b>S P R I N G I</b> </p>	<p>           Algebraic Notation            Solving Linear Equations            Continuing Sequences and term to term rule            Averages and Range         </p>	<p>           Solving Equations            Expanding and Factorising Expressions            Identifying Linear Sequences            Using nth term rule            Shape with Algebra            Averages and Range            Frequency Tables         </p>	<p>           Solving Equations and Inequalities            Algebraic Manipulation            Simultaneous Equations            Recognising Sequences            Nth Term rule            Averages and Range            Grouped Frequency Tables            Comparing Data            Angles Properties            Constructions         </p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"> <b>S P R I N G 2</b> </p>	<p>           Fractions            Decimals            Simple proportion            Measuring Lines and Angles            Negative Numbers         </p>	<p>           Fractions            Decimals            Proportion with real life context            Direct and Inverse Proportion            Angles Properties            Pythagoras Theorem            Constructions         </p>	<p>           Proportion with real life context            Direct and Inverse Proportion            Compound Measures            Pythagoras Theorem            Transformations         </p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);"> <b>S U M M E R I</b> </p>	<p>           Coordinates            Money Problems            Comparing values using Inequalities            Solving equations            Substitution (plotting)            Converting Measures         </p>	<p>           Transformations            Sequences            Plotting and Interpreting Graphs            Linear and Quadratic Graphs            Inequalities            Solving equations            Probability Trees            Venn Diagrams         </p>	<p> <b>MOCKS</b>            SOW to be tailored following Mock QLA         </p>

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Collecting Representing and Interpreting Data  
Applying probability to simple diagrams  
Negative Numbers  
Ratio and Proportion in real life context- best buys/recipes

Collecting Representing and Interpreting Data  
Pythagoras Theorem  
Ratio and Proportion  
Converting Measures  
Compound Measures

Revision and Exams