

Mathematics at Meols Cop

Our Maths curriculum aims to cultivate mathematical fluency and enhance problem-solving skills through engaging, challenging tasks. Our curriculum sequencing and use multiple representations prioritises the development of a deep and connected understanding of mathematical concepts. A strong emphasis on retrieval practice for all year groups aids students' memory retention and supports long-term mastery and learning. Our approach nurtures resilience and independence, encouraging students to tackle mathematical challenges with confidence. By developing mathematical literacy, we empower learners to articulate their reasoning and approach problems methodically, preparing them for future academic and real-world applications.

Autumn Term 1	Spring Term 1	Summer Term 1
<u>Sequences:</u> - Linear sequences - Non – linear (geometric, Fibonacci etc) <u>Number & Place Value:</u> - Place Value - Understanding Negatives - Using the inequality sign - Ordering Decimals - Rounding (integer, 10, 100, 1000) - Rounding to decimal places - Rounding to significant figures	<u>Number 2 – Applications of Addition & subtraction</u> - Mental addition - Written Addition - Addition of decimals - Perimeter - Mental Subtraction - Written subtraction - Perimeter - Mode and Range - Angles in polygons	<u>Number 3 Ctd</u> - Index notation - Standard form conversions - Factors, multiples and primes - Squares, cubes and roots - Use of a calculator
Autumn Term 2	Spring Term 2	Summer Term 2
<u>Number & Place Value ctd:</u> <u>Negatives</u> Addition and subtraction of negatives	<u>Negatives</u> Multiplication and Division of negatives <u>Number 3 - Applications of Multiplication & Division</u> - Multiplying integers - Multiplying and Dividing by powers of 10 - Multiplying Decimals - Dividing integers - Dividing decimals & dividing by a decimal - Area: Rectangle, Parallelogram, Triangle and Trapezium	<u>Number 3 Ctd</u> - Prime factorisation - Area and Circumference of a circle - Order of operations - Finding the median and mean <u>Number 4</u> - Equivalent and simplifying fractions - Multiplying fractions and mixed numbers - Dividing fractions and mixed numbers - One quantity as a fraction of another

Year 8**Autumn Term 1**Algebra 1

- Using algebraic notation
- Collecting Like Terms
- Indices
- Expanding Brackets
- Factorising

Spring Term 1Fractions, decimals and percentages

- Converting between fractions, decimals and % (calculator and non-calculator methods)
- Area and Circumference of a circle - recap (pi day)

Summer Term 1Percentages

- % of an amount Non Calc
- % of an amount Calc
- Increase & Decrease by a %
- Express an amount as a percentage of another
- Percentage change
- Reverse %

Autumn Term 2Algebra contd

- Substitution
- Solving Equations
- Forming and solving equations
- Sequences and nth term

Spring Term 2Ratio and proportion

- Direct Proportion
- Unit Conversions
- Proportion & Scale Diagrams
- Best Buys
- Recipe Problems
- Working in a ratio
- Sharing in a Ratio
- SDT
- Conversion graphs & distance-time graphs

Summer Term 2Algebra 2

- Coordinate and midpoints
- Horizontal and Vertical lines
- Table of values
- Plotting straight line graphs
- Gradient
- Equation of a line

Year 9**Autumn Term 1**Angles

- Angles recap
- Angles in triangles/quadrilaterals
- Angles in polygons
- Angles in parallel lines

Spring Term 1Probability

- Basic probability
- Sample Space
- Relative frequency
- Sets and Venn Diagrams
- Frequency tree (KS4)
- Probability Trees (KS4)

Summer Term 1Properties of number

- Rounding and estimation
 - Error Intervals
 - Factors, multiples, primes and prime factorisation
 - HCF, LCM using Venn diagrams
 - Laws of Indices
 - Standard form
- (INC CALCULATOR USE)

Autumn Term 22D and 3D shapes

- Area recap
- Properties of 3D shapes
- SA cuboids and triangular prism
- SA of cylinders
- Volume of a prism
- Density Mass Volume (KS4)
- Plans and elevations
- Constructions and Loci

Spring Term 2Transformations

- Translation
- Reflection
- Rotation
- Enlargement

Summer Term 2RECAP

- Use of a calculator
- % of amount
- Amount as a % of another

Right angled triangles

- Pythagoras
- Trigonometry

Year 10					
Autumn Term 1		Spring Term 1		Summer Term 1	
<u>Algebra & Formulae</u>		<u>Interpreting and representing data</u>		<u>H: Perimeter Area and Volume</u>	<u>F: Ratio and Proportion</u>
Autumn Term 2		Spring Term 2		Summer Term 2	
<u>H: Trigonometry</u>	<u>F: Algebra & Formulae ctd</u>	<u>H: Graphs</u> <u>H: More Trigonometry</u>	<u>F: Right Angled Triangles (recap)</u>	<u>H: Circle Theorems</u>	<u>F: Straight Line Graphs</u>

Year 11					
Autumn Term 1		Spring Term 1		Summer Term 1	
<u>H: More Algebra</u>	<u>F: Indices and Standard Form</u>	<u>H: Inequalities</u>	<u>F: Simultaneous equations</u>	<u>H: Proportion and graphs</u>	<u>F: Multiplicative reasoning</u>
<u>H: Surds</u>	<u>F: Quadratic Equations and Graphs</u>	<u>H: Trigonometry and graphs</u>			
		<u>H: Similarity and congruence</u>			
<u>Ongoing Revision and Exam preparation</u>					
Autumn Term 2		Spring Term 2			
<u>H:Probability</u> <u>H: Multiplicative reasoning</u>	<u>F: Averages</u>	<u>H: Vectors and geometric proof</u>	<u>F: Congruence, Similarity and Vectors</u>		
<u>Ongoing Revision and Exam preparation</u>					