

Mathematics at Meols Cop

We believe that our students deserve an ambitious mathematics curriculum rich with engaging and challenging tasks that develop both mathematical fluency and problem solving skills. Our curriculum design and sequencing uses multiple representations and 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> <ul style="list-style-type: none"> Linear sequences Non – linear (geometric, Fibonacci etc) <u>Number & Place Value:</u> <ul style="list-style-type: none"> 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> <ul style="list-style-type: none"> Mental addition Written Addition Addition of decimals Perimeter Mental Subtraction Written subtraction Perimeter Mode and Range Angles in polygons 	<u>Number 3 Ctd</u> <ul style="list-style-type: none"> 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> <p>Addition and subtraction of negatives</p>	<u>Negatives</u> <p>Multiplication and Division of negatives</p> <u>Number 3 - Applications of Multiplication & Division</u> <ul style="list-style-type: none"> 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> <ul style="list-style-type: none"> Prime factorisation Area and Circumference of a circle Order of operations Finding the median and mean <u>Number 4</u> <ul style="list-style-type: none"> 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	Spring Term 1	Summer Term 1
<u>Algebra 1</u> <ul style="list-style-type: none">Using algebraic notationCollecting Like TermsIndicesExpanding BracketsFactorising	<u>Fractions, decimals and percentages</u> <ul style="list-style-type: none">Converting between fractions, decimals and % (calculator and non-calculator methods)Area and Circumference of a circle - recap (pi day)	<u>Percentages</u> <ul style="list-style-type: none">% of an amount Non Calc% of an amount CalcIncrease & Decrease by a %Express an amount as a percentage of anotherPercentage changeReverse %
Autumn Term 2	Spring Term 2	Summer Term 2
<u>Algebra contd</u> <ul style="list-style-type: none">SubstitutionSolving EquationsForming and solving equationsSequences and nth term	<u>Ratio and proportion</u> <ul style="list-style-type: none">Direct ProportionUnit ConversionsProportion & Scale DiagramsBest BuysRecipe ProblemsWorking in a ratioSharing in a RatioSDT	<u>Algebra 2</u> <ul style="list-style-type: none">Coordinate and midpointsHorizontal and Vertical linesTable of valuesPlotting straight line graphsGradientEquation of a lineReal life graphs

Autumn Term 1	Spring Term 1	Summer Term 1
<u>Angles</u> <ul style="list-style-type: none"> Angles recap Angles in triangles/quadrilaterals Angles in polygons Angles in parallel lines 	<u>Probability</u> <ul style="list-style-type: none"> Basic probability Sample Space Relative frequency Sets and Venn Diagrams Frequency tree (KS4) Probability Trees (KS4) 	<u>Properties of number</u> <ul style="list-style-type: none"> Rounding and estimation Error Intervals Factors, multiples, primes and prime factorisation HCF, LCM using Venn diagrams Laws of Indices Standard form <p>(INC CALCULATOR USE)</p>
Autumn Term 2	Spring Term 2	Summer Term 2
<u>3D shapes</u> <ul style="list-style-type: none"> 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 	<u>Transformations</u> <ul style="list-style-type: none"> Translation Reflection Rotation Enlargement 	<u>RECAP</u> <ul style="list-style-type: none"> Use of a calculator % of amount Amount as a % of another <p><u>Right angled triangles</u></p> <ul style="list-style-type: none"> 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: Circle Theorems</u>	<u>F: Ratio and Proportion</u>
Autumn Term 2	Spring Term 2		Summer Term 2	
<u>Algebra & Formulae ctd</u>	<u>H: More Trigonometry</u>	<u>F: Right Angled Triangles (recap)</u>	<u>H: Quadratic Equations and Graphs</u>	<u>F: Straight Line Graphs</u>

Year 11

Autumn Term 1	Spring Term 1		Summer Term 1	
<u>H: More Algebra</u> <u>H: Surds</u>	<u>F: Indices and Standard Form</u> <u>F: Quadratic Equations and Graphs</u>	<u>H: Trigonometry and graphs</u> <u>H: Similarity and congruence</u>	<u>F: Simultaneous equations</u>	<u>H: Proportion and graphs</u> <u>F: Multiplicative reasoning</u>
<u>Ongoing Revision and Exam preparation</u>				
Autumn Term 2	Spring Term 2			
<u>H:Algebra & Formulae ctd</u> <u>H: Inequalities</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>				