

MATHS

Units taught in Year 7

AUTUMN	SPRING	SUMMER
Number	Graphs	Fractions and Decimals
Angles	Rounding	Pie charts
Probability	Interpreting Data	Circles
Percentages	Algebra	Equations and Formulae
Sequences	Congruence and Scaling	Exam Review
Algebra	Ratio and proportion	Comparing Data

Main skills developed in Year 7:

- Use positive integer powers and associated real roots
- Apply the four operations with decimal numbers
- Write a quantity as a fraction or percentage of another
- Use multiplicative reasoning to interpret percentage change
- Add, subtract, multiply and divide with fractions and mixed numbers
- Check calculations using approximation, estimation or inverse operations
- Simplify and manipulate expressions by multiplying a single term over a bracket
- Substitute numbers into formulae
- Solve linear equations in one unknown
- Understanding balance
- Using negative numbers
- Generating sequences and plotting linear equations
- Understand and use geometric notation for labelling angles, lengths, equal lengths and parallel lines

How parents can help to support their son's/daughter's learning:

- Ensure that your child is always equipped with a pen, pencil, ruler and calculator
- Encourage the need for meeting homework deadlines
- Encourage the need to review their answers to check they are reasonable
- Encourage the need for revision to consolidate the topics taught

Students will be set weekly homework. This will be in the form of a written task or computer based task.

The following websites can help your son/daughter's learning:

- www.mymaths.co.uk, www.corbettmaths.com and www.bbc.com/bitesize (your child will have their own logins)

If you have any queries, please contact Ms D Davis



MATHS

Units taught in Year 8

AUTUMN	SPRING	SUMMER
Percentage and multiples	Area	Pythagoras
Equations and equality	Expanding brackets	Speed/Distance/Time
Polygons/Angles	Plotting quadratics	Standard Form
Venn diagrams	Volume	Gradient
Substitution	Ratio	Trigonometry
Calculations with fractions		

Main skills developed in Year 8:

- Convert numbers into standard form and vice versa
- Find a relevant multiplier when solving problems involving proportion
- Solve problems involving percentage change, including original value problems
- Factorise an expression by taking out common factors
- Solve linear equations with unknowns on both sides
- Plot and interpret graphs of linear functions
- Apply the formulae for circumference and area of a circle
- Calculate the gradient of a straight line
- Understand and use Pythagoras' Theorem
- Calculate volumes of 3D shapes
- Calculate speed, distance and time
- Use and draw venn diagrams

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MATHS

Units taught in Year 9

AUTUMN	SPRING	SUMMER
Number: Fractions, ratio & proportions	Solving linear equations algebraically	Similarity
Quadratic sequences	Factorising	Exploring and applying probability
Plans and elevations	Compound shapes and circles	Number: Powers and standard form
Percentage change	Linear Graphs	Equations and inequalities
Polygons: Interior and exterior angles	Volume of 3D shapes	Accuracy, powers & surds
Transformations and Loci	Pythagoras	Tree Diagrams
	Trigonometry	

Main skills developed in Year 9:

Whether taking the Foundation or Higher GCSE route, students will become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time. Subsequently students will develop their conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They will reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. Students will be given opportunities to show they can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

How parents can help to support their son's/daughter's

learning:

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MATHS

Units taught in Year 10

AUTUMN	SPRING	SUMMER
Solving quadratics algebraically	Functions and iteration	Vectors
Limits of accuracy and surds	Rearranging formulae	Algebraic proportion
Cumulative frequency and averages	Venn Diagrams	Histograms
Similar areas and volumes	Fractions/Algebraic fractions	Density
Conditional probability	Linear graphs	Pressure
Circle theorems	Pythagoras and Trigonometry in 3D	End of Year Exam
Algebraic proportion	Revision	Recap of topics – Prep for Y11
Trigonometry		

Main skills developed in Year 10:

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SMSC and British Values:

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. Mathematics therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

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MATHS

Units taught in Year 11

AUTUMN	SPRING	SUMMER
Circle Theorems	Equations (including circles/tangents)	Topics identified from 2 nd mock exam
Negative and fractional powers	Revision for 1st Mock	GCSE Exam Revision
Transformations	Topics identified from 1st mock exam	GCSE Exam Revision
Revision for 1st Mock	Revision for 2nd Mock	GCSE EXAMS

Main skills developed in Year 11:

Whether taking the Foundation or Higher GCSE route, students will become fluent in the fundamentals of mathematics, through varied and frequent practice with increasingly complex problems over time. Subsequently students will develop their conceptual understanding and the ability to recall and apply knowledge rapidly and accurately. They will reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language. Students will be given opportunities to show they can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

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