

Department curriculum page – Math (Year 8)

Year 8:

The curriculum aims to build a foundation of mathematical skills which can be built upon throughout subsequent years and into GCSE. The curriculum prepares students for the rigours of the GCSE in Maths. The course is split into 3 strands; A, B and C, with the difficulty of the topics increasing from A to C

	Topic(s)	Key content to be learned	Assessment
Autumn Term 1	<ul style="list-style-type: none"> Whole Number and Decimals Measure, perimeter and area 	Order and compare decimals Add, subtract, multiply and divide integers Identify and use multiples factors and prime numbers Use tests for divisibility Find the prime factor decomposition of a number Find the highest common factor of two numbers Find the Lowest Common multiple of two numbers Identify and use square and cube numbers, square roots and cube roots Use appropriate units to measure length, mass and capacity Convert between metric units of measurements Calculate the area and perimeter of a rectangle Calculate the perimeter and area of a triangle Calculate the area of a parallelogram and trapezium	Written assessment, on these topics only, once the content has been covered in class
Autumn Term 2	<ul style="list-style-type: none"> Expressions and formulae Fractions, decimals and percentages Angles and shape 	Substitute into expressions Simplify by collecting like terms Use indices to simplify expressions Expand brackets Construct formulae Order decimals and fractions Convert between fractions decimals and percentages Add and subtract fractions Find a fraction of a quantity Express a number as a fraction of another Calculate percentages of an amount Express one number as a percentage of another Calculate missing angle around a point and on a straight line Calculate missing angles in a triangle Find missing angles in parallel and intersecting lines Recognise quadrilaterals and know their properties Be able to recognise and use properties of polygons	Written assessment, on these topics only, once the content has been covered in class

Spring Term 1	<ul style="list-style-type: none"> • 3D Shapes • Ratio and proportion • Probability 	<p>Recognise, and name, 3D shapes Recognise nets of 3D shapes Use isometric paper to draw 3D shapes Draw plans and elevations of 3D shapes Calculate surface area and volume of cuboids Calculate volume of prisms Simplify ratio Divide in a given ratio and use ratio in context Solve problems using direct proportion Calculate percentages of an amount Calculate percentage changes Use fractions, decimal and percentages to compare simple proportions and solve problems Use diagrams and tables to record mutually exclusive outcomes Find probabilities bases on equally likely outcomes Calculate the probability of an event not happening from the probability that it does happen Estimate probabilities by collecting data from an experiment Compare theoretical probabilities and experimental probabilities Use the language of sets (Venn diagrams) and use sets to calculate probabilities</p>	Written assessment, on these topics only, once the content has been covered in class
Spring Term 2	<ul style="list-style-type: none"> • Transformations and symmetry • Equations 	<p>Reflect, rotate and translate 2D shapes Transform 2D shapes using a combination of transformations Recognise reflections and rotational symmetry Enlarge a 2D shape given a scale factor and from a given centre of enlargement Solve simple one step equations and multi-step equations with an unknown on both sides, or involving fractions Solve equations with brackets Solve real life equations</p>	End of Year exams
Summer Term 1	<ul style="list-style-type: none"> • Written and calculator methods • Graphs 	<p>Add subtract multiply and divide whole numbers and decimals using standard written methods Use order of operations in order to carry out calculations Solve problems using standard written methods for addition, subtraction, multiplication and division of integers and decimals Draw a straight line given its equation by generating a table of values Recognise equations of vertical, horizontal and sloping lines (using gradient and intercept) Interpret and draw real life graphs Construct and interpret simple line graphs from time series</p>	Written assessment, on these topics only, once the content has been covered in class

Summer Term 2	<ul style="list-style-type: none"> Sequences Constructions Collecting and representing data 	Find and use a term to term rule in a sequence Find and use the position to term rule in a sequence (including finding the n th term of a linear sequence) Use sequences in context and in real life situations Recognise, and describe, geometric patterns Construct triangles and quadrilaterals accurately Construct bisectors, perpendicular bisectors and perpendicular lines accurately Use bearings to specify directions Measure and construct angles involving bearings Use scale drawings to represent real life objects Draw pie charts Draw bar charts and frequency diagrams Calculate mean, median and mode from discrete and continuous data Construct and interpret scatter diagrams and identify types of correlation	No formal assessment
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Useful links:

<https://www.mymaths.co.uk/>

Homework can be set on this platform. It is also a useful place to revise lessons on challenging topics as part of revision.

<https://www.kerboodle.com/>

Access the textbooks which are used in class. Catch up on missed work and revise chapters/topics which you are finding difficult

<https://corbettmaths.com/>

Videos on every topic covered. Exam questions to practice.