

Mathematics-Year 8 Curriculum

Content (Intent)	Links to prior learning	Skills and Assessment (Implementation)	Expected Learning Outcomes (Impact)
Term 1 Whole numbers and decimals Measures, perimeter and area Expressions and formulae	Consolidate and continue the learning from Year 8. Factors, multiples and primes Prime factor decomposition LCM and HCF Square roots and cube roots Indices Rounding and estimation Trial and improvement Metric measures Area Circumference of a circle Index laws Expanding brackets Factorising expressions Formulae Rearranging formulae Writing expressions Algebraic fractions	Essentials Assessments based on Number work Combined End of Unit assessment based on work covered	Expand knowledge of factors multiples, primes, indices and estimation. Convert between measures Find the perimeter and area of 2D shapes including circles. To manipulate algebra including basic algebraic fractions.
Term 2 Fractions, decimals and percentages Angles and 2D shapes Graphs	Percentage problems Fractions, decimals and percentages Angles and parallel lines Properties of a triangle and a quadrilateral Properties of a polygon Congruent shapes Graphs of linear functions Equation of a straight line Curved graphs Midpoints of coordinate pairs Graphs of implicit functions	Essentials Assessments based on Number work Combined End of Unit assessment based on work covered	Convert between fractions, decimals and percentages. Perform the 4 operations with fractions. Solve percentages problems. Investigate angle laws in parallel line and properties of 2D shapes. Plot and analyse linear and non-linear graphs. To draw and interpret real life graphs.

	Real life graphs Time series		
Term 3 Mental calculations Statistics Transformations Equations	Arithmetic with negative integers Powers of 10 Mental Planning a statistical investigation Frequency tables Constructing diagrams Averages Interpreting statistical diagrams Scatter diagrams and correlation Comparing distributions Transformations Combinations of transformations Symmetry Enlargements Linear equations Equations with fractions Trial and improvement Real life equations	Essentials Assessments based on Number work Combined End of Unit assessment based on work covered	Solve operational problems mentally. Calculate with negative integers and standard form. Understand and explore the statistical enquiry cycle through planning, collecting, representing and analysing data. Perform, read and spot patterns in transformations. Solve linear equations including with fractions and by trial improvement.
Term 4 Written and calculator methods Construction Sequences 3D shapes	Multiplication Division Calculator skills Order of operations Written addition and subtraction Written multiplication and division Constructing triangles Bisectors and perpendiculars Scale drawings Bearings General term of a sequence Sequences in context Geometric sequences	Essentials Assessments based on Number work Combined End of Unit assessment based on work covered	Perform operations in a written format and more complex calculations on a calculator. Construct triangles and bisectors. Explore scale drawings and link with bearings. Evaluate different types of sequences and notation. Identify, represent and calculate with 3D shapes.

	Recursive sequences 3D shapes Plans and elevations Surface area of a prism Volume of a prism		
Term 5 Ratio and proportion Probability Revision	Ratio Division in a given ratio Direct proportion Comparing proportions Algebra and proportion Two or more events Tree diagrams Mutually exclusive outcomes Experimental probability Comparing experimental and theoretical probability Simulating experimental data Venn diagrams and probability	Essentials Assessments based on Number work Combined End of Unit assessment based on work covered	Solve ratio problems and link to proportion. Compare and use algebra in proportion problems. Observe different diagrams associated with probability. Record, describe and analyse frequencies.
Term 6 Whole numbers and decimals Measure and area	Significant figures Upper and lower bounds Using numbers in index form Measures Dimensions Length and area Compound measures	Essentials Assessments based on Number work Combined End of Unit assessment based on work covered	Explore problems involving rounding, bounds and numbers in index form. Convert between measures of length, area and compound nature. Use compound measures to solve problems.

Additional features:

All units are cross referenced to KS2 and Year 7 teaching to ensure continuity.

Students who lack the KS2 skills and are unable to access the year 7 curriculum will continue to work on the KS2 schemes in parallel to the year 7 and 8 schemes of work

These students will also be supported through the not secondary ready program at Newlands.

Each unit and each topic have a specific number of hours allocated to it.

Formative (deep marking/End of unit test) and summative assessment dates have been included to ensure students progress is accurately and timely measured.

Reference to ICT; MyMaths, Kerboodle, mathsbot and mathsbox.