Year 7 Curriculum
Mathematics

	Term 1 (Autumn)		Term 2 (Spring)		Term 3 (Summer)	
	Autumn 1	**Autumn 2**	**Spring 1**	**Spring 2**	**Summer 1**	**Summer 2**
Key Concepts – All Sets	• Sequences – Generating sequences – Recognising special sequences • Algebraic Notation – Function machines – Substitution – Rearrange and simplify • Equality & Equivalence – Inverse operations – Using letters to represent unknowns – Using function machines – Solving linear equations	• Place value – Compare integers and decimals – Inequalities – Number lines – Range and median of number lines – Round to powers of ten, decimal places and significant figures • FDP – Conversions – Meaning of percentages – Represent fractions as diagrams, number lines	• Addition & Subtraction – Mental strategies – Written methods – Solve perimeter problems – Solve problems with tables and timetables – Solve problems with frequency trees – Apply addition and subtraction to bar charts, line graphs and two-way tables. • Multiplying & dividing – Find factors and multiples – HCF/LCM – By powers of 10 – Convert metric units – Formal methods – Order of operations – Problems involving area of rectangles, parallelograms, and triangles – Problems involving the mean	• Fractions & Percentages of Amounts – Fractions of amounts – Percentages of amounts with and without a calculator • Directed Numbers – Representations – Order and use inequality symbols – Add, subtract, multiply and divide – Calculator use – Algebraic expressions – Solve two step equations – Correct order of operations • Adding & Subtracting Fractions – Mixed numbers and improper fractions – Equivalent fractions – Add and subtract fractions, including mixed numbers – Add and subtract fractions and decimals	• Constructing & Measuring – Labelling notation – Line segments – Use a compass – Angles – classify, measure, draw – Parallel and perpendicular – Types of triangles – Types of quadrilaterals – Name polygons – Construct triangles ASA, SAS and SSS – Construct and interpret pie charts • Geometric Reasoning – Angles around a point, on a straight line, vertically opposite, in a triangle, quadrilateral – Solve problems	• Sets & Probability – Identify and represent sets – Venn diagrams – Language of probability – Sample spaces – Probability scale – Sum of possible outcomes • Primes & Proofs – Multiples – Factors of numbers and expressions – Prime numbers – Square and triangular numbers – HCF and LCM

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Year 7 Curriculum *(continued)*

Mathematics

Extension Objectives – All Sets	• Finding the nth term of a linear sequence	• Write 10, 100, 1000 etc as powers of 10 • Investigate negative powers of 10 • Write positive integers and decimals in standard form • Fractions as division • FDP conversions with fractions greater than 1	• Add and subtract in standard form • Multiply by 0.1, 0.01, etc • Problems involving area of trapezia • Apply multiplication and division skills to algebraic contexts	• Problems with fractions greater than 1 and percentages greater than 100% • Square and square root of positive numbers • Higher powers and roots of positive numbers • Fractions in algebraic context • Add and subtract algebraic fractions	• Construct more complex polygons • Angle sum in any polygon • Angles in parallel lines • Simple proofs	• Complement of a set • HCF and LCM using a Venn diagram • Tests and conjectures • Counter example

Year 7 Assessment
Mathematics

All pupils will sit several knowledge tests and an assessment in Year 7.

<table>
<tr><th></th><th>Knowledge Tests</th><th colspan="2">Assessment</th><th>Revision Resources</th></tr>
<tr><td></td><td>Autumn/Spring Terms</td><td colspan="2">Summer Term</td><td rowspan="3">Kennet Resources
• Year 7 Knowledge Organisers
• Learning Habits

External Resources
• www.mymaths.co.uk
• www.bbc.com/bitesize

You can also find revision material on Frog</td></tr>
<tr><td>Style of Assessment</td><td>Each knowledge test consists of 10 multiple-choice questions</td><td>Paper 1:
Non-Calculator</td><td>Paper 2:
Calculator</td></tr>
<tr><td>Topics Assessed</td><td>• Core knowledge taught until that point in the academic year</td><td colspan="2">The exam will assess any content taught up to this point in the year or any previously taught content. The units covered are:
• Sequences
• Algebraic Notation
• Equality & Equivalence
• Place Value
• Fractions, Decimals & Percentages
• Addition & Subtraction
• Multiplying & Dividing
• Fractions & Percentages of Amounts
• Directed Numbers
• Adding & Subtracting Fractions
• Constructing & Measuring

A revision list and revision materials will be provided prior to the assessment</td></tr>
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