

## Long-term planning

### Maths - Year 7

Year 7 Themes	Autumn term 1	Autumn term 2	Spring term 1	Spring term 2	Summer term 1	Summer term 2
Developing confidence and enjoyment of maths	<b>Students will know that</b>	<b>Students will know that</b>	<b>Students will know that</b>	<b>Students will know that</b>	<b>Students will know that</b>	<b>Students will know that</b>
	BIDMAS is the order of operations. Integers can be positive or negative.	Algebra is accessible and follows the same rules as numbers. Time is measured in blocks of 60's.	The difference between perimeter (length) and area. Numbers have many different properties and can be classified by these.	Fractions are parts of a whole. Fractions have equivalent values. Single brackets can be expanded and also factorised.	Angles are measured in degrees. There are 3 types of average. Data needs to be reliable.	Fractions, decimals and percentages all have equivalent values. Probability uses fractions, decimals and percentages.
	<b>Students will know how</b>	<b>Students will know how</b>	<b>Students will know how</b>	<b>Students will know how</b>	<b>Students will know how</b>	<b>Students will know how</b>
	Use both calculator and non-calculator methods to complete operations Round to a given degree of accuracy Calculate with directed number Apply commutative and associative laws to operations.	Understand and write algebraic expressions, substitute into algebraic expressions and solve simple equations Use and calculate with measures of units and time	Find perimeter and area of 2D shapes Plot shapes using coordinates Identify types of numbers using factors, multiples and primes	Write, compare, add and subtract fractions Expand and factorise single brackets	Draw, measure and calculate angles Calculate averages and range from data Use data tables and charts to collect and present data Solve proportion word problems	Multiply and divide fractions, find fractions of an amount Compare and order fractions, decimals and percentages Use theoretical probability
	<b>Vocabulary and the concepts they link to</b>	<b>Vocabulary and the concepts they link to</b>	<b>Vocabulary and the concepts they link to</b>	<b>Vocabulary and the concepts they link to</b>	<b>Vocabulary and the concepts they link to</b>	<b>Vocabulary and the concepts they link to</b>
	Integer Operation Calculate Root Power	Substitute Expression Linear Measure Conversion	Length Area Congruent Vertex (Vertices) Axis (Axes)	Equivalent Simplify Factorise Expand Expression	Acute Obtuse Range Average Proportion	Reciprocal Convert Probability Mutually Exclusive Sample Space

	<b>Summative Assessment</b>	<b>Summative Assessment</b>	<b>Summative Assessment</b>	<b>Summative Assessment</b>	<b>Summative Assessment</b>	<b>Summative Assessment</b>
	Sparx Baseline	Sparx Shadow baseline	End of term 1	End of term 2	End of year	End of term 3
	<b>Diversity &amp; development of cultural capital</b>	<b>Diversity &amp; development of cultural capital</b>	<b>Diversity &amp; development of cultural capital</b>	<b>Diversity &amp; development of cultural capital</b>	<b>Diversity &amp; development of cultural capital</b>	<b>Diversity &amp; development of cultural capital</b>
	Alan Turing and the history of Bletchley Park	Problems involving different time zones	Piet Mondrian – how we can use maths to understand his work	Earliest examples of fractions and historical systems	Calculating averages with real life data	Probability in real life – Betting odds and statistical models in football
	<b>Cross-curricular opportunities and enrichment</b>	<b>Cross-curricular opportunities and enrichment</b>	<b>Cross-curricular opportunities and enrichment</b>	<b>Cross-curricular opportunities and enrichment</b>	<b>Cross-curricular opportunities and enrichment</b>	<b>Cross-curricular opportunities and enrichment</b>
		Maths Week England Fibonacci Day	Euler's Number Day NSPCC Number Day	Pi Day	Junior UKMT Square Root Day Women in Maths Day National Numeracy Day	My Money Week Pythagoras' Theorem Day