

Subject

Year 7

Autumn

Year: 7 Term: Autumn					
Subject	Topic	Key Knowledge	Links to prior learning	Wider curriculum connections	Knowledge booklet / Quizlet
Phase A					
Number 1	The four operations and language of maths	Long, short and mental methods of performing arithmetic BODMAS Mathematical notation. Concept of inverse operations	Times tables Written methods of arithmetic Synonyms for different operations		
	Concepts and applications of place value	Use the concept of place value to compare numbers and estimate calculations and find half way values	Identifying digits in a number Ordering integers and decimals Multiplying and dividing by powers of 10 Number line	Science	
	Negative Numbers	The 4 operations with negative number	Number line Ordering integers		
	Interpreting Scales and real life timetables	Train/Bus timetables Scales for weight	Time (minutes in an hour. Hours in a day etc)	Geography Science	
	Estimation and rounding	Decimal Places	Place value	Geography Science	

Subject

		Significant figures			
	Factors multiples and Primes	Compare factors multiples and primes Find factors and multiples of a number Recall first 15 primes Express numbers as a product of primes Find HCF and LCM	Times tables Know the definition of factors, multiples and primes		
	Simplifying, Comparing and performing arithmetic with fractions	Arithmetic with both same and different denominators Find a fraction of an amount Order fractions	Times tables Simplifying fractions Understand the concept of equivalent fractions Understand fractions pictorially	Science	
	Indices,	Evaluate higher powers Simplify indices with the same base	Evaluating powers of 2 or 3 Place Value Powers of 10	Science	

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Spring

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Algebra 1	Co-ordinates	Problems involving coordinates and compass directions	Plotting and reading coordinates	Geography	
	Substitution		BODMAS The 4 operations	Science	
	Function Machines		BODMAS Substitution		
	Drawing graphs	Drawing Linear Graphs	Times tables Substitution Co-ordinates Reading a scale	Science	
Geometry 1	Angles	Measuring and drawing angles Angle facts: Triangle Straight line Around a point	Acute and Obtuse angles Use of a protractor Basic algebra skills		
	Properties of 2D and 3D shapes	Properties of shapes: faces, edges, vertices Notation for equal length lines and parallel lines	Nets Naming 2D and 3D shapes Symmetry		
	Area Perimeter and Volume	Find the area and perimeter of basic 2D	Definitions and concepts of area and		

Subject

		shapes Compare areas and perimeters of 2D shapes	perimeter		
	Metric Conversions	Converting units of length mass and capacity	Using a ruler Concept of space	RM Science	
Ratio 1	Basic proportional reasoning	Basic proportion problems Recipe Questions Value for money			

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Data and probability 1	Representing and Interpreting data	Pictograms Pie Charts Scatter diagrams	Tally and bar charts Angle facts	Geography Science	
	Probability	Using a probability scale Two way tables Venn diagrams	Likelihood of events Addition and subtractions Fractions Interpreting a scale	Psychology	
Geometry 2	Transformations	Defining Congruence	Symmetry Properties of	Art	

Subject

		Reflections Rotations Translations	2D shapes		
Number 2	Percentages on a calculator	Calculator skills Multipliers Increasing and decreasing by a percentage Expressing a fraction as a percentage	Basic calculator skills Concept of percentages Fractions	Business Geography Science	

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Number 2 (Includes revisiting topics from number 1)	Four operations	Confidently perform arithmetic on both integers and decimals Arithmetic with negative numbers Negatives in real life	Four operations Negative numbers		
	Rounding and estimation	Rounding to significant figures Use appropriate rounding to	Rounding to integers, dp etc Multiplying and dividing decimals		

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		estimate answers to solutions			
	Factors Multiples and Primes	HCF and LCM including real life applications Product of Primes Mathematical reasoning using prime numbers	Know the definition of factors multiples and primes Be able to find and factors multiples		
	Fractions	Confidently perform arithmetic with proper fractions Convert between mixed and improper fractions Arithmetic with improper fractions Fractions of a quantity Worded fraction problems	Equivalence Simplifying Arithmetic of fractions		
	Indices	Laws of indices Simplifying indices	Evaluating powers Recalling square and cube numbers		
	Standard Form	To convert between standard form and ordinary numbers	Indices Place Value		

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		To order numbers in standard form			
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Algebra 2 (includes revisiting algebra 1)	Graphs	Confidently draw linear graphs Understand the concept of gradient and intercept Find the midpoint between 2 coordinates Draw quadratic and cubic graphs	Drawing linear graphs Substitution Using a calculator Squares and Cubes		
Geometry 3 (includes revisiting geometry 1 and 2)	Area and Perimeter	Finding area and perimeter of simple 2D shapes Naming parts of a circle Area and Circumference of circles	Simple Geometric definitions Area and perimeter		
	Angles	Basic Angle facts	Drawing and measuring	Literacy and reasoning	

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		(triangle, straight line, point) Angles in parallel lines Multi step angles problems and reasoning	angles Language of angles (obtuse, acute, reflex) The four operations Basic algebra		
Ratio 2 (includes revisiting ratio 1)		Sharing in a ratio Reverse Ratio Converting between ratios, fractions, decimals and percentages Exchange rates	Basic proportional reasoning Value for money Recipe Questions	Food tech Science	

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Number 3 (includes revisiting number 1 and 2)	Percentages	Key language (interest, depreciate) Expressing as a percentage Percentage change Simple	Finding percentages both with and without a calculator Multipliers Expressing as a percentage Converting	Comprehension Business Geography	

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		Interest	between fractions and percentages Simplifying fractions Equivalent fractions		
Geometry 4 (includes revisiting geometry 2)	Transformations	Confidently rotate, reflect and translate shape Enlarge shapes with a positive scale factor	Symmetry Reflections, rotations and translations		
Data and Probability 2 (includes revisiting data and probability 1)	Representing data Sample space diagrams Listing outcomes Experimental probability and relative frequency Venn diagram notation	Pie Charts including interpreting Scatter Diagrams including interpreting Stem and leaf diagrams Averages from a list and a table or graph	Tally and bar charts Pie charts Basic angle facts Averages from a list of data Probability scale Fractions Multiplying decimals Concept of Venn diagrams		

Year 9

Autumn

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Year 9

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Summer

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Year 10

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Year 10

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Year 11

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Year 11

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Year 11

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