

Year 7

Timing	Unit Title	Key Question	Knowledge	Assessing Understanding
Autumn	Number work	Can you use all four operations correctly?	<ul style="list-style-type: none"> Place value. Using the four operations. Long multiplication & division. 	<p>How understanding is assessed</p> <ul style="list-style-type: none"> by applying the theory to a range of questions and increasingly more complex situations discussion in lessons, sample problems homework and tests <p>Skills</p> <ul style="list-style-type: none"> understanding of the concepts numerical skills problem solving skills <p>Assessment Point information</p> <ul style="list-style-type: none"> classroom tests relevant to topics studied
	Index notation	Do you know how to work with index notation and indices?	<ul style="list-style-type: none"> Understanding the meaning of square, cube, square root and cube root of a number Understanding index notation 	
	BIDMAS	Do you know the order of operations to use?	<ul style="list-style-type: none"> Applying rules for order of operations. Using calculators to apply operations 	
	Factors and multiples	Can you identify multiples and factors?	<ul style="list-style-type: none"> Identifying multiples and factors of numbers Applying the above concepts to solve daily life problems 	
	Directed numbers	Can you work with negative numbers?	<ul style="list-style-type: none"> Recognising the use of negative numbers in the real world Adding, subtracting, dividing and multiplying with negative numbers. 	
	Transformations, Symmetry and Congruence	Can you use rotational symmetry & lines of reflections? Do you understand the idea of congruence?	<ul style="list-style-type: none"> Translate, rotate and reflect 2D shapes Describe translations in vector form Combine transformations Understand the idea of congruence Match the sides and angles of two congruent shapes 	
	Collecting, Organising and Displaying Data	Can you use statistics and charts to present on a topic of your choosing?	<ul style="list-style-type: none"> Recognise different methods of collecting data Identify and write appropriate survey questions Organise data 	

			<ul style="list-style-type: none"> ● Create frequency tables ● Construct, analyse and interpret pictograms, vertical line charts, bar charts and compound bar charts 	<p>How understanding is assessed</p> <ul style="list-style-type: none"> ● by applying the theory to a range of questions and increasingly more complex situations ● discussion in lessons, sample problems ● homework and tests <p>Skills</p> <ul style="list-style-type: none"> ● understanding of the concepts ● numerical skills ● problem solving skills <p>Assessment Point information</p> <ul style="list-style-type: none"> ● classroom tests relevant to topics studied
Spring	Expressions & formulae	Can you set up expressions and formulae and substitute into them?	<ul style="list-style-type: none"> ● Using and interpreting algebraic notation. ● Substitution of numerical values into formulae and expressions. ● Simplifying expressions by collecting like terms. 	
	Linear equations	Can you solve a linear equation?	<ul style="list-style-type: none"> ● Solving linear equations in one variable, including brackets. ● Forming linear equations from a worded problem. 	
	Fractions	Can you add, subtract, multiply and divide with fractions?	<ul style="list-style-type: none"> ● Simplifying fractions. ● Finding fractions of amounts. ● Adding, subtracting, multiplying and dividing with fractions. 	
	Decimals	Can you add, subtract, multiply and divide with decimals?	<ul style="list-style-type: none"> ● Ordering decimals. ● Adding, subtracting, multiplying and dividing with decimals. 	
	Angles, Parallel Lines & Triangles	Do you know your angle properties?	<ul style="list-style-type: none"> ● Measuring and drawing angles using a protractor. ● Applying properties of angles in triangles, on a straight line, vertically opposite and around a point. ● Applying properties of angles for parallel lines. 	

Summer	Percentages	Can you convert between fractions, decimals & percentages? Can you find a percentage of an amount?	<ul style="list-style-type: none"> Working interchangeably with percentages, decimals and their corresponding fractional equivalents. Writing one number as a percentage of another. Finding simple percentages of amounts. 	<p>How understanding is assessed</p> <ul style="list-style-type: none"> by applying the theory to a range of questions and increasingly more complex situations discussion in lessons, sample problems homework and tests <p>Skills</p> <ul style="list-style-type: none"> understanding of the concepts numerical skills algebraic skills problem solving skills <p>Assessment Point information</p> <ul style="list-style-type: none"> classroom tests relevant to topics studied
	Perimeter and Area of Triangles and Circles	Can you use the formulae for the area of triangles and circles to solve problems?	<ul style="list-style-type: none"> Find the perimeter and area of a triangle Find the circumference of a circle Find the perimeter of a semicircle and a quarter of a circle Find the area of a circle Find the area of a semicircle and a quarter of a circle 	
	Perimeter and Area Problems	Can you find perimeters and area of composite shapes?	<ul style="list-style-type: none"> Find a length given the perimeter or area of a shape Solve problems involving perimeters and areas of composite plane figures formed by rectangles, squares, triangles and circles 	
	Volume and Surface Area of Cubes and Cuboids	Can you find the surface area and the volume of cubes and cuboids?	<ul style="list-style-type: none"> Draw nets of cuboids, including cubes Calculate the surface areas and volumes of cuboids, including cubes Solve problems involving volume and surface area of cuboids, including cubes 	
	Famous Mathematician Project	Can you learn more about some of the great mathematicians in the world?	<ul style="list-style-type: none"> Research Design a poster 	