Year 9 SOW - Foundation

Y9 Foundation -HT1					
Chapter	**Lesson**	**Learning objective**	**R**	**A**	**G**
Decimal numbers	Ordering decimals	Know the value of each digit in a whole number (including decimals)			
		To be able to order decimal numbers according to size			
	Addition / subraction	To carry out additions and subtractions with decimals (including problem solving)			
	Order of operations	To use BIDMAS to carry out calculations			
	Powers of 10	To understand and work with both positive and negative powers of ten			
	Multiplication/division of decimals	To consolidate multiplying decimal numbers			
		To consolidate dividing decimals			
	Rounding	To round numbers, where necessary, to a suitable degree of accuracy i.e decimal place and significant figures			
	Solving problems	To solve real-life problems involving multiplication or division			
Ratios and Proportion	Simplifying ratios	To write a ratio as simply as possible			
	Ratios and sharing	To use ratios to find totals or missing quantities			
	Solving problems	To use ratio to solve problems in a real life context (including recipes)			
Percentages	Fractions/Decimals/Percentages	To revise the links within fractions, decimals and percentages FDP			
	Simple interest	To understand what simple interest is			
		To solve problems involving simple interest			
	Percentage increases and decreases	To calculate the result of a percentage increase or decrease			
		To calculate simple percentage change			
		To calculate simple compound percentages			
	Calculating the original value	**To calculate simple original value (reverse percentage)**			

Y9 Foundation-HT2					
Chapter	**Lesson**	**Learning objective**	**R**	**A**	**G**
Fractions	Adding and subtracting fractions	To add or subtract fractions (starting with same then leading to different denominators)			
		To add or subtract two simple mixed numbers			
	Multiplying fractions	To multiply two fractions			
		To multiply two simple mixed numbers			
	Dividing fractions	To divide one fraction by another			
		To divide two simple mixed numbers			
Algebra	Like terms	To simplify algebraic expressions by combining like terms			
	Using index notation	To write algebraic expressions involving simple powers			
	Expanding brackets	To multiply out brackets			
	Factorising algebraic expressions	To factorise expressions			
	Expand and simplify	To expand expressions with two brackets and simplify e.g 2(5x+5) - 3(2x - 4)			
		To expand double brackets			
Equations	Solving equations	To solve one step equations			
		To solve simple two step equations			
		To solve equations which include brackets			
		To solve equations with unknown on both sides			
		To solve equations with fractional coefficients.			
Formulae	Using formulae	To substitute values into simple formulae			
Y9 Foundation- HT3					
Chapter	**Lesson**	**Learning objective**	**R**	**A**	**G**
Solving equations graphically	Graphs from equations in the form $y = mx + c$	To draw a straight line graph from any linear equation using the table of values with and without calculator			
		To solve a linear equation from a graph			
	Solving simple quadratic equations by drawing graphs	To draw simple quadratic graphs with and without calculator			
		To solve a simple quadratic equation by drawing a graph			
Circles	Circumference of a circle	To calculate the circumference of a circle			
	Area of a circle	To calculate the area of a circle			
	Mixed problems	To solve problems involving the circumference and area of a circle			
Surface area and volume of 3D shapes	Surface area of cubes and cuboids	To work out the surface area of cubes and cuboids			
	Volume of cubes and cuboids	To work out the volume of a cube and cuboid			
		To work out the capacity of a cube or cuboid (1litre = 1000cm³ and 1000 litre = 1m³)			
	Volume of triangular prisms	To work out the volume of a triangular prism			

Y9 Foundation- HT4					
Chapter	**Lesson**	**Learning objective**	**R**	**A**	**G**
Polygons	Polygons	To know the names of polygons			
		To know the difference between an irregular polygon and a regular polygon			
	Angles in polygons	To work out the sum of the interior angles of a polygon			
	Interior angles of regular polygons	To work out the sizes of the interior angles in regular polygons			
		To work out the sizes of the exterior angles in regular polygons			
Enlargements	Scale factors and enlargements	To use a scale factor to show an enlargement			
	The centre of enlargement	To enlarge a shape about a centre of enlargement			
Similar shapes	Similar shapes	To understand what similar shapes are			
Y9 Foundation- HT5					
Chapter	**Lesson**	**Learning objective**	**R**	**A**	**G**
Using data	Scatter graphs and correlation	To describe correlation from two related scatter graphs			
		To draw the line of best fit			
	Stem and leaf diagrams	To construct stem and leaf diagrams			
		To use stem and leaf diagrams to find mode, median and range of a set of data			
	Two-way tables	To complete two-way tables			
	Comparing two or more sets of data	To compare two sets of data from statistical tables and diagrams			
	Statistical investigations	To plan a statistical investigation			
Compound units	Distance	To work out the distance travelled in a certain time at a given speed			
		To use and interpret distance–time graphs			
	Speed	To work out the speed of an object, given the distance travelled and the time taken			
	Time	To work out the time an object will take on a journey, given its speed and the distance travelled			
Pythagoras' theorem	Calculating the length of the hypotenuse	To calculate the length of the hypotenuse in a right-angled triangle			
	Calculating the length of a shorter side	To calculate the length of a shorter side in a right-angled triangle			
	Using Pythagoras' theorem to solve problems	To use Pythagoras' theorem to solve problems			

Y9 Foundation- HT6					
Chapter	**Lesson**	**Learning objective**	**R**	**A**	**G**
Probability	Probability scales	To use a probability scale to represent likelihood			
		Probability of equally likely outcomes / Probability of events not occuring			
	Sample space	To use basic sample space diagrams to calculate probabilities			
	Experimental probability	To calculate probabilities from experiments			
Transformations	Translations	To understand how to translate a shape (mentioning object and image are congruent shapes)			
	Rotations	To understand how to rotate a shape (mentioning object and image are congruent shapes)			
	Reflections	To understand how to reflect a shape (mentioning object and image are congruent shapes)			
		To use a coordinate grid to reflect shapes			
	Enlargement	To understand how to enlarge a shape by a positive scale factor (mentioning object and image are similar shapes)			
Revision and GCSE preparation	Re-teach & revise	Help pupils to practise and revise topics covered in their current course			
Review					