

Year 8 SOW - Foundation

Y8 Foundation- HT1					
Chapter	Lesson	Learning objective	R	A	G
Working with numbers	Place value	Know the value of each digit in a whole number/decimals			
	Ordering decimals	To understand and use the symbols < (less than) and > (greater than) To be able to order decimal numbers according to size			
	Addition / subtraction	To carry out additions and subtractions including decimals (including problem solving)			
	Multiplying and dividing by 10, 100 and 1000	To be able to multiply and divide by 10, 100 and 1000 (including decimals)			
	Multiplication	To choose a written method for multiplying two numbers together			
	Division	To use written methods to carry out divisions accurately (including decimals and problem solving)			
	Calculations with measurements	To convert between common metric units To use simple measurements in calculations			
	Order of operations	To use the rules of BIDMAS to carry out calculations			
	Using tables and money	To be familiar with everyday uses of tables and money To carry out calculations from information given in tables To work out everyday money problems			
Negative numbers	Negative numbers	To use a number line to order positive and negative numbers To use a number line to calculate with negative numbers To carry out additions and subtractions involving negative numbers (including problem solving) <u>To carry out multiplications / division involving negative numbers</u>			
Rounding and Estimation	Rounding	To round numbers to one/ two decimal place <u>To round to 1 sf, 2sf, 3sf (significant figure)</u>			
	Estimating answers	To use rounding to estimate answers to calculations			
	Problem solving with decimals	To solve problems with decimal numbers			
Review					

Y8 Foundation- HT2					
Chapter	Lesson	Learning objective	R	A	G
Multiples / Factors and primes	Factors and highest common factors (HCF)	To be able to list factors of a number			
		To be able to list common factors			
		To be able to find HCF			
	Prime Numbers	To be able to list prime numbers up to 30			
		To find prime factors of a number			
		To write a number as a product of its prime factors using a calculator			
		<u>To write a number as a product of its prime factors</u>			
	Multiples and lowest common multiple (LCM)	To be able to list multiples of a number			
		To be able to list common multiples			
		To be able to find LCM			
	Squares, cubes and roots	To understand and use squares and square roots			
		To understand and use cubes and <u>cube roots</u>			
		<u>To estimate the square root of a number</u>			
Area	Area of simple shapes (rectangle - triangle)	To be able to work out the area of a shape by counting squares			
		To be able to work out the area of a rectangle			
		To be able to work out the area of a triangle			
	Areas of compound shapes	To work out the area of simple compound shapes			
	<u>Area of a parallelogram</u>	<u>To work out the area of a parallelogram</u>			
	Circumference/Area of a circle	To know the definition of a circle and the names of its parts/practice how to draw a circle			
		To work out the circumference of a circle			
		<u>To work out the area of a circle</u>			
Expressions	Like terms	To simplify algebraic expressions by combining like terms			
		To use algebraic expressions in different contexts (including perimeter, area and angles)			
		To write algebraic expressions involving powers			
	Expanding brackets	To multiply out single brackets			
Review					

Y8 Foundation- HT3					
Chapter	Lesson	Learning objective	R	A	G
Sequences	Other sequences	To know and understand the Fibonacci sequence			
		Investigate other sequences such as square and <u>triangle number</u>			
		To use function machines to generate sequences			
	The n th term of a sequence	To use the term-to-term rule			
		To use the n th term rule to generate sequence			
		To find the n th term of a sequence			
Equations	Equations	To solve one step equations			
		To solve two step equations			
		<u>To solve equations which include brackets</u>			
		<u>To form and solve simple equations</u>			
Formulae	Substituting into formulae	To use simple algebra to write formulae			
		To substitute values into formulae			
Review					
Y8 Foundation- HT4					
Chapter	Lesson	Learning objective	R	A	G
Fractions	Adding and subtracting fractions	To convert a fraction into a decimal/percentage			
		To add and subtract fractions (including simple mixed numbers)			
	Multiplying fractions and integers	To calculate a fraction of a quantity			
		To multiply a fraction or a mixed number by an integer			
		To multiply 2 fractions			
	<u>Dividing with integers and</u>	<u>To divide a unit fraction by an integer</u>			
<u>To divide an integer by a unit fraction</u>					
Percentages	Calculating percentages	To write a percenatge as a fraction/decimals			
		To write one quantity as a percentage of another			
	Percentage increase/decrease Problem solving with percentages	To calculate the result of a percentage increase or decrease with/without a calculator			
		To solve simple percentage problems (including real life context)			
Ratio and Proportion	Simplifying ratios	To simplify ratios			
	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)			
	Direct proportion	To understand the meaning of direct proportion			
		To find missing values in simple problems involving proportion			
	Inverse proportion	To understand what is meant by inverse proportion			
Review					

Y8 Foundation- HT5					
Chapter	Lesson	Learning objective	R	A	G
Graphs	Coordinates	To plot more complex coordinates in all four quadrants			
	Graphs from a table	To draw a graph from a table of values with/without calculator			
	Distance–time graphs	To read and draw distance–time graphs			
		To learn how graphs can be used to represent real-life situations			
	<u>Graphs from simple quadratic equations</u>	<u>To recognise and draw the graph from a simple quadratic equation using a calculator</u>			
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)			
Scale Drawing	Scales	To understand and use scale drawings			
		To know how to use map ratios			
Challenge	Constructing triangles				
Review					

Y8 Foundation- HT6					
Chapter	Lesson	Learning objective	R	A	G
Angles	Measuring and drawing angles	To consolidate on using a protractor to measure / draw an angle			
		To know different types of angles			
		To understand parallel/perpendicular lines			
	Calculating angles	To calculate angles at a point (including problem solving <u>such as solving equations</u>)			
		To calculate angles on a straight line (including problem solving <u>such as solving equations</u>)			
		To calculate vertically opposite angles (including problem solving <u>such as solving equations</u>)			
		To know that the sum of the angles in a triangle is 180° (<u>including isosceles and equilateral triangle including problem solving</u>)			
	To know that the sum of the angles in a quadrilateral is 360°				
Probability	Probability scales	To use a probability scale to represent likelihood			
		Probability of equally likely outcomes / Probability of events not occurring			
	Sample space	To use basic sample space diagrams to calculate probabilities			
	Experimental probability	To calculate probabilities from experiments			
Interpreting / Representing data	Pie charts	To create and interpret simple pie charts			
	Scatter graphs and correlation	To read and plot scatter graphs			
		To describe correlation			
	Stem and leaf diagrams	To construct stem and leaf diagrams			
	Grouped frequency tables	To create a grouped frequency table from continous/discrete raw data			
	Averages	To understand and calculate the mean, mode and median			
		To use the mean and range to compare data from two sources			
To understand when each different type of average is most useful					
Review					