



Key Stage 3 Scheme of Work Maths

Year 7 Half Term 1							
Week	Theme	Subject content / Knowledge	Skills	Assessment	Differentiation		Key Resources
					Support	Challenge	
1	Number	Understanding Place Value Rounding and Estimation	<ul style="list-style-type: none"> Understand place value in numbers up to 10,000,000 Read and write numbers up to 10,000,000 identify the value of each digit in numbers given to three decimal places Multiply and divide decimals by 10,100 and 1000 giving answers up to three decimal places order a set of integers (up to seven digits) order a set of decimals round any whole number up to 1,000,000 to a required degree of accuracy (e.g. nearest integer, 10,100,100 etc..) 	Autumn 1 Assessment	<ul style="list-style-type: none"> Understand and use place value in four digit numbers Multiply and divide whole numbers by 10, 100 and 1000 Approximate numbers by rounding to the nearest 10,100 or 1000. 	<ul style="list-style-type: none"> Use inequality signs (< or >) to compare numbers Use a compound inequality to compare three or more numbers (e.g. $-1 < 0.5 < 4$) round numbers to a specified number 	



2		Order of Operations	<ul style="list-style-type: none"> Round decimals to a given number of decimal places use estimation to check answers use their knowledge of the order of operations to carry out calculations (BODMAS) 		<ul style="list-style-type: none"> Approximate decimals by rounding to the nearest whole number 	<ul style="list-style-type: none"> of significant figures Estimate calculations by rounding numbers to 1 significant figure. solve problems which require answers to be rounded to specified degrees of accuracy 	
3		Calculating using the four operators (Integers and Decimals)	<ul style="list-style-type: none"> solve addition and subtraction multi-step problems in context (integers and decimals), multiply multi-digit numbers up to 4 digits by a 2 digits whole numbers using the formal written method of long multiplication Divide up to a four digit number by a one digit number where there is no remainder using short division Divide up to a four digit number by a one digit number which results in a decimal answer using short division Multiply decimals using a formal written method Divide a decimal by an integer using short division Solve multiplication and division multi-step problems in context (integer and decimals) 		<ul style="list-style-type: none"> Use column addition/subtraction for numbers up to four digits recall multiplication facts up to 12 x12 recall division facts for multiplication tables up to 12x12 Add and subtract numbers mentally (ones, tens and hundreds) find different combinations of coins that equal the same amounts of money. solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change. solving problems involving addition and subtraction of money (including use of £ and p) 	<ul style="list-style-type: none"> Know and be able to show that addition and multiplication can be done in any order but subtraction and division cannot (that they are commutative) Use long division to divide numbers up to four digits by a two-digit number Divide by a number less than one 	
4	Algebra	Using Algebraic Notation and Simplifying Algebraic Expressions	<ul style="list-style-type: none"> Know basic algebraic notation (the rules of algebra) Simplify an expression by collecting like terms 			<ul style="list-style-type: none"> Simplifying complex algebraic expressions 	



			<ul style="list-style-type: none"> Construct expressions using the four operators Recognise algebraic expressions which are and are not equivalent 			involving more complex powers	
5	Number	Using Powers and Roots	<ul style="list-style-type: none"> Read, write and evaluate powers Recognise and use triangular, square and cube numbers Define and find square roots (including use of the $\sqrt{\quad}$) Define and find cube roots and other roots, including the use of a scientific calculator Use conventional notation for priority of operations, including brackets, powers, roots and reciprocals basic algebraic notation (the rules of algebra) 			<ul style="list-style-type: none"> Solve complex calculations using powers and roots using a calculator Use standard form to write large numbers Use standard form to write small numbers 	
6	Shape	Area and Perimeter	<ul style="list-style-type: none"> measure and calculate the perimeter of rectangles and triangles Calculate the perimeter of compound shapes calculate and compare the area of rectangles (including squares) using standard units, square centimetres (cm²) and square metres (m²) Calculate the area of compound shapes find missing side lengths given the area/perimeter create an expression for perimeter and area of rectangles and triangles 		<ul style="list-style-type: none"> find perimeter of a rectangle by counting squares find area of a rectangle by counting squares. estimate the area of irregular shapes know appropriate units for measuring length and area 	<ul style="list-style-type: none"> Calculating the area of parallelograms and trapezium Creating an expression for perimeter and area of parallelograms and trapezium Recognise that shapes with the same areas can have different perimeters and vice versa Convert between units of area e.g. cm² to m² 	
7	Revision End of Autumn 1 Assessment Analysis of Autumn 1 Assessment						