

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Topic:</p> <p>Knowledge and skills covered: Place value, addition & subtraction</p> <p>Numeracy Unit</p> <p>Unit 1: Place value</p> <p>Unit 2: Addition</p> <p>Unit 3: Subtraction</p> <p>Unit 4: Decimals</p> <p>Unit 1: Place value</p> <ul style="list-style-type: none"> Understand the base ten system and represent it with concrete manipulatives, number lines and tables. Put integers in ascending and descending order Multiply and divide integers by 10,100,1000 Round and estimate numbers and check reasonability of answers 	<p>Topic:</p> <p>Knowledge and skills covered: Multiplication</p> <p>Unit 5: multiplication of whole numbers</p> <p>Unit 6: multiplication of decimals and area of triangles and rectangles</p> <p>Unit 7: factors and division of whole numbers and decimals</p> <p>Unit 5: multiplication of whole numbers</p> <ul style="list-style-type: none"> use multiplication facts to solve mental calculations use the terms 'product', 'multiple' and 'LCM' understand and use the column method to multiply integers represent multiplication word problems using bar models, and solve <p>Unit 6: multiplication of decimals and area of triangles and rectangles</p>	<p>Topic:</p> <p>Knowledge and skills covered: Geometry</p> <p>Unit 8: Reading scales</p> <p>Unit 9: Angles and angle properties of straight lines</p> <p>Unit 10: Properties of triangles</p> <p>Unit 11: Properties of quadrilaterals</p> <p>Unit 8: Reading scales (5 lessons)</p> <ul style="list-style-type: none"> Record and order measurements using decimal notation Estimate and measure length, mass and volume <p>Unit 9: Angles and angle properties of straight lines (5 lessons)</p> <ul style="list-style-type: none"> Identify, name and draw perpendicular, parallel, horizontal and vertical lines Identify right angles 	<p>Topic:</p> <p>Knowledge and skills covered: Fractions</p> <p>Unit 13: understand and use equivalent fractions</p> <p>Unit 14: fractions of amounts</p> <p>Unit 15: multiply and divide fractions</p> <p>Unit 13: understand and use equivalent fractions</p> <ul style="list-style-type: none"> Represent fractions using area diagrams, bar models and number lines Recognise and name equivalent fractions Convert fractions to decimals Convert terminating decimals to fractions in their simplest form Convert between mixed numbers and improper fractions Compare and order numbers (including like and unlike fractions) 	<p>Topic:</p> <p>Knowledge and skills covered: Percentages & Pie Charts</p> <p>Unit 16: Pie Charts</p> <p>Unit 17: Percentages</p> <p>Unit 18: Percentage of a quantity</p> <p>Unit 16: Pie Charts</p> <ul style="list-style-type: none"> read and interpret pie charts find fractions of amounts find the whole given a part <p>Unit 17: Percentages</p> <ul style="list-style-type: none"> understand percentage as a fractional operator with denominator of 100 express a part of a whole as a percentage, using 	<p>Topic:</p> <p>Knowledge and skills covered: Algebra</p> <p>Unit 19: Order of operations</p> <p>Unit 20: Simplify and evaluate algebraic expressions</p> <p>Unit 21: Algebraic generalisation in rich contexts</p> <p>Unit 19: Order of operations</p> <ul style="list-style-type: none"> Carry out combined operations involving addition, subtraction, multiplication and division Understand and use brackets appropriately <p>Unit 20: Simplify and evaluate algebraic expressions</p> <ul style="list-style-type: none"> Represent an unknown number using a letter Write simple algebraic expressions with one unknown,

<p>Unit 2: Addition</p> <ul style="list-style-type: none"> Use number bonds to add mentally Use concrete manipulatives, number lines and place value tables to represent column addition Solve problems involving addition, length and perimeter <p>Unit 3: Subtraction</p> <ul style="list-style-type: none"> Use number bonds to subtract Use concrete manipulatives, number lines and place value tables to represent column subtraction Solve worded problems involving subtraction, length and perimeter <p>Unit 4: Decimals</p> <ul style="list-style-type: none"> Understand decimal notation and place values (tenths, hundredths, thousandths) and identify the values of the digits in a decimal Read and write decimals with up to 6 digits in figures and words Convert between decimal and fraction where the 	<ul style="list-style-type: none"> multiply whole numbers and decimals estimate answers in calculations and check that results are reasonable find the area of a rectangle and triangle solve problems involving length, perimeter and area measure time, calculate with time and solve time word problems <p>Unit 7: factors and division of whole numbers and decimals</p> <ul style="list-style-type: none"> divide whole numbers and decimals by whole numbers use the terms 'quotient', 'remainder', 'factor', 'HCF' estimate answers in calculations and check that results are reasonable find the mean average, interpreting average as "total amount ÷ number of items" and solve word problems involving average 	<ul style="list-style-type: none"> Use notation such as $\angle ABC$ and $\angle x$ to name angles Identify angles in figures and objects Estimate and measure angles Find unknown angles on a straight line Find unknown angles round a point Find vertically opposite angles <p>Unit 10: Properties of triangles (5 lessons)</p> <ul style="list-style-type: none"> Identify and name equilateral, isosceles and scalene triangles Know and use the sum of the angles in a triangle Draw a triangle using ruler and protractor <p>Unit 11: Properties of quadrilaterals (5 lessons)</p> <ul style="list-style-type: none"> Identify and name parallelogram, rhombus and trapezium Draw a square, rectangle, parallelogram, rhombus or trapezium 	<p>Unit 14: fractions of amounts</p> <ul style="list-style-type: none"> Express one quantity as a fraction of another Find a fraction of a set of objects or quantity <p>Unit 15: multiply and divide fractions</p> <ul style="list-style-type: none"> Use the unitary method to find the whole given a fractional part Multiply a whole number or fraction by a whole number or fraction Multiply a mixed number and a whole number Divide a whole number or proper fraction by a whole number or proper fraction 	<p>the percentage symbol (%)</p> <ul style="list-style-type: none"> write fractions as percentages and vice versa represent percentages on a pie chart <p>Unit 18: Percentage of a quantity</p> <ul style="list-style-type: none"> find fractions and percentages of given quantities find the whole given a part and the percentage find percentage increase and percentage decrease 	<p>with one or more operation</p> <ul style="list-style-type: none"> Understand simple algebraic expressions such as $y + 2$, or $3y$ Evaluate simple algebraic expressions by substitution Substitute numerical values into formulae and expressions Simplify algebraic expressions with one unknown by addition and subtraction of terms Multiply out brackets, collect like terms, identify and take out common factors to simplify expressions Recognise that different-looking expressions may be identical Prove simple algebraic identities, and explain why two given expressions are not identical <p>Unit 21: Algebraic generalisation in rich contexts</p> <ul style="list-style-type: none"> Solve word problems involving algebraic expressions
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<p>denominator is a factor of 10 or 100</p> <ul style="list-style-type: none"> • Use the number line to display decimals and round decimals to the nearest whole number, to 1 or 2 decimal places • Use correctly the symbols $<$, $>$ etc. and the associated language to order a set of positive integers and decimals, or measurements • Multiply and divide any integer or decimal by 10, 100, 1000, or 10 000 • Solve word problems involving the addition and subtraction of money in decimal notation • Relate decimal arithmetic to integer arithmetic • Use standard written methods in column format for addition and subtraction of integers and decimals • Extend existing mental calculation to include decimals • Calculate the perimeter of rectangles, squares and rectilinear figures 					
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End of year exam: Essentials & Fluency Paper – 2 x 1 hour, non-calculator, using & applying skills to problem solving questions Extension Paper for E1 & F1 – additional 1 hour, non-calculator, using & applying skills to problem solving questions					
Post Assessment					
Summative assessment: Post Assessment-covering units 1 to 4, based on Maths Mastery which has skills practice and problem solving questions	Summative assessment: Post Assessment-covering units 5 to 7, based on Maths Mastery which has skills practice and problem solving questions	Summative assessment: Post Assessment-covering units 8 to 11, based on Maths Mastery which has skills practice and problem solving questions	Summative assessment: Post Assessment-covering units 12 to 15, based on Maths Mastery which has skills practice and problem solving questions	Summative assessment: Post Assessment-covering units 16 to 18, based on Maths Mastery which has skills practice and problem solving questions	Summative assessment: Post Assessment-covering units 19 to 21, based on Maths Mastery which has skills practice and problem solving questions

End of year exam:



Subject: Maths Yr 7 2018/19