

YEAR 7 COURSE GUIDE

(Optional 'higher' objectives in **bold**)

	Selected Success Criteria, from this year's course	
Unit 1 SEQUENCES	<ul style="list-style-type: none"> Describe and continue sequences in diagram and number forms, both linear and non-linear. Find missing numbers within sequences. 	
Unit 2 UNDERSTAND & USE ALGEBRAIC NOTATION	<ul style="list-style-type: none"> Using single function machines and series of two function machines with numbers, bar models and letters. Forming and substituting into expressions, including generating sequences. Representing functions graphically. 	
Unit 3 EQUALITY & EQUIVALENCE	<ul style="list-style-type: none"> Understanding equality and fact families Forming and solving one step equations Understanding equivalence Collecting like terms 	
Unit 4 PLACE VALUE & ORDERING (INTEGERS & DECIMALS)	<ul style="list-style-type: none"> Convert between fractions, decimals and percentages. Understand integer place value up to one billion and decimal place value to hundredths Use and interpret pie charts Working out and using number lines Comparing and ordering numbers Use the range and median Round to positive powers of ten and one significant figure. Write large and small numbers in standard form. 	
Unit 5 FRACTION, DECIMAL & PERCENTAGE EQUIVALENCE	<ul style="list-style-type: none"> Represent tenths and hundredths on diagrams and number lines. Interchange between fractions, decimals and percentages for multiples of tenths and quarters, eighths and thousandths. Interpret pie charts Use equivalent fractions Convert between any fraction, decimal and percentage. Use fractions greater than one. 	
Unit 6 ADDITION & SUBTRACTION	<ul style="list-style-type: none"> Use formal methods of addition with integers and decimals. Solve problems in the context of perimeter, money and frequency trees and tables. Add and subtract numbers in standard form. 	
Unit 7 MULTIPLICATION & DIVISION	<ul style="list-style-type: none"> Multiply by 10, 100 and 1000 and apply to unit conversions Use formal methods for multiplication and division Find the Highest Common Factor and Lowest Common Multiple Find areas of triangles, rectangles, parallelograms and trapeziums. Find the mean. Solve two step equations (with and without a calculator) Use BIDMAS for order of operations. Multiply and divide algebraic expressions 	

<p>Unit 8 FRACTIONS & PERCENTAGES OF AMOUNTS</p>	<ul style="list-style-type: none"> • Calculate and use fractions of amounts • Calculate and use percentages of amounts • Work with percentages over 100% 	
<p>Unit 9 NEGATIVE NUMBERS</p>	<ul style="list-style-type: none"> • Ordering directed numbers with and without context • Revisit four operations using directed numbers • Use a calculator with directed numbers • Use the order of operations • Explore powers and roots with directed numbers- including knowing the square root of a number can be positive and negative. 	
<p>Unit 10 ADDING & SUBTRACTING FRACTIONS</p>	<ul style="list-style-type: none"> • Represent tenths and hundredths on diagrams and number lines. • Add/subtract fractions with a common denominator, including answers above one. • Revisit equivalent fractions • Add and subtract fractions with different denominators. • Add/subtract fractions and decimals e.g. $\frac{1}{2} + 0.2$. • Add and subtract algebraic fractions. 	
<p>Unit 11 DRAWING, MEASURING & USING GEOMETRIC NOTATION</p>	<ul style="list-style-type: none"> • Draw and measure lines and angles using a ruler and protractor • Understand and use notation for lines and angles • Understand parallel and perpendicular • Recognise types of triangles, quadrilaterals and other polygons. • Draw triangles given SSS, SAS, ASA • Draw and interpret pie charts 	
<p>Unit 12 GEOMETRIC REASONING</p>	<ul style="list-style-type: none"> • Calculate using angles at a point, angles on a straight line, vertically opposite angles and use parallel line angle rules. • Calculate missing angles in triangles, quadrilaterals and find the angle sum for any polygon. 	
<p>Unit 13 NUMBER SENSE</p>	<ul style="list-style-type: none"> • Use mental arithmetic strategies • Use known facts to derive other facts including algebraic expressions. 	
<p>Unit 14 SETS & PROBABILITY</p>	<ul style="list-style-type: none"> • Understand and use set notation. • Draw and fill in a Venn diagram • Find the probability of a single event. • Understand and use the complement of a set. 	
<p>Unit 15 PRIME NUMBERS & PROOF</p>	<ul style="list-style-type: none"> • Know types of number including prime, square and triangular numbers. • Write a number as a product of its prime factors. • Calculate powers and roots • Use counter-examples 	