



	Autumn Term		Spring Term		Summer Term	
Topic title-	<p><u>Application of Number</u></p> <p>Learning: Solving Problems with Addition and Subtraction. Solving Problems with Multiplication and Division.</p>	<p><u>Reasoning with Number</u></p> <p>Learning: Place Value. Four Operations with Directed Number. Prime Numbers and Proof. Ordering Integers and Decimals. Manipulating and using ratio (Sept '24)</p>	<p><u>Algebraic and Fractional Thinking</u></p> <p>Learning: Sequences. Addition and Subtraction of Fractions. Fraction, Decimal, Percentage Equivalence.</p>	<p><u>Mathematical Reasoning</u></p> <p>Learning: Understanding and Using Algebra. Equality and Equivalence. Constructing, Measuring and Using Geometric Notation.</p>	<p><u>Reasoning with Probability and Geometry</u></p> <p>Learning: Developing Geometric Reasoning. Developing Number Sense Sets and Probability.</p>	<p><u>Consolidation</u></p> <p>Learning: Consolidation of years learning. Opportunities for reflection and recap if needed. Research project on Katherine Johnson Revision for end of year assessments</p>
Powerful knowledge (will vary depending on ability)	<ul style="list-style-type: none"> •Adding and Subtracting: integers and decimals •Draw and interpret bar charts and pictograms 	<ul style="list-style-type: none"> •Place Value: Ten thousand to hundredths •Rounding 10/100/1000 •Simplify ratio 	<ul style="list-style-type: none"> •Fraction shaded •Fractions of a quantity •Number sequences •Linear sequences; 	<ul style="list-style-type: none"> •Solving Equations: 1 step •Angles; name and draw •Simplifying algebra: 	<ul style="list-style-type: none"> •Area & perimeter: rectangles •Probability: words and scale •Properties regular shapes 	Consolidation of all knowledge up to this point.



	<ul style="list-style-type: none"> • Multiplying and dividing 10/100/1000 • Long multiplication • Perimeter; Compound shapes • BIDMAS • Averages: Mean, median, mode, range • Division: By one and two digit numbers 	<ul style="list-style-type: none"> • Facts linked to 2, 3, 4, 5, 10 x tables • Negative Number line • Factors, multiples, primes; HCF, LCM • Ratio: simplifying, sharing, problems • Negative numbers in context • Rounding: 1, 2, 3dp • Powers & roots 	<p>continue and term to term rule</p> <ul style="list-style-type: none"> • FDP • Calculating Percentages: mental and calculator 	<p>multiple variables</p> <ul style="list-style-type: none"> • Solving equations; 2 step 	<ul style="list-style-type: none"> • Area: Triangle, Parallelogram • Angles: line, point, vertically opposite, • Volume of a cuboid • Problems with metric units 	
Links to prior learning-	<p>KS2: Written Strategies of Addition and Subtraction. KS2: Written Strategies of Multiplication and Division.</p>	<p>KS2: Place Value. KS2: Understanding of Negative Numbers and Place Value. KS3: Special Sequences.</p>	<p>KS2: Basic Sequences and continuation of Patterns. KS2: Basic Fraction, Decimal, Percentage Equivalence.</p>	<p>KS2: Basic Algebra Skills. KS2: Inverse Operations. KS2: Basic Angle Facts.</p>	<p>KS2: Language of Probability.</p>	<p>KS3 – Recap of learning and acting upon gaps in knowledge identified by QLA from assessments.</p>



	KS2: Written Strategies of Addition and Subtraction. KS3: Mental Strategies of Addition and Subtraction.					
SMSC links (inc. careers)-	Financial Maths. Varying Multiplication Methods used around the World. Mental Strategies for 'Every Day' Maths.	Types of Number and their Origin. History of Maths.	Golden Ratio's. History of Maths. Origin of Ratio's in art and the Human Body. Types of Number and their Origin. Rangoli Patterns and their Cultural Origin.	Euclidean Geometry		Research into Famous Mathematician's, looking at Social and Moral Barriers to their Lives.
Core knowledge and skills-	Using the column method to add and subtract. Using the grid/column method to multiply Using the bus stop method to divide.	Using numeracy methods to operate with negative numbers. Use of divisibility tests	Using knowledge of place value to convert between FDP. Describing a numerical pattern.	Understanding the basic laws of algebra and using algebraic representation	Understand basic properties of 3 and 4 sided shapes. Use these properties to calculate area and perimeter.	Consolidation of all until this point.



	Using times tables knowledge to carry out mental calculations	to identify prime numbers Ordering decimals and integers	Using understanding of numerator and denominator to add and subtract fractions with the same denominator.		Use of basic language of probability and understanding of likeliness of an event.	
Assessment (inc. homework)-	End of half term/term assessments on taught knowledge. Powerful knowledge assessment at the end of the year. Homework set on Sparx weekly.					
Stretch and Challenge Opportunities	<ul style="list-style-type: none"> •Opportunity to visit Norwich Castle for curriculum enrichment trip. •Learning about History and origins of Maths through Literacy and comprehension tasks. •Extension of curriculum to include topics outside of NC. •Extension of curriculum to include Higher Level only topics, extending into year 8 curriculum and beyond. 					