Springwell Park

Year 6 – Mathematics Planning Overview

Based on White Rose Maths version 3.0

(Key changes from version 2.0 noted in red)

Springwell Park

Autumn Term

Duration		
3 weeks	**Number – Place Value** *There us more revision of numbers of the size children met in Year 5.* *Place value charts are used more extensively to emphasise the structure of numbers in "groups ofthrees" – 1s, 10s, 100s followed by 1,000s, 10,000s and 100,000s.* *Multiplicative connections between numbers hasmore emphasis e.g. 100 times the size, one hundredth the size of…* *Use of the number line has more emphasis, including dividing into 2,4, 5 and 10 sections.*	• Numbers to 1,000,000 • Numbers to 10,000,000 • Read and write numbers to 10,000,000 • Powers of 10 • Number line to 10,000,000 • Compare and order any integers • Round any integers • Negative numbers
5 weeks	**Number – Addition, Subtraction, Multiplication and Division** *An explicit step has been included to checkunderstanding of the rules of divisibility.* *The progression in the block is now even clearer,for example the sequence of learning for long division has been improved.* *More emphasis is placed on problem solving, including using the appropriate method for acalculation.*	• Add and subtract integers • Common factors • Common multiples • Rules of divisibility • Primes to 100 • Square and cube numbers • Multiply up to a 4-digit number by a 2-digit number • Solve problems with multiplication • Short division • Division using factors • Introduction to long division • Long division with remainders • Solve problems with division • Solve multi-step problems • Order of operations • Mental calculations and estimation • Reason from known facts

3 weeks	**Number - Fractions (A)** *There is more introductory work on equivalent fractions before moving to simplifying.* *The progression in the block is now even clearer, for example the sequence of learning for long division has been improved.* *More emphasis is placed on problem solving, including using the appropriate method for a calculation.*	• Equivalent fractions and simplifying • Equivalent fractions on a number line • Compare and order (denominator) • Compare and order (numerator) • Add and subtract simple fractions • Add and subtract any two fractions • Add mixed numbers • Subtract mixed numbers • Multi-step problems
3 weeks	**Number – Fractions (B)** *An extra step has been included with mixed questions to support children to identify the correct operation and correct method of solution.*	• Multiply fractions by integers • Multiply fractions by fractions • Divide a fraction by an integer • Divide any fraction by an integer • Mixed questions with fractions • Fraction of an amount • Fraction of an amount - find the whole
1 week	**Measurement – Converting Units** *There are no major changes to the content of this block.*	• Metric measures • Convert metric measures • Calculate with metric measures • Miles and kilometres • Imperial measures

SPRING TERM

Duration		
2 weeks	**Number – Ratio** *Extra steps have been added to ease progressionand help children see the difference between additive and multiplicative reasoning.* *More emphasis is placed on language so children have understanding ratio and proportion in terms of "for every" and "in every".*	• Add or multiply? • Using ratio language • Introduction to the ratio symbol • Ratio and fractions • Scale drawing • Using scale factors • Similar shapes • Ratio problems • Proportion problems • Recipes
2 weeks	**Number – Algebra** *The opening steps have been focused to explorefunction machines more deeply, including working backwards. This strategy is then developed in the equations steps.* *The progression in working with problems withtwo unknowns has been improved, with an emphasis on a bar modelling approach.*	• 1-step function machines • 2-step function machines • Form expressions • Substitution • Formulae • Form equations • Solve 1-step equations • Solve 2-step equations • Find pairs of values • Solve problems with two unknowns
2 weeks	**Number – Decimals** *The progression in this block has been slowed down with clearer development building fromlearning in earlier years.* *Some steps have been moved into the next block,Fractions, decimals and percentages, to ensure decimals are secure before moving to equivalence.*	• Place value within 1 • Place value – integers and decimals • Round decimals • Add and subtract decimals • Multiply by 10, 100 and 1,000 • Divide by 10, 100 and 1,000 • Multiply decimals by integers • Divide decimals by integers • Multiply and divide decimals in context
2 weeks	**Number – Fractions, Decimals and Percentages** *This replaces the block on percentages in the previous version of the schemes. The focus is onunderstanding equivalence before using this to support calculations.* *More emphasis is placed on representations,including number lines and bar models.*	• Decimal and fraction equivalents • Fraction as division • Understand percentages • Fractions to percentages • Equivalent fractions, decimals and percentages • Order fractions, decimals and percentages • Percentage of an amount – one step • Percentage of an amount – multi-step • Percentages – missing values

2 weeks	**Measurement – Area, Perimeter and Volume** *There are no significant changes to this block, but the steps involving the area of a triangle have been renamed to clarify their purpose.*	• Shapes – same area • Area and perimeter • Area of a triangle – counting squares • Area of a right-angled triangle • Area of any triangle • Area of a parallelogram • Volume – counting cubes • Volume of a cuboid
2 weeks	**Statistics** *The steps on line graphs have been consolidated into one, as these have been covered in detail in earlier years.* *An extra step has been added to explicitly explore dual bar charts.* *The step on circles has been moved into the Shape block in the summer term, but some vocabulary will be needed when studying pie charts.*	• Line graphs • Dual bar charts • Read and interpret pie charts • Pie charts with percentages • Draw pie charts • The mean

SUMMER TERM

Duration		
3 weeks	**Geometry – Shape** *The step about circles has been moved from the statistics block to sit with the more similar stepsin this block.* *Some steps have been renamed to clarify theirpurpose and to ensure the correct use and understanding of mathematical language.*	• Measure and classify angles • Calculate angles • Vertically opposite angles • Angles in a triangle • Angles in a triangle – special cases • Angles in a triangle – missing angles • Angles in quadrilaterals • Angles in polygons • Circles • Draw shapes accurately • Nets of 3-D shapes
1 week	**Geometry – Position and Direction** *An extra step has been added to allow for practice working with coordinates in all four quadrants before moving on to translations andreflections.*	• The first quadrant • Read and plot points in four quadrants • Solve problems with coordinates • Translations • Reflections
Themed Projects, Consolidation and Problem Solving		