Curriculum Overview – Maths Small Steps – Year 5

	These small steps have been taken from the new White Rose overview v3.0 and reformatted into the table below.		
Number of Weeks	**Curriculum Area**	**National Curriculum Objective**	**Small step objectives.**
Weeks 1-3	Place Value	• Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit • count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • Solve number problems that involve all of the above • Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000	1. Roman numerals to 1000 2. Numbers to 10000 3. Numbers to 100000 4. Numbers to 1000000 5. Read and write numbers to 1000000 6. Powers of 10 7. 10/100/1000/10000/100000 more or less 8. Partition numbers to 1000000 9. Number line to 1000000 10. Compare and order numbers to 100000 11. Compare and order numbers to 1000000 12. Round to the nearest 10, 100 or 1000 13. Round within 100000 14. Round within 1000000
Weeks 4-5	Addition and Subtraction	• Add and subtract numbers mentally with increasingly large numbers. • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) • Use rounding to check answers to calculations and determine, in context of a problem, levels of accuracy • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	1. Mental strategies 2. Add whole numbers with more than four digits 3. Subtract whole numbers with more than four digits 4. Round to check answers 5. Inverse operations (addition and subtraction) 6. Multi-step addition and subtraction problems 7. Compare calculations 8. Find missing numbers
Weeks 6-8	Multiplication and Division (Part 1)	• Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers • Establish whether a number up to 100 is prime and recall prime numbers up to 19.	1. Multiples 2. Common multiples 3. Factors 4. Common factors 5. Prime numbers 6. Square numbers 7. Cube numbers 8. Multiply by 10, 100 and 1000

		• multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 • Recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) • Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes	9. Divide by 10, 100 and 1000 10. Multiples of 10, 100 and 1000
Weeks 9-12	Fractions (Part 1)	• Compare and order fractions whose denominators are all multiples of the same number • Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] • Add and subtract fractions with the same denominator, and denominators that are multiples of the same number • Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	1. Find fractions equivalent to a unit fraction 2. Find fractions equivalent to a non-unit fraction 3. Recognise equivalent fractions 4. Convert improper fractions to mixed numbers 5. Convert mixed numbers to improper fractions 6. Compare fractions less than 1 7. Order fractions less than 1 8. Compare and order fractions greater than 1 9. Add and subtract fractions with the same denominator 10. Add fractions within 1 11. Add fractions with total greater than 1 12. Add o a mixed number 13. Add two mixed numbers 14. Subtract fractions 15. Subtract from a mixed number 16. Subtract from a mixed number – breaking the whole 17. Subtract two mixed numbers
Weeks 13-15	Multiplication and Division (Part 2)	• Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers	1. Multiply up to a 4-digit number by a 1-digit number 2. Multiply a 2-digit number by a 2-digit number (area model) 3. Multiply a 2-digit number by a 2-digit number 4. Multiply a 3-digit number by a 2-digit number

		• Multiply and divide numbers mentally, drawing upon known facts • Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	5. Multiply a 4-digit number by a 2-digit number 6. Solve problems with multiplication 7. Short division 8. Divide a 4-digit number by a 1-digit number 9. Dive with reminders 10. Efficient division 11. Solve problems with multiplication and division
Weeks 16-17	Fractions (Part 2)	• compare and order fractions whose denominators are all multiples of the same number • identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths • recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{6}{5} = 1\frac{1}{5}$] • add and subtract fractions with the same denominator, and denominators that are multiples of the same number • multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	1. Multiply a unit fraction by an integer 2. Multiply a non-unit fraction by an integer 3. Multiply a mixed number by an integer 4. Calculate a fraction by a quantity 5. Fraction of amount 6. Find the whole 7. Use fractions as operators
Weeks 18-20	Decimals and Percentages	• Read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$]	1. Decimals up to 2 decimal places 2. Equivalent fractions and decimals (tenths) 3. Equivalent fractions and decimals (hundredths)

		• Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place • Read, write, order and compare numbers with up to 3 decimal places • Solve problems involving number up to 3 decimal places • Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per 100', and write percentages as a fraction with denominator 100, and as a decimal fraction • Solve problems which require knowing percentage and decimal equivalents of $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{2}{5}$, $\frac{4}{5}$ and those fractions with a denominator of a multiple of 10 or 25	4. Equivalent fractions and decimals 5. Thousandths as fractions 6. Thousandths as decimals 7. Thousandths on a place value chart 8. Order and compare decimals (same number of decimal places) 9. Order and compare any decimals with up to 3 decimal places 10. Round to the nearest whole number 11. Round to 1 decimal place 12. Understand percentages 13. Percentages as fractions 14. Percentages as decimals 15. Equivalent fractions, decimals and percentages
Weeks 21-22	Perimeter and Area	• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres • Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm²) and square metres (m²), and estimate the area of irregular shapes	1. Perimeter of rectangles 2. Perimeter of rectilinear shapes 3. Perimeter of polygons 4. Area of rectangles 5. Area of compound shapes 6. Estimate area
Week 23	Statistics	• Solve comparison, sum and difference problems using information presented in a line graph • Complete, read and interpret information in tables, including timetables	1. Draw line graphs 2. Read and interpret line graphs 3. Read and interpret tables 4. Two-way tables 5. Read and interpret timetables
Weeks 24-26	Shape	• Identify 3-D shapes, including cubes and other cuboids, from 2-D representations	1. Understand and use degrees 2. Classify angles 3. Estimate angles 4. Measure angles up to 180 degrees

		• Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles
		• Draw given angles, and measure them in degrees (°)
		• Identify:
		  ○ Angles at a point and 1 whole turn (total 360°)
		  ○ Angles at a point on a straight line and half a turn (total 180°)
		  ○ Other multiples of 90°
		  ○ Use the properties of rectangles to deduce related facts and find missing lengths and angles
		  ○ Distinguish between regular and irregular polygons based on reasoning about equal sides and angles
			5. Draw lines and angles accurately
			6. Calculate angles on a straight line
			7. Lengths and angles in shapes
			8. Regular and irregular polygons
			9. 3-D shapes

Weeks 27-28	Position and Direction	• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed	1. Read and plot coordinates 2. Problem solving with coordinates 3. Translation 4. Translation with coordinates 5. Lines of symmetry 6. Reflection in horizontal and vertical lines
Weeks 29-31	Decimals	• Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place • Read, write, order and compare numbers with up to 3 decimal places • Solve problems involving number up to 3 decimal places • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000	1. Use know facts to add and subtract decimals within 1 2. Complements to 1 3. Add and subtract decimals across 1 4. Add decimals with the same number of decimal places 5. Subtract decimals with the same number of decimal places 6. Add decimals with different numbers of decimal places 7. Subtract decimals with different numbers of decimal places

			8. Efficient strategies for adding and subtracting decimals 9. Decimal sequences 10. Multiply by 10, 100 and 1000 11. Divide by 10, 100 and 1000 12. Multiply and divide decimals – missing values
Week 32	Negative numbers	• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through 0 •	1. Understand negative numbers 2. Count through zero in 1s 3. Count through zero in multiples 4. Compare and order negative numbers 5. Find the difference
Weeks 33-34	Converting units	• Solve problems involving converting between units of time • Convert between different units of metric measure [for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre] • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints	1. Kilograms and kilometres 2. Millimetres and millilitres 3. Convert units of length 4. Convert between metric and imperial units 5. Convert units of time 6. Calculate with timetables
Week 35	Volume	• Estimate volume [for example, using 1 cm³ blocks to build cuboids (including cubes)] and capacity [for example, using water]	1. Cubic centimetres 2. Compare volume 3. Estimate volume 4. Estimate capacity
Week 36	Consolidation of skills		