Year 5, Autumn Term 1

Wk	Strands	Weekly Summary
1	**NPV** Number and place value; **WAS** Written addition and subtraction; **PRA** Problem solving, reasoning and algebra	Read, write, compare and order 5-digit numbers, understanding the place value and using < and >signs; add and subtract multiples of 10, 100 and 1000 to and from 5-digit numbers; use written addition to add two 4-digit numbers; work systematically to spot patterns. **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Read and write numbers to at least 1 000 000 • Order and compare numbers to at least 1 000 000 Please see Mastery Checkpoint 5.1.1 (Teacher Guide 5.1.1) • Add whole numbers with 4 digits, including using the formal written method of columnar addition (answers > 10 000) • Use place value and number facts to add and subtract 2-, 3- and 4-digit numbers Please see Mastery Checkpoint 5.1.2 (Teacher Guide 5.1.2)
2	**MAS** Mental addition and subtraction; **NPV** Number and place value	Add and subtract 2- 3- and 4-digit numbers mentally; choose a strategy for solving mental additions or subtractions; solve word problems
3	**DPE** Decimals, percentages and their equivalence to fractions; **PRA** Problem solving, reasoning and algebra; **MMD** Mental multiplication and division	Understand place value in decimal numbers; multiply and divide numbers with up to two decimal places by 10 and 100; multiply and divide by 0 and 100; add and subtract 0·1 and 0·01; multiply and divide by 4 by doubling or halving twice; use mental multiplication strategies to multiply by 20, 25 and 9
4	**MEA** Measurement	Revise converting 12-hour clock times to 24-hour clock times; find a time a given number of minutes or hours and minutes later; calculate time intervals using 24-hour clock format; measure lengths in mm and convert to cm; find perimeters in cm and convert cm to m **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Understand the 24-hour clock, convert times, calculate time intervals and use timetables • Complete, read and interpret information in timetables using 24-hour times Please see Mastery Checkpoint 5.4.3 (Teacher Guide 5.4.3)
5	**WAS** Written addition and subtraction; **MAS** Mental addition and subtraction	Solve subtraction using a written method for 3-digit − 3-digit numbers and for 4-digit numbers; use counting up (Frog) as a strategy to perform mental subtraction; find change from a multiple of ten pounds using counting up

Year 5, Autumn Term 2

Wk	Strands	Weekly Summary
6	**MMD** Mental multiplication and division; **FRP** Fractions, ratio and proportion	Recognise which numbers are divisible by 2, 3, 4, 5, 6, 9 and 25 and identify multiples; find factors; recording results systematically and finding all factors of a given number; compare and place fractions on a line; find equivalent fractions and reduce them to their simplest form **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Solve problems involving multiplication and division using knowledge of factors, doubles and halves, and times tables Please see Mastery Checkpoint 5.6.4 (Teacher Guide 5.6.4)
7	**MMD** Mental multiplication and division; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra	Use mental strategies to multiply and divide multiples of 10 and 100; use a written method to multiply 3-digit and 4-digit numbers by 1-digit numbers and estimate answers, divide 3-digit numbers by 1-digit numbers using a written method and express remainders as a fraction and solve division word problems **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Choose a mental or written method to solve problems, including word problems, involving division (including 2-/3-digit divided by 1-digit), and spot and explain patterns and relationships Please see Mastery Checkpoint 5.7.5 (Teacher Guide 5.7.5)
8	**GPS** Geometry: properties of shapes; **PRA** Problem solving, reasoning and algebra	Use a protractor to measure and draw angles in degrees; recognise, use terms and classify angles as obtuse, acute and reflex; recognise that angles on a line total 180° and angles round a point total 360°; identify and name parts of a circle including diameter, radius and circumference; draw circles to a given radius using a pair of compasses; relate angles to turns, and recognise that a 360° angle is a complete turn; use angle facts to solve problems related to turn **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Estimate and compare acute, obtuse and reflex angles • Know angles are measured in degress Please see Mastery Checkpoint 5.8.6 (Teacher Guide 5.8.6)
9	**NPV** Number and place value; **DPE** Decimals, percentages and their equivalence to fractions; **FRP** Fractions, ratio and proportion	Place numbers to 100 000 and decimals up to two places on a line, round numbers to the nearest 10, 100 and 1000 and decimals up to two places to the nearest whole number; compare and order numbers with up to two decimal places; reduce fractions to their simplest form; know and recognise equivalent fractions and decimals to half, tenths and fifths **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Read, write, order and compare numbers with up to 2 decimal places

		Please see Mastery Checkpoint 5.9.7 (Teacher Guide 5.9.7) • Identify, name and write equivalent fractions, including simplest forms of a given fraction, represented visually, including tenths and hundredths Please see Mastery Checkpoint 5.9.8 (Teacher Guide 5.9.8)
10	**MAS** Mental addition and subtraction; **WAS** Written addition and subtraction; **MMD** Mental multiplication and division; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra	Revise mental and written addition and subtraction strategies, choose to use a mental strategy or written method to solve addition and subtraction, choose to solve word problems involving multiplication and division questions including 2- and 3-digit by 1-digit and 2-digit by 2-digit using a mental or a written method, use mathematical reasoning to work out a function, identify the operation being used on numbers, understand that addition and subtraction are inverse operations multiplication and division, use function machines **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Subtract whole numbers with 4 digits. including using the formal written method of columnar subtraction • Use place value and number facts to add and subtract 2-. 3- and 4-digit numbers • Begin to add and subtract numbers mentally with increasingly large numbers Please see Mastery Checkpoint 5.10.9 (Teacher Guide 5.10.9) • Choose a mental or a written method to solve problems, including word problems, involving multiplication (including 2-/3-digit x 1-digit; 2-digit x 2-digit) Please see Mastery Checkpoint 5.10.10 (Teacher Guide 5.10.10)

Year 5, Spring Term 1

Wk	Strands	Weekly Summary
11	**NPV** Number and place value; **DPE** Decimals, percentages and their equivalence to fractions; **PRA** Problem solving, reasoning and algebra	Read, write and order numbers with up to 6 digits and understand the place value of each digit; place 6-digit numbers on a number line and find numbers between; solve place-value additions and subtractions with 6-digit numbers; understand place value in decimal numbers as tenths and hundredths; multiply and divide by 10/100/1000 using a place-value grid; understand place value in decimal numbers to 2-decimal places; place decimal numbers on a line; round two-place decimal numbers to nearest tenth and whole number; say the number a tenth or a hundredth more **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 • Read and write numbers to at least 1 000 000 • Order and compare numbers to at least 1 000 000 • Determine the value of each digit in numbers to at least 1 000 000 and use to solve place value additions and subtractions • Order and compare 6-digit numbers and place on a number line Please see Mastery Checkpoint 5.11.11 (Teacher Guide 5.11.11)

		• Add and subtract 0·1 or 0·01 to/from numbers with up to 2 decimal places • Round decimals with 2 decimal places to the nearest whole number and to 1 decimal place • Multiply and divide numbers by 10 and 100, including decimal numbers and those leading to decimal answers Please see Mastery Checkpoint 5.11.12 (Teacher Guide 5.11.12)
12	**MAS** Mental addition and subtraction; **PRA** Problem solving, reasoning and algebra; **WAS** Written addition and subtraction	Rehearse mental addition strategies for decimals and whole numbers; use counting on as a strategy to perform mental addition of 2-place decimals to the next whole number; solve missing number sentences; use mental strategies to solve multi-step word problems; use counting up as a strategy to perform written subtraction (Frog) **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Solve problems involving numbers with up to 3 decimal places, including in the context of measures Please see Mastery Checkpoint 5.12.13 (Teacher Guide 5.12.13) • Add and subtract numbers mentally with increasingly large numbers • Solve addition 1- step and multi-step problems using mental addition Please see Mastery Checkpoint 5.12.14 (Teacher Guide 5.12.14)
13	**MMD** Mental multiplication and division; **NPV** Number and place value; **PRA** Problem solving, reasoning and algebra	Use rules of divisibility to find if numbers are divisible by 2, 3, 4, 5, 9 and 10; identity prime numbers; revise finding factors of numbers; find squares and square roots of square numbers; finding patterns and making and testing rules; use mental multiplication and division strategies; relate mental division strategies to multiples of ten of the divisor **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Identify multiples and factors, including finding all factor pairs of a number, and common factors of 2 numbers • Multiply and divide numbers mentally drawing upon known facts • 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 • Recognise and use square numbers and their notation (2) Please see Mastery Checkpoint 5.13.15 (Teacher Guide 5.13.15)
14	**PRA** Problem solving, reasoning and algebra; **GPS** Geometry: properties of shapes; **MEA** Measurement; **STA** Statistics	Know properties of equilateral, isosceles, scalene and right-angled triangles; find that angles in a triangle have a total of 180°; sort triangles according to their properties; use scales to weigh amounts to the nearest half interval; convert from grams to kilograms and vice versa, from millilitres to litres and vice versa, and from metres to kilometres and vice versa; read scales to the nearest half division; understand that we measure distance in kilometres and miles; use ready reckoning to give approximate values of miles in kilometres and vice versa; draw line conversion graphs **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Know that the angles in a triangle add up to 180° and devise and test rules to find a missing angle • Describe the properties of triangles (including scalene, right-angled, isosceles and equilateral) Please see Mastery Checkpoint 5.14.16 (Teacher Guide 5.14.16) • Convert between different units of metric measure (km / m; cm / m; cm / mm; g / kg; L / ml)

		Please see Mastery Checkpoint 5.14.17 (Teacher Guide 5.14.17)
15	**WAS** Written addition and subtraction; **PRA** Problem solving, reasoning and algebra; **MEA** Measurement	Use a written column method to add amounts of money in pounds and pence; add 2-place decimals using written column addition; subtract decimal numbers using counting up (Frog) **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Add whole numbers and 1-place decimals using appropriate mental strategies • Add 1- and 2-place decimal numbers (including money) choosing and using an appropriate method (including columnar addition and mental methods) • Use counting on and bonds to 100 to add to any 2-place decimal to find the next whole number • Subtract amounts of money and other 1- and 2-place decimal numbers in the context of measures • Add 2-digit numbers with 2-place decimals, including money, using column addition Please see Mastery Checkpoint 5.15.18 (Teacher Guide 5.15.18)

Year 5, Spring Term 2

Wk	Strands	Weekly Summary
16	**WMD** Written multiplication and division	Use a written method (grid) to multiply pairs of 2-digit numbers; use short division to divide 3-digit numbers by 1-digit numbers, including those which leave a remainder **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Choose an appropriate method to divide one number by another, including for larger numbers requiring a written procedure • Use short division to divide 3-digit numbers by 1-digit numbers (including those that leave a remainder) Please see Mastery Checkpoint 5.16.19 (Teacher Guide 5.16.19)
17	**WMD** Written multiplication and division; **FRP** Fractions, ratio and proportion	Find unit fractions and non-unit fractions of 3-digit numbers; use short multiplication to multiply 3-digit numbers by 1-digit numbers; begin to use short multiplication to multiply 4-digit numbers by 1-digit numbers **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Find unit and non-unit fractions of 2 and 3 digit numbers Please see Mastery Checkpoint 5.17.20 (Teacher Guide 5.17.20) • Use a written method to multiply pairs of 2-digit numbers • Use short multiplication to multiply 3-digit numbers by 1-digit numbers, rounding to estimate answers Please see Mastery Checkpoint 5.17.21 (Teacher Guide 5.17.21)

18	**GPS** Geometry: properties of shapes; **PRA** Problem solving, reasoning and algebra; **MEA** Measurement	Understand what a polygon is; draw polygons using dotted square and isometric paper; revise terms obtuse, acute and reflex angles, perpendicular and parallel sides; recognise quadrilaterals as polygons and identify their properties; classify quadrilaterals; draw regular polygons and explore their properties; revise metric units of weight, capacity and length; understand that we can measure in imperial units and relate these to their instances in daily life **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Use mathematical reasoning to identify properties of different polygons, including equal sides and angles and explain findings • Identify and define a polygon; distinguish between regular and irregular polygons based on reasoning about equal sides and angles Please see Mastery Checkpoint 5.18.22 (Teacher Guide 5.18.22)
19	**FRP** Fractions, ratio and proportion; **PRA** Problem solving, reasoning and algebra	Place mixed numbers on lines; count up in fractions using equivalence; convert improper fractions to mixed numbers and vice versa; write improper fractions as mixed numbers and vice versa; multiply proper fractions by whole numbers **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Recognise mixed numbers and improper fractions and convert from one form to the other; look for patterns and write rules • Place fractions on a number line and count in steps of a given fraction, using equivalence Please see Mastery Checkpoint 5.19.23 (Teacher Guide 5.19.23)
20	**WAS** Written addition and subtraction; **PRA** Problem solving, reasoning and algebra	Solve subtraction of 4-digit numbers using written column subtraction (decomposition); add several numbers using written column addition; use column to solve problems **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Count up to solve 4-digit minus 4-digit subtractions from near multiples of 1000, where column subtraction is awkward; use column subtraction where appropriate • Use columnar addition to add more than 2 numbers with up to 4 digits Please see Mastery Checkpoint 5.20.24 (Teacher Guide 5.20.24)

Year 5, Summer Term 1

Wk	Strands	Weekly Summary
21	**MAS** Mental addition and subtraction; **DPE** Decimals, percentages and their equivalence to fractions; **PRA** Problem solving, reasoning and algebra	Add mentally 2-place decimal numbers in the context of money using rounding; add several small amounts of money using mental methods; mentally subtract amounts of money including giving change; calculate the difference between two amounts using counting up; solve word problems, including 2-step problems, choosing an appropriate method **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map:

		• Use rounding to check answers to calculations and determine, in the context of a problem, level of accuracy; use addition to check subtraction • Subtract 2-place decimal numbers (including money) using counting up or mental methods • Solve addition and subtraction problems, including multi-step and word problems; decide which operations and methods to use and why • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign Please see Mastery Checkpoint 5.21.25 (Teacher Guide 5.21.25)
22	**FRP** Fractions, ratio and proportion; **PRA** Problem solving, reasoning and algebra; **WMD** Written multiplication and division	Multiply fractions less than 1 by whole numbers, convert improper fractions to whole numbers; use short multiplication to multiply 3-digit and 4-digit numbers by 1-digit numbers; use long multiplication to multiply 2-digit and 3-digit numbers by teens numbers **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Multiply proper fractions by whole numbers, supported by materials and diagrams, spot patterns and make generalisations Please see Mastery Checkpoint 5.22.26 (Teacher Guide 5.22.26) • Use short multiplication to multiply 4-digit numbers by 1-digit numbers, rounding to estimate answers Please see Mastery Checkpoint 5.22.27 (Teacher Guide 5.22.27)
23	**DPE** Decimals, percentages and their equivalence to fractions; **PRA** Problem solving, reasoning and algebra; **NPV** Number and place value	Read, write and compare decimals to three decimal places, understanding that the third decimal place represents thousandths; multiply and divide numbers by 10, 100 and 1000 using 3-place decimal numbers in the calculations; place 2-place decimals on a number line and round them to the nearest tenth and whole number; read, write, order and compare 3-place decimal numbers; understand and use negative numbers in the context of temperature **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Read, write, order and compare numbers with up to 3 decimal places • Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 Please see Mastery Checkpoint 5.23.28 (Teacher Guide 5.23.28) • Interpret negative numbers in context; count forwards and backwards with positive and negative whole numbers, including through 0; solve problems in the context of temperature Please see Mastery Checkpoint 5.23.29 (Teacher Guide 5.23.29)
24	**GPD** Geometry: position and direction; **PRA** Problem solving, reasoning and algebra; **GPS** Geometry: properties of shapes	Read and mark co-ordinates in the first two quadrants; draw simple polygons using co-ordinates; translate simple polygons by adding to and subtracting from the co-ordinates; reflect simple shapes in the y axis or in a line, noting the effect on the co-ordinates; translate simple shapes and note what happens to the co-ordinates; draw regular and irregular 2D shapes using given dimensions and angles; use the properties of 2D shapes, including rectangles, to derive related facts; identify 3D shapes from 2D representations; create 3D shapes using 2D nets and draw 3D shapes **Mastery Checkpoint**

There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map:

- Identify, describe and represent the position of a shape following a reflection or translation using the appropriate language; know that the shape has not changed; describe the relationship between the shapes' co-ordinates
- Read and mark coordinates in the first two quadrants and plot and join coordinates to create a polygon

Please see Mastery Checkpoint 5.24.30 (Teacher Guide 5.24.30) (Additional Resource 5.24.30)

- Draw given angles and straight lines to given lengths to create a triangle
- Identify 3D shapes, including cubes and other cuboids, from 2D representations

Please see Mastery Checkpoint 5.24.31 (Teacher Guide 5.24.31) (Additional Resource 5.24.31)

25	**WAS** Written addition and subtraction; **PRA** Problem solving, reasoning and algebra	Add 5-digit numbers using written column addition; subtract 5-digit numbers using written method (decomposition); check answers to subtractions using written column addition; solve subtractions of 4- and 5-digit numbers using written column subtraction or number line counting up **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Add whole numbers with more than 4 digits, including using formal written methods such as columnar addition • Subtract whole numbers with more than 4 digits, including using formal written methods such as columnar subtraction Please see Mastery Checkpoint 5.25.32 (Teacher Guide 5.25.32)

Year 5, Summer Term 2

Wk	Strands	Weekly Summary
26	**MMD** Mental multiplication and division; **PRA** Problem solving, reasoning and algebra; **FRP** Fractions, ratio and proportion	Identify factors and multiples, find factor pairs; revise equivalent fractions; compare and order fractions with related denominators; add fractions with same or related denominators, then convert answer into a mixed number; subtract fractions with same and related denominators, revise multiplying fractions by whole numbers **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Compare and order fractions, including mixed numbers, whose denominators are all multiples of the same number • Add and subtract fractions with the same denominator and denominators that are multiples of the same whole number, including answers more than 1 Please see Mastery Checkpoint 5.26.33 (Teacher Guide 5.26.33)
27	**WMD** Written multiplication and division	Use short division to divide 3-digit numbers by 1-digit numbers and 4-digit numbers by 1-digit numbers, including those which leave a remainder; express a remainder as a fraction; use long multiplication to multiply 3-digit and 4-digit numbers by teens numbers **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map:

		• Divide numbers up to 4 digits by a 1-digit number using the formal written method of short division and interpret remainders appropriately for the context Please see Mastery Checkpoint 5.27.34 (Teacher Guide 5.27.34) • Multiply numbers up to 4 digits by a 1- or 2-digit number using a formal written method, including long multiplication for 2-digit numbers Please see Mastery Checkpoint 5.27.35 (Teacher Guide 5.27.35)
28	**PRA** Problem solving, reasoning and algebra; **MEA** Measurement	Find the area and perimeter of squares and rectangles by calculation and pursue a line of enquiry; estimate and find the area of irregular shapes; calculate the perimeter and area of composite shapes; use the relations of area and perimeter to find unknown lengths; begin to understand the concept of volume; find the volume of a cube or cuboid by counting cubes; understand volume as measurement in three dimensions; relate volume to capacity; recognise and estimate volumes **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Measure and calculate the perimeter of composite rectilinear shapes in cm and m • Calculate and compare the area of rectangles (including squares), including using standard units, cm2 and m2, and pursue a line of enquiry • Estimate the area of irregular shapes Please see Mastery Checkpoint 5.28.36 (Teacher Guide 5.28.36) • Estimate and begin to find volume and capacity Please see Mastery Checkpoint 5.28.37 (Teacher Guide 5.28.37)
29	**DPE** Decimals, percentages and their equivalence to fractions; **FRP** Fractions, ratio and proportion; **NPV** Number and place value	Understand what percentages are, relating them to hundredths; know key equivalences between percentages and fractions, finding percentages of amounts of money; find equivalent fractions, decimals and percentages; solve problems involving fraction and percentage equivalents; write dates using Roman numerals **Mastery Checkpoint** There is one Mastery Checkpoint in this week. It tests the following outcomes from the Progression Map: • Recognise the per cent symbol (%) and understand that it relates to 'number of parts per hundred'; write percentages as a fraction with denominator 100 and as a decimal • Solve problems which require knowing percentage and decimal equivalents of 1/2, 1/4, 1/5, 2/5, 4/5 and those fractions with a denominator of a multiple of 10 or 25 Please see Mastery Checkpoint 5.29.38 (Teacher Guide 5.29.38)
30	**NPV** Number and place value; **STA** Statistics; **MEA** Measurement; **WMD** Written multiplication and division; **PRA** Problem solving, reasoning and algebra; **MMD** Mental multiplication and division	Find cubes of numbers to 10; draw and interpret line graphs showing change in temperature over time; begin to understand rate; use timetables using the 24-hour clock and use counting up to find time intervals of several hours and minutes; solve problems involving scaling by simple fractions; use factors to multiply; solve scaling problems involving measure **Mastery Checkpoint** There are two Mastery Checkpoints in this week. They test the following outcomes from the Progression Map: • Draw line graphs; solve comparison, sum and difference problems using information presented in a line graph

- Estimate intermediate values on line graphs

Please see Mastery Checkpoint 5.30.39 (Teacher Guide 5.30.39)

- Solve problems (including word problems and problems about measure) involving multiplication and division, including scaling by simple fractions and problems involving simple rates

Please see Mastery Checkpoint 5.30.40 (Teacher Guide 5.30.40)