Year 3 – Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14
Autumn	**Number** - Place Value						**Number** – Addition & Subtraction		**Geometry** - Shape	**Number** – Multiplication & Division				Consolidate
Spring	**Number** - Fractions			**Measure**- Perimeter & Length			**Number** - Fractions		**Number**- Multiplication & Division		**Geometry** – 2D Shape: Turns		Consolidate	
Summer	**Measure** Money	**Statistics**	**Measure** – Mass & Capacity		**Time**- Analogue clock & Roman numerals		**Number**- Addition & Subtraction review	**Number Multiply & Division** Review	**Fraction** Review	**Geometry** Review	Consolidate	Note: Attendance Statistics week will be carried out during sports week.		

Place value - Starter 10mins	Counting **Week 1**	Counting **Week 2**	Counting **Week 3**	Partitioning **Week 4**
	Count in steps of 2,3, and 5 from 0, and in tens from any number, forwards and backward. Recognise the place value of each digit in two-digit numbers (tens, ones)	Read and write any given number to at least 100 in numerals and words.	Count from 0 in multiples 50 and 100. *Review counting in 5s and 10s. Discuss how multiples of 5, 10, 50 and 100 end in 0 or 5. Use counting sticks, hundred square and/or gattegno charts.*	Partition numbers up to 1000 in as many different ways as possible. **56** = 50 + 6, 25 + 25 + 6, 50 + 3 + 3… *Progress to apply the above skill to 3 digit numbers.*

Autumn

NCETM PD Materials	**National Curriculum**	
Week 1 / Place Value, Addition & Subtraction Year 2 Revision **Number** Year 2: NCETM- Ready to progress – Look at the first 9 slides for revision. **Week 2 – Place Value** **Number**- Place Value Spine 1: 1.17 Teaching point 1- 4 100 & bridging 100 (25's,50's, 100's, 1000's)	**Stem sentences to be introduced – use ping pong effect between yourself and the children.** **Use choral response for recalling a maths strategy.** **Reasoning and problem-solving questions to be completed in this unit- available on the NCETM reasoning site.** **Mastery assessment – deep understanding of maths.**8 questions of varied difficulties to use at the end of the unit.	*Count from 0 in multiples of 4, 8, 50 and 100. * Find 10 or 100 more or less than a given number * Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) * Compare and order numbers up to 1000 * Identify, represent and estimate numbers using different representations * Read and write numbers up to 1000 in numerals and in words * Solve number problems and practical problems involving these idea

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Spine 1: 1.18 Teaching point 1 (1's,10's,100's) Teaching point 2 (number line to 1000) Teaching point 3 (1,10,100 more or less) Teaching point 4 (compare and order) Include counting in 100,50,25	**NCETM- ready to progress. Year 3 Slides 2 - 6 Stem sentences to be included & recorded in books.**	

Addition & Subtraction – Starter 10mins				
	Adding mentally Week 5 Use number bonds to add mentally. ***13 + 7 =?*** *3+7 = 10 so 10 + 10 = 20* ***23 + 7*** *= 3 +7 = 10, so 10 +20 = 30...* *Progress to apply the above skill to 3 digit numbers.*	**Subtracting mentally Week 6** Use number line to add on to subtract. Adding up to nearest tens. 87-25 = 25_____87 *Progress to apply the above skill to 3 digit numbers.*	**Adjust to subtract mentally (-9 and -11 to start with) Week 7** *37 – 9 = 28* *(Adjust 9 by adding one to it to make 10, 37-10 = 27, then adjust the answer by adding 1, 27+1= 28)* *Apply the same with -11 but encourage children to partition 11 into 10 + 1, take 10 away first, then take 1 away.* *Progress to apply the above skill to 3 digit numbers.*	**Adding and subtracting** **mentally Week 8** Review adding and subtracting mentally checking progress to 3-digit numbers.

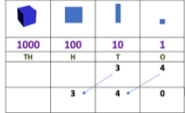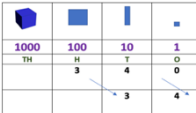| **Week 5- Addition & Subtraction**

 Number -Addition and Subtraction
 Spine 1: 1.17- Teaching point 3&4 (crossing 10's & 100's)
 Spine 1: 1.18- Teaching point 1 to 4
 Teaching point 5 (add & subtract multiples of 100)
 Teaching point 6 (Counting sequence up to 1000)
 Spine 1: 1.19 – Teaching points 1 – 4
 Securing mental strategies: calculation up to 999 | **Reasoning and problem-solving questions to be completed in this unit- resources available on the NCETM reasoning site.**

 Mastery assessment – deep understanding of maths. 8 questions of varied difficulties to use at the end of the unit.
 NCETM- ready to progress. Year 3 Slides 10 & 16 - 19
 Stem sentences to be included & recorded in books. Use ping pong effect with children & choral response for recalling maths strategy.
 Extra resources are available on White Rose. | * Add and subtract numbers mentally, including:
 * A three-digit number and ones
 * A three-digit number and tens
 * A three-digit number and hundreds
 * Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction
 * Estimate the answer to a calculation and use inverse operations to check answers
 * Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction |

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Spine 1: 1.20 – Teaching point 1 - 5 Algorithms: column addition. Written addition Spine 1: 1.21 Written subtraction		
Shape - Starter – 10 mins	Counting <mark>Week 9</mark> Count from 0 in multiples of 4. *Review counting in multiples of 2 and discuss the links – double 2 is 4. All multiples of 2 and 4 are even. Use counting sticks and hundred squares.*	
Week 9 - Geometry **Measure 2D shape** Revisit what makes a 2D shape- look at visual representations- Practical manipulation/ Geo boards.	**Reasoning and problem-solving questions to be completed in this unit- resources available on the NCETM reasoning site.** **Mastery assessment – deep understanding of maths.** 4 questions of varied difficulties to use at the end of the unit. **Stem sentences to be included & recorded in books. Use ping pong effect with children & choral response for recalling maths strategy.** Extra resources are available on White Rose site.	*Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them.

Multiplication & Division – Starter 10 mins	Use Knowledge of near doubles to add mentally. <mark>Week 10</mark> 25 +26 = 51 (26 can be partitioned into 25+1, so 25+25= 50, 50 + 1 =51) 150+152=302 (152 can be partitioned to 150 + 2, double 150 is 300, 300 + 2 = 302).	X 10 mentally. <mark>Week 11</mark> *Children need to understand that the answer increases in multiplication. The Dienes and the 1, 10, 100, 1000 show visually what happens as the digits move left.*	*Divide by 10* <mark>*Week 12*</mark> *Children need to understand that the answer decreases in division. The Dienes and the 1, 10, 100, 1000 show visually what happens as the digits move right.*	Use the inverse to divide. <mark>Week 13</mark> *48 divided by 8 =?* *8 x 8 = 48, so 48 divided by 8 = 8.* **Counting** Count from 0 in multiples of 4.

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				Review counting in multiples of 2 and discuss the links – double 2 is 4. All multiples of 2 and 4 are even. Use counting sticks and hundred squares.
Week 10-Number- Multiplication & Division Spine 2- 2.6 (Revisit for equal groups) Spine 2- 2.7 Teaching point 1-5 – Times tables: 2,4, & 8, and the relationship between them. Spine 2-2.8 Teaching point 1 only- Times table:3,6 & 9 & the relationship between them.	**Reasoning and problem-solving questions to be completed in this unit- resources available on the NCETM reasoning site.** **Mastery assessment – deep understanding of maths.** 14 questions of varied difficulties to use at the end of the unit. **NCETM- ready to progress. Year 3 Slides 11-12 Stem sentences to be included & recorded in books. Use ping pong effect with children & choral response for recalling maths strategy.** Extra resources are available on White Rose site.		*Count from 0 in multiples of 4, 8,50, & 100, find 10 or 100 more or less than a given number. *Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables *Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers of times one-digit numbers, using mental and progressing to formal written methods *Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	
Week 14- Consolidate				
Spring				
Fractions – Starter – 10 mins	**Time Week 1** *Read the time (digital) – 12 hour and 24 hour clock (opportunity to use mental addition/subtraction taught in Autumn 1)*	**2D Shape Week 2** *Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. Flash various 2D shapes to the children and they answer on whiteboards or verbally.*		
Week 1 Number- Fractions Revisit Spine 3-Ks1 fractions for intro Spine3- 3.1 Teaching points 1-4 Preparing for fractions: the part whole relationship Spine 3- 3.2 Teaching points 1-6 Unit fractions; identifying, representing & comparing	**Reasoning and problem-solving questions to be completed in this unit- resources available on the NCETM reasoning site.** **Mastery assessment – deep understanding of maths.** 14 questions of varied difficulties to use at the end of the unit. **NCETM- ready to progress. Year 3 Slides 21-25 Stem sentences to be included & recorded in books.** **Use ping pong effect with children & choral response for recalling maths strategy.**	*Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 *Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators		

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Measure – Starter – 10 mins	**Counting Week 3** Count from 0 in multiples of 8. *Review counting in multiples of 2 and 4. Discuss the links – double 2 is 4, double 4 is 8. All multiples of 2, 4 and 8 are even. Use counting sticks and hundred squares.*	**Counting Week 4** **Multiples of 5.** *Count up and down, back and forwards in multiples of 5. Identify that multiples of 5 end only in digits 0 and/or 5. Use counting sticks and hundred squares.*	**Recognising multiples of 4 Week 5** Multiples of 4 are even so always end with the digits 0, 2, 4, 6 or 8. To find the answer to a x4 calculation, double the number twice. 8x4 = 8x2= 16, 16x2=32	
Week 3: Measure- Perimeter& Length Spine 2 2.16 Teaching points 1&2 Multiplicative contexts: area & perimeter	**Reasoning and problem-solving questions to be completed in this unit- available on the NCETM reasoning site.** **Stem sentences to be included & recorded in books.** **Use ping pong effect with children & choral response for recalling maths strategy.**			*Measure, compare, add and subtract lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) *Measure the perimeter of simple 2-D shape
Fractions – Starter – 10 mins				
Week 6: Number- Fractions Spine 3 – 3.3 Teaching points 1-3; non-unit fractions; identifying, representing & comparing Teaching points 4-6; fractions as numbers Teaching points 7-8; comparing fractions Spine 3- 3.4 Teaching points 1-4 adding & subtracting within one whole	**Reasoning and problem-solving questions to be completed in this unit- NCETM reasoning site.** **Mastery assessment – deep understanding of maths.** 14 questions of varied difficulties to use at the end of the unit. **NCETM- ready to progress. Year 3 Slides 21-25 Stem sentences to be included & recorded in books. Use ping pong effect with children & choral response for recalling maths strategy.**			*Recognise and show, using diagrams, equivalent fractions with small denominators *Add and subtract fractions with the same denominator within one whole [for example, 7 5 + 7 1 = 7 6] *Compare and order unit fractions, and fractions with the same denominators *Solve problems that involve all of the above

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Multiplication & Division – Starter – 10 mins		
Week 9: Number- Multiply &Division Spine 2- 2.14 Teaching point 1&2, multiplication: partitioning leading to short division. Spine 2 – 2.2.17 Teaching point 1 only (repeated in yr. 4) Structures: using measures & comparison to understand scaling.	**Reasoning and problem-solving questions to be completed in this unit- resources available on the NCETM reasoning site.** **Mastery assessment – deep understanding of maths.** 14 questions of varied difficulties to use at the end of the unit. **NCETM- ready to progress. Year 3 Slides 11-12 Stem sentences to be included & recorded in books.** **Use ping pong effect with children & choral response for recalling maths strategy.**	*Count from 0 in multiples of 4, 8,50, & 100, find 10 or 100 more or less than a given number. *Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables *Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers of times one-digit numbers, using mental and progressing to formal written methods *Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects
Geometry – Starter – 10 mins		
Week 11: Geometry- 2D Shape & Turns Split pin angle measure to make. Angles.	**Reasoning and problem-solving questions to be completed in this unit- resources available on the NCETM reasoning site.** **Mastery assessment – deep understanding of maths.** 5 questions of varied difficulties to use at the end of the unit. **NCETM- ready to progress. Year 3 Slides 26-27 Stem sentences to be included & recorded in books.** **Use ping pong effect with children & choral response for recalling maths strategy.**	*Recognise angles as a property of shape or a description of a turn *Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle *Identify horizontal and vertical lines and pairs of perpendicular and parallel lines
Week 13 Consolidate		
Week 13- Starter 10 mins		
Summer		
Money- Starter- 10 mins		

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Week 1: ==Measure==- Money Spine 1- 1.25 Teaching point 5-change NCETM- Unit 2 Year 5 money- power points slide 12- 16	**Mastery assessment – deep understanding of maths.** 2 questions of varied difficulties to use at the end of the unit. **NCETM- ready to progress. Year 3 Slides 17. Stem sentences to be included & recorded in books.** **Use ping pong effect with children & choral response for recalling maths strategy.**	*Add and subtract amounts of money to give change, using both £ and p in practical contexts
Statistics- Starter 10 mins		
Week 2: ==Statistics==	==Whole school attendance statistic== **Reasoning and problem-solving questions to be completed in this unit- resources available on the NCETM reasoning site.**	*Interpret and present data using bar charts, pictograms and tables *Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables.
Measure- Starter 10 mins		
Week 3: ==Measure==- Mass & Capacity White Rose resources available to supplement this.	**NCETM Mastery assessment – deep understanding of maths.** 4 questions of varied difficulties to use at the end of the unit. **Stem sentences to be included & recorded in books.** **Use ping pong effect with children & choral response for recalling maths strategy.**	*Measure, compare, add and subtract mass (kg/g); volume/capacity (l/ml)
Time- Starter 10 mins		
Week 5: ==Measure==: Time- Analogue Clock & Roman Numerals	**Mastery assessment – deep understanding of maths.** 2 questions of varied difficulties to use at the end of the unit. **Stem sentences to be included & recorded in books. Use ping pong effect with children & choral response for recalling maths strategy.**	*Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks *Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight

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Podcasts available on NCETM site for teaching Singapore method for this.		*Know the number of seconds in a minute and the number of days in each month, year and leap year *Compare durations of events [for example to calculate the time taken by particular events or tasks].
Addition & Subtraction- Starter 10 mins		
Week 7: Number- Addition & Subtraction Review		Notes and guidance (non-statutory) Pupils practise solving varied addition and subtraction questions. For mental calculations with two-digit numbers, the answers could exceed 100. Pupils use their understanding of place value and partitioning, and practise using columnar addition and subtraction with increasingly large numbers up to three digits to become fluent.
Multiply & Division- Starter 10 mins		
Week 8: Number- Multiply & Division Review		Notes and guidance (non-statutory) Pupils continue to practise their mental recall of multiplication tables when they are calculating mathematical statements in order to improve fluency. Through doubling, they connect the 2, 4 and 8 multiplication tables. Pupils develop efficient mental methods, for example, using commutativity and associativity (for example, 4 × 12 × 5 = 4 × 5 × 12 = 20 × 12 = 240) and multiplication and division facts (for example, using 3 × 2 = 6, 6 ÷ 3 = 2 and 2 = 6 ÷ 3) to derive related facts (for example, 30 × 2 = 60, 60 ÷ 3 = 20 and 20 = 60 ÷ 3).
Fraction- Starter 10 mins		
Week 9: Fraction Review		Notes and guidance (non-statutory) Pupils connect tenths to place value, decimal measures and to division by 10. They begin to understand unit and non-unit fractions as numbers on the number line, and deduce relations between them, such as size and equivalence. They should go beyond the [0, 1] interval, including relating this to measure.

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		Pupils understand the relation between unit fractions as operators (fractions of), and division by integers. They continue to recognise fractions in the context of parts of a whole, numbers, measurements, a shape, and unit fractions as a division of a quantity. Pupils practise adding and subtracting fractions with the same denominator through a variety of increasingly complex problems to improve fluency.
Geometry- Starter 10 mins		
Week 10: Geometry Review		Notes and guidance (non-statutory) Pupils' knowledge of the properties of shapes is extended at this stage to symmetrical and non-symmetrical polygons and polyhedral. Pupils extend their use of the properties of shapes. They should be able to describe the properties of 2-D and 3-D shapes using accurate language, including lengths of lines and acute and obtuse for angles greater or lesser than a right angle. Pupils connect decimals and rounding to drawing and measuring straight lines in centimetres, in a variety of contexts.
Week 11 Consolidate		
Week 11 – Starter- 10 mins		