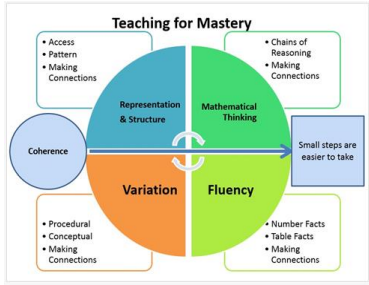
The Best That You Can Be

Devonshire Primary Academy

Maths Long Term Plan



Autumn term **21.10.24- 29.10.24 Half term** **Finish 20th December** **13 weeks including 1 enrichment week commencing 25th November**	**National Curriculum Objectives:** Pupils should be taught to: The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the 4 operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

Previous Teaching: EYFS: Cardinality and Counting. Understanding that the cardinal value of a number refers to the quantity, or 'howmanyness' of things it represents. Subitising and Counting skills and explore the composition of numbers within and beyond 5. Equal, unequal and connecting two equal groups, number facts, counting larger numbers.

Pre School: Number and Counting; say numbers 1-10, recognising numbers, counting objects, count from a group, Days of the week, amounts, decrease, compared, near and far.

Year 1:count to and across 100, forwards and backwards, read and write numbers to 100, count in multiples of 2,5,10, using number lines, language equal, more than, less than, fewer, most, least, read, write and interpret addition and subtraction signs +-=, solve problems including missing numbers, +- one digit and two digit numbers to 20, including 0, number bonds 10/20, arrays, lots of, count in fractions up to 10, $\frac{1}{2}$, $\frac{1}{4}$ equivalence on a number line, recognise, find and name fractions $\frac{1}{2}$ as two equal parts, compare decimals with the same number of up to 2 dp, recognise and name 2D and 3D shapes, describe position and movement including half, quarter and three quarter turn, measurement in height, length and volume, time(hours, seconds and mins) Sequence events.

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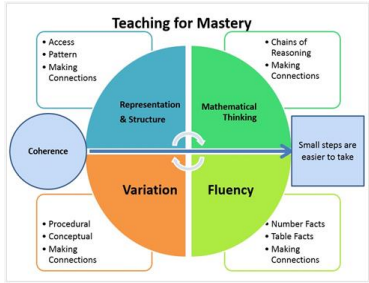

Topics	Small steps	National Curriculum- Progression Document/Prioritisation	Vocabulary	Notes on provision and priority for teaching
Autumn 1 **Place Value**	● count objects to 100 and read and write in numerals and words ● represent to 100 ● tens and ones with a part-whole model ● tens and ones using addition ● use a place value chart ● compare objects ● compare numbers ● order objects and numbers ● count in 2s, 5s, 10s, 3s	**2NPV–1** Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning. 2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. **Count in steps of 2, 3, and 5 and 10 from 0, and in tens from any number, forward or backward** Identify, represent and estimate numbers using different representations, including the number line Read and write numbers to at least 100 in numerals and in words **Compare and order numbers from 0 up to 100; use <, > and = signs** **Recognise the place value of each digit in a two-digit number (tens, ones)** **Use place value and number facts to solve problems** To be able to contextualise their understanding of number through real-life situations. E.g., use of money. To be able to identify and estimate missing numbers E.g., in number sentences and on number lines. Be able to identify greater than/less than relationships, including use of <> symbols. **To use practical resources to deepen understanding of place value.**	place value number equal to greater than/less than teen tens/ones symbol more/less compare tens frame part-whole base 10	

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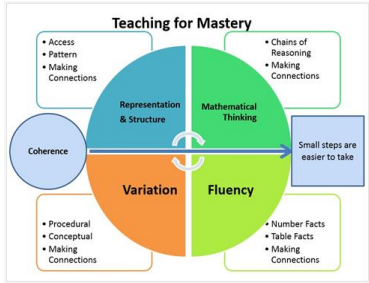

Autumn 1-2 Addition and Subtraction	● fact families - addition and subtraction bonds to 20 ● check calculations ● compare number sentences ● related facts ● bonds to 100 (tens) ● add and subtract 1s ● 10 more and 10 less ● add and subtract 10s ● add a 2-digit and 1-digit numbers - crossing 10 ● subtract a 1-digit number from a 2-digit number - crossing 10 ● add two 2-digits numbers - not crossing ten - add ones and add tens ● add two 2-digits numbers - crossing ten - add ones and add tens	**2NF–1** Secure fluency in addition and subtraction facts within 10, through continued practice. **2AS–1** Add and subtract across 10. **2AS–2** Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?". **2AS–3** Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number. **2AS–4** Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers. **Applying their increasing knowledge of mental and written methods.** **Add and subtract numbers using concrete objects, pictorial representations, and mentally, including:** **♣ a two-digit number and ones** **♣ a two-digit number and tens** · two two-digit numbers · adding three one-digit numbers show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot add and subtract numbers using concrete objects, pictorial representations, and mentally, including:	number bonds column ones total (=) sum number sentence tens add more than addition'; '+'; -; 'subtract' 'fact family', '10 more' and '10 less'. Addend subtrahend commutative	

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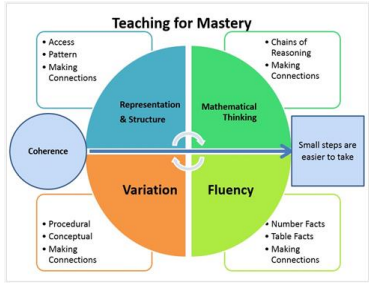

	● subtract a 2-digit number from a 2-digit number - not crossing 10 ● subtract a 2-digit number from a 2-digit number - crossing 10 - subtract ones and tens ● bonds to 100 tens and ones) ● Add three 1-digit numbers	* a two-digit number and ones * a two-digit number and tens * two two-digit numbers * adding three one-digit numbers **Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.** **Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100** **recognise and use the inverse relationship between addition and subtraction and** **use this to check calculations and missing number problems.** **(copied from Addition and Subtraction)** *recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100* (copied from Addition and Subtraction) Compare number sentences		
Autumn 2 Money	● count money – pence ● count money - pounds (notes and coins) ● count money - notes and coins ● select money	**Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value** **Find different combinations of coins that equal the same amounts of money** **Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change**	money'; 'coins'; 'notes'; 'pounds £'; 'pence p'; 'left'; 'buy'; 'spend'; 'how much'; 'value'; 'total'; 'altogether'; 'difference'; 'compare'; 'most'; 'least'; 'less than ';	

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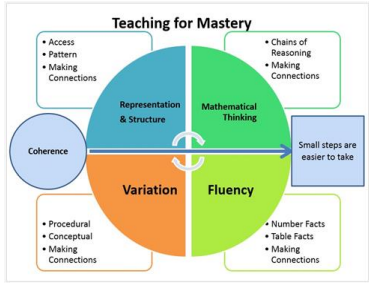

	● make the same amount ● compare money ● find the total ● find the difference ● find change ● two-step problems	To be able to contextualise their understanding of number through real-life situations. E.g., use of money.	'equal =') change', 'amount' and 'total value'	
	Consolidate learning- using the end of topic assessments on White Rose and upload onto Spreadsheet. Recap any areas the children found tricky. Complete Autumn Assessment (Saved on the drive)			
SMSC	Calculate whether an answer is wrong			
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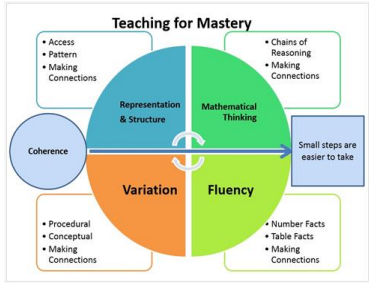

Spring Term **Half term 17-21st Feb** **Finish 11th April (Easter)** **13 weeks including Number Day 7th Feb; 1 enrichment week commencing 24th-28th March**	**National Curriculum Objectives:** Pupils should be taught to: The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the 4 operations, including with practical resources [for example, concrete objects and measuring tools]. At this stage, pupils should develop their ability to recognise, describe, draw, compare and sort different shapes and use the related vocabulary. Teaching should also involve using a range of measures to describe and compare different quantities such as length, mass, capacity/volume, time and money. By the end of year 2, pupils should know the number bonds to 20 and be precise in using and understanding place value. An emphasis on practice at this early stage will aid fluency. Pupils should read and spell mathematical vocabulary, at a level consistent with their increasing word reading and spelling knowledge at key stage 1.

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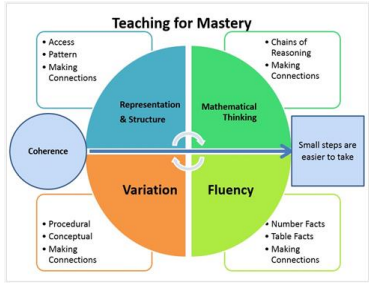

Spring 1 Multiplication and Division	● recognise equal groups ● make equal groups ● add equal groups ● make arrays ● multiplication sentences using the x symbol ● multiplication sentences from pictures ● use arrays ● 2/5/10 times table ● make equal groups - sharing ● make equal groups – grouping ● divide by 2/5/10	**2MD–1** Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. **2MD–2** Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division). **Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs** **Use known multiplication facts to check the accuracy of calculations** **Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers** **Solve problems involving multiplying and dividing, using materials, arrays, repeated addition** Explore the relationship between 5 and 10.	equal groups'; 'equal parts'; 'same'; 'different'; 'more than'; 'in total'; 'multiplication x'; 'repeated addition'; 'skip counting'; 'number in a group'; 'number of groups'; 'times-table'; 'array'; 'rows'; 'columns'; 'number line'	
Statistics	● make tally charts ● draw pictograms (1-1) ● interpret pictograms (1-1)	Interpret and construct simple pictograms, tally charts, block diagrams and simple tables ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity	'tally', 'tally charts', 'pictograms', 'block diagrams' and 'tables'.	

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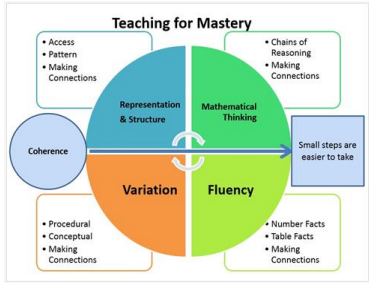

	● draw pictograms (2, 5 and 10) ● interpret pictograms (2, 5 and 10) ● block diagrams	ask and answer questions about totalling and comparing categorical data solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.		
Spring 2 Shape	● recognise 2D and 3D shapes ● count side on 2D shapes ● count vertices on 2D shapes ● draw 2D shapes ● lines of symmetry ● sort 2D shapes ● Make patterns with 2D shapes ● count faces on 3D shapes ● count edges on 3D shapes	**2G–1** Use precise language to describe the properties of 2D and 3D shapes and compare shapes by reasoning about similarities and differences in properties. Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid] Using vocabulary appropriately and consistently distinguish between regular and irregular polygons based on compare and sort common 2-D and 3-D shapes and everyday objects Understanding functionality of shapes e.g. round wheels.	‘prism’, ‘polygon’, ‘pentagon’, ‘hexagon’, ‘octagon’ and ‘hemisphere’ vertices’, ‘vertex’, ‘quadrilateral’, ‘line of symmetry’ and ‘curved surface’	

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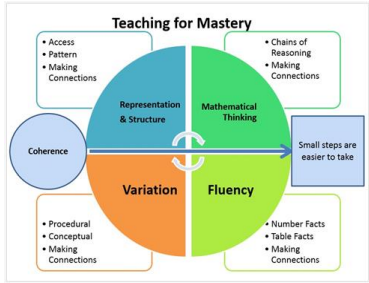

	● count vertices on 3D shapes ● sort 3D shapes ● make patterns with 3D shapes			
Spring 2 Fractions	make equal parts ● recognise a half ● find a half ● recognise a quarter ● find a quarter ● recognise a third ● find a third ● unit fractions ● non0unit fractions ● equivalence of 1/2 and 2/4 ● find three quarter ● count in fractions	**Count up and down in tenths.** **Recognise, find, name and write fractions 1/3, ¼, 2/4, and ¾ of a length, shape, set, of objects or quantity.** **Write simple fractions e.g. ½ of 6 = 3** **Recognise the equivalence of 2/4 and ½**	equal' or 'equivalent'. grouping' and 'sharing' division unit fractions' and 'non-unit fractions' unit fractions' and 'non-unit fractions 'wholes', 'parts' equal parts'	

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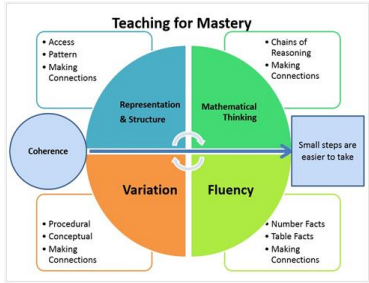

Consolidate learning recap prior knowledge if needed use end of topic assessments and add to spreadsheet. Complete Spring White Rose Assessment data.	
SMSC	Calculate whether an answer is wrong
BV	Discuss their work Explain their reasoning when solving problems
Wider World	Link to jobs- Baker, shop keeper, teacher, builder, architect, Linked stories: RECOMMENDATIONS - MathsThroughStories.org - for specific topics

Summer Term Year 1

Half term 26th May-9th June

Finish 18th July

11 weeks including; 2 enrichment weeks

19th-23rd May Health and Wellbeing week

14th-18th July

National Curriculum Objectives:

Pupils should be taught to:

The principal focus of mathematics teaching in key stage 1 is to ensure that pupils develop confidence and mental fluency with whole numbers, counting and place value. This should involve working with numerals, words and the 4 operations, including with practical resources [for example, concrete objects and measuring tools].

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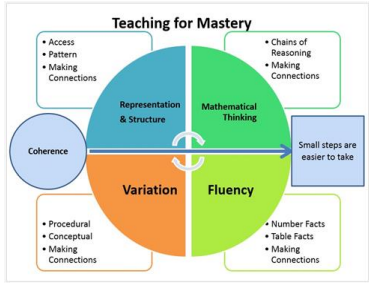

Previous Learning: EYFS: Cardinality and Counting. Understanding that the cardinal value of a number refers to the quantity, or 'howmanyness' of things it represents. Subitising and Counting skills and explore the composition of numbers within and beyond 5. Equal, unequal and connecting two equal groups, number facts, counting larger numbers.

Pre School: Number and Counting; say numbers 1-10, recognising numbers, counting objects, count from a group, Days of the week, amounts, decrease, compared, near and far. Amounts of mass (containers)

Year 1-Aut: Number bonds to 10, counting forwards and backwards to 10, compare and order numbers, use part whole, addition and subtraction using objects. **Sp:** number bonds to 20, add and subtract from 20, count forwards and backwards from 50, measurement in height, length and volume.

Topic	Small Steps	National Curriculum- Progression Document/Prioritisation	Vocabulary	Notes on provision and priority for teaching
Summer 1 Length: height and weight	● measure length (cm) ● measure length (m) ● compare lengths ● order lengths ● four operations with lengths	**Compare and order lengths and record the results using >, < and =**	'length', 'height', 'width', 'distance' and 'ruler'. compare longer shorter	
Summer 1 Position and direction	● describe movement ● describe turns ● describe movement and turns	**Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise)**	clockwise' and 'anti-clockwise' right and left	

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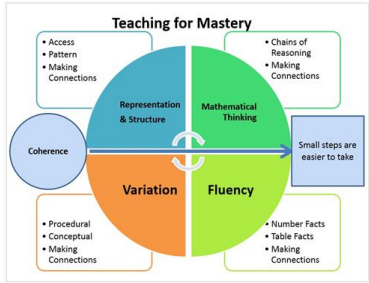

	● making patterns with shapes	**Order and arrange combinations of mathematical objects in patterns and sequences**		
Summer 2 Time	● o'clock and half past ● quarter past and quarter to ● telling time to 5 minutes ● hours and days ● find durations of time ● compare durations of time	**Compare and sequence intervals of time** **Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times** **Know the number of minutes in an hour and the number of hours in a day**	24 hours', 'daytime', 'night time', 'quarter to', 'quarter past', 'a quarter of an hour', 'to (e.g. twenty to three)', 'a.m.', 'p.m.', 'duration', 'longer', 'shorter' minute hour second hand analogue intervals o'clock half past	
Summer 2 Capacity and Temp	● compare mass ● measure mass in grams ● measure mass in kilograms ● compare volume ● mililitres ● litres ● temperature	choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); **mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit**, using rulers, **scales, thermometers and measuring vessels** ● compare and order lengths, **mass, volume/capacity and record the results using >, < and =**	grams', 'kilograms', 'millilitres', 'litres', 'temperature', 'thermometer', 'degrees Celsius', 'hottest', 'coldest', 'g', 'kg', 'ml', 'l', 'ºC')	
	Consolidate previous learning- Complete Summer Assessment grids for YEAR 2 Papers ready for Year 3. introduce Year 3 type questions ready for September/ recap previous learning that needs addressing.			

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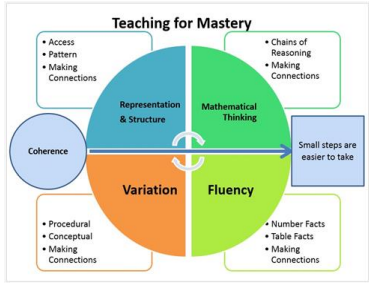

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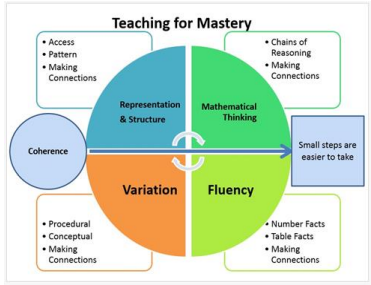

Mastering Number

Year 2 Overview

Term 1	Term 2	Term 3
Pupils will have an opportunity to consolidate their understanding and recall of number bonds within 10; they will re-cap the composition of the numbers 11 to 20 and reason about their position within the linear number system. **Pupils will:** • review the composition of the numbers 6 to 9 as '5 and a bit' • compare numbers using the language of comparison and use the symbols < > = • review the structure of even numbers (including exploring how even numbers can be composed of two odd parts or two even parts) and the composition of each of 6, 8 and 10 • review the structure of odd numbers (including exploring how odd numbers can be composed of one odd part and one even part) and the composition of each of 7 and 9	Pupils will have an opportunity to use their knowledge of the composition of numbers within 10 to calculate within 20; they will explore the links between the numbers in the linear number system within 10 to numbers within 100, focusing on multiples of 10 and the midpoint of 50. **Pupils will:** • explore how the numbers 6 to 9 can be doubled using the '5 and a bit' and '10 and a bit' structure • use doubles to calculate near doubles • use bonds of 10 to reason about bonds of 20, in which the given addend is greater than 10 • use known number bonds within 10 to calculate within 20, working within the 10-boundary	Pupils will have further opportunities to use their knowledge of the composition of numbers within 10 to calculate within 20 and to reason about equations and inequalities. **Pupils will:** • continue to explore a range of strategies to subtract across the 10-boundary • review bonds of 20 in which the given addend is greater than 10, and reason about bonds of 20, in which the given addend is less than 10 • practise previously explored strategies to support their reasoning about inequalities and equations • review doubles and near doubles and transform additions in which two addends are adjacent odd/ even numbers into doubles

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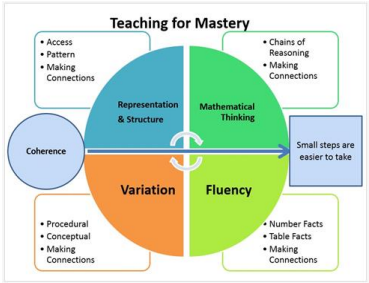

• consolidate their understanding of the numbers 10 and 20 as '10 and a bit' • consolidate their understanding of the linear number system to 20 and reason about midpoints	• use their knowledge of bonds of 10 to find three addends that sum to 10 • use their knowledge of the composition of numbers within 20 to add and subtract across the 10-boundary • use their understanding of the linear number system to 10 to position multiples of 10 on a 0—100 number line and reason about midpoints	• consolidate previously taught facts and strategies through continued, varied practice
This term will particularly support the teaching and consolidation of the following RtP criteria: • 1NPV-2 • 2NF-1	This term will particularly support the teaching and consolidation of the following RtP criteria: • 2NPV-2 • 2NF-1 • 2AS-1	This term will particularly support the teaching and consolidation of the following RtP criteria: • 2NF-1 • 2AS-1 • 2AS-2