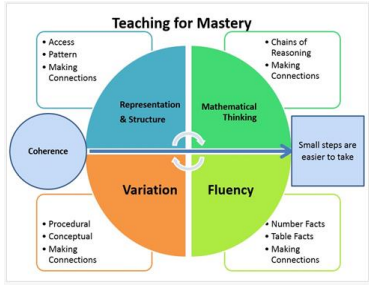
*The Best That You Can Be*

# Devonshire Primary Academy

## Maths Long Term Plan




| **Autumn term**<br><br>**21.10.24- 29.10.24 Half term**<br><br>**Finish 20th December**<br><br>**13 weeks including 1 enrichment week commencing 25th November** | **National Curriculum Objectives:**<br><br>Pupils should be taught to:<br><br>The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.<br><br>By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling. |
|---|---|

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.

**Year 2: count in steps of 2,3,5 and10 from 0, identify, represent and estimate numbers, read and write numbers to 100, compare and order numbers from 0 up to 100 <>=, recognise the palce value of each digit in a 2digit number- tens and ones. Solve number fact problems, mental and written methods, add and subtract two-digit numbers and ones, adding three digit numbers, show commutative, inverse relationships, recall +- facts to 100, multiplication and division symbols, recall 2,5,10 multiplication tables, recognise odd and even numbers, count in tenths, recognise fractions, whole, $\frac{1}{2}$, $\frac{1}{4}$,**

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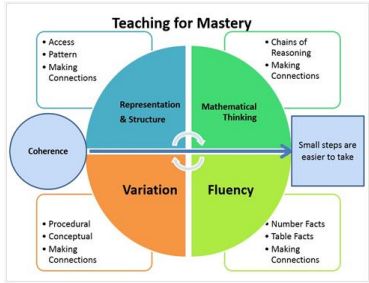


**1/3, equivalent fractions, 2D, 3D shapes, lines of symmetry, regular and irregular polygons, position and direction- turn, right angles, half turn etc, compare lengths mass and volume, tell the time, pictograms, charts, tables tally's**

| Topics | Small steps | National Curriculum- Progression Document/Prioritisation | Vocabulary | Notes on provision and priority for teaching |
|---|---|---|---|---|
| **Autumn 1**<br><br>**Place Value** | Hundreds<br><br>● represent numbers to 1000<br>● 100s, 10s, 1s<br><br>● number line to 1000<br><br>● find 1,10,100 more or less than a given number<br><br>● compare objects to 1000<br><br>● compare numbers to 1000<br><br>● order numbers<br><br>● counts in 50s | **3NPV–1** Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.<br><br>**3NPV–2** Recognise the place value of each digit in three-digit numbers and compose and decompose three-digit numbers using standard and non-standard partitioning.<br><br>**3NPV–3** Reason about the location of any three-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10<br><br>**3NPV–4** Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.<br>**Count from 0 in multiples of 4, 8, 50 and 100;**<br><br>**Find 10 or 100 more or less than a given number**<br>**Identify, represent and estimate numbers using different representations**<br><br>**Read and write numbers up to 1 000 in numerals and in words**<br>**Compare and order numbers up to 1 000**<br>**Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)**<br>**Solve number problems and practical problems involving these ideas.**<br><br>To be able to work systematically in response to a given problem. | 'equal to =', 'less than ', 'order', 'compare', 'place value' hundreds, more, less, | |

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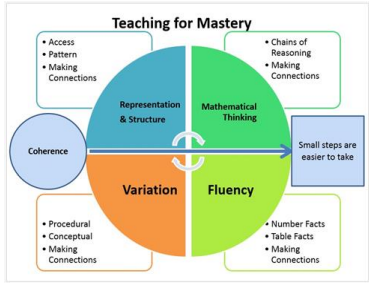


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|---|---|---|---|---|
| | | To be able to partition numbers in a range of ways.<br>To use mathematical reasoning to explain logical answers to questions<br><br>To use practical resources to deepen understanding of place value. | | |
| Autumn 1-2<br><br>Addition and Subtraction | ● add and subtract multiples of 100<br><br>● add and subtract 3-digit and 1-digit numbers - not crossing 10<br><br>● add and subtract 3-digit and 1-digit numbers - crossing 10<br>● subtract a 1-digit number from a 3-digit number - crossing 10<br><br>● add and subtract 3-digit and 2-digit numbers - not crossing 100<br><br>● add and subtract 3-digit and 2-digit numbers - crossing 100<br>● subtract a 2-digit number from a 3-digit numbers - crossing 100<br><br>● add and subtract 100s | **3AS–1** Calculate complements to 100.<br><br>**3AS–2** Add and subtract up to three-digit numbers using columnar methods.<br><br>**3AS–3** Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition and understand the related property for subtraction.<br><br>**Pupils should be taught to:**<br>**♣ add and subtract numbers mentally, including:**<br>**♣ a three-digit number and ones**<br>**♣ a three-digit number and tens**<br>**♣ a three-digit number and hundreds**<br><br>**Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction**<br>**Estimate the answer to a calculation and use inverse operations to check answers**<br>**Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.**<br><br>**solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. (copied from Addition and** | Addend, subtrahend, minuend, total, equation, sum, difference, add, subtract, hundreds, tens, ones, greater then, less than, pattern, altogether, variation, partition, estimate, approximate, fact family, bar modal | |

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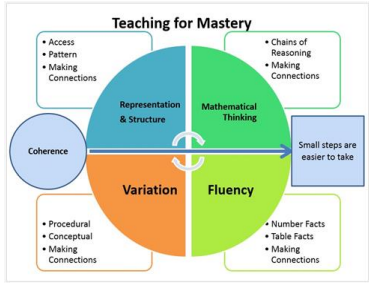


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| | ● spot the pattern - making it explicit<br><br>● add and subtract a 2-digit and 3-digit numbers - not crossing 10 or 100<br><br>● add a 2-digit and 3-digit number - crossing 10 or 100<br><br>● subtract a 2-digit number from a 3-digit numbers - crossing 10 or 100<br><br>● add two 3-digit numbers – not crossing 10 or 100<br><br>● add two 3-digit numbers - crossing 10 or 100<br><br>● subtract a 3-digit number from a 3-dogit number - no exchange<br><br>● subtract a 3-digit number from a 3-digit number - exchange<br><br>● Estimate answers to calculations | **Subtraction)**<br><br>**Solve addition and subtraction one-step problems in contexts, deciding which operations and methods to use and why.** | | |

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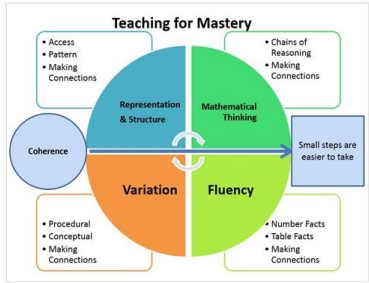


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| | ● check answers | | | |
| Autumn 2/Spring 1<br><br>Multiplication and Division | ● multiplication - equal groups<br>● multiply by 3<br>● divide by 3<br>● the 3 times table<br>● multiply by 4<br>● divide by 4<br>● the 4 times table<br>● multiply by 8<br>● divide by 8<br>● the 8 times table<br>● comparing statements<br>● related calculations<br>● multiply 2-digits by 1 digit<br>● divide 2-digits by 1-digit | **3MD–1** Apply known multiplication and division facts to solve contextual problems with different structures, including quotative and partitive division.<br><br>**Solve problems involving multiplying and dividing, including, using the distributive law to multiply two digit numbers by one digit**<br><br>**Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods (appears also in Mental Methods)**<br><br>**Use known multiplication facts to check the accuracy of calculations**<br><br>**Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.**<br><br>Explore the relationship between 4 and 8<br><br>*solve problems, including missing number problems, involving multiplication and division, including integer scaling*<br>(copied from Multiplication and Division) | equal grouping, unequal groups, and sharing equally.<br><br>multiply, multiplication fact, times table, and array. Commutative, multiplicand, multiplier, product<br><br>divide, division, dividend, quotient statement, whole, left over, and remainder, partitive division<br><br>multiplication, division, greater than, less than, equal, remainder, share, partition, | |

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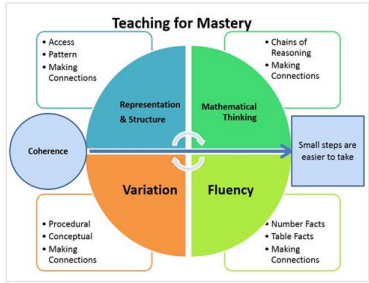


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| | ● scaling<br>● how many ways? | | compare, equally, least, most, tens (10s), ones (1s), exchange | |
| | Consolidate learning- using the end of topic assessments on White Rose and upload onto Spreadsheet. Recap any areas the children found tricky.<br>Complete Autumn Assessment (Saved on the drive) | | | |
| **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<br>Linked stories: RECOMMENDATIONS - MathsThroughStories.org - for specific topics | | | |

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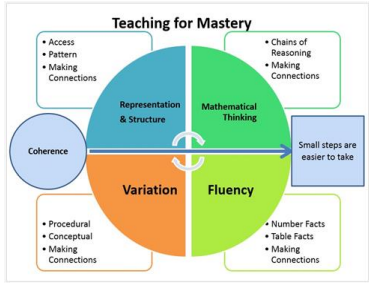


| Spring Term | National Curriculum Objectives: |
|---|---|
| **Half term 17-21st Feb**<br><br>**Finish 11th April (Easter)**<br><br>**13 weeks including Number Day 7th Feb; 1 enrichment week commencing 24th-28th March**<br><br>. | Pupils should be taught to:<br><br>The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.<br><br>By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling. |

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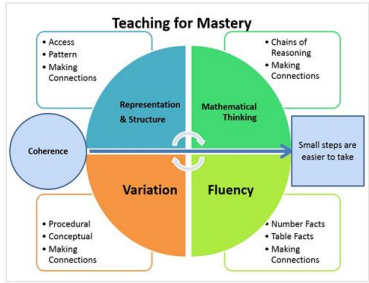


| Topics | Small Steps | National Curriculum- Progression Document/Prioritisation | Vocabulary | Notes on provision and priority for teaching |
|---|---|---|---|---|
| Spring 1 Multiplication and Division continued from Autumn 2 as above. | | | | |
| Money<br><br>(link to addition Autumn term) | ● pounds and pence<br>● covert pounds and pence<br>● add money<br>● subtract money<br>● give change | **add and subtract amounts of money to give change, using both £ and p in practical contexts** | add, subtract, total, less, more, difference, convert, amount, cost, change, pounds (£), pence (p).] | |
| Spring 2<br><br>Statistics | ● pictograms<br>● bar charts<br>● tables | Interpret and present data using bar charts,<br>pictograms and tables<br><br>Solve one-step and twostep questions 'How many more?' and 'How many fewer?' using information presented in scaled bar charts and pictograms and tables<br><br>solve comparison, sum and difference problems using information<br>presented in a line graph | bar chart', 'table' and 'pictogram': symbol, altogether, most, least, compare, half way, smallest, between, order, largest, total, column, row, | |

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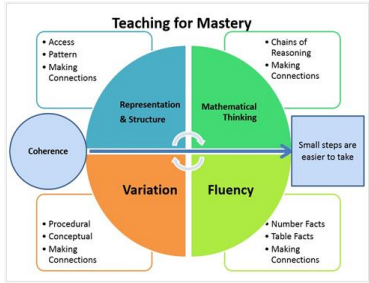


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| Spring 2<br><br>Measurement: length and Perim<br><br>Link to addition and subtraction Autumn | ● measure length<br>● equivalent lengths - m & cm<br>● equivalent lengths - mm & cm<br>● compare lengths<br>● add lengths<br>● subtract lengths<br>● measure perimeter<br>● calculate perimeter | **Measure, compare, add and subtract: lengths (m/cm/mm)**; mass (kg/g); volume/capacity (l/ml)<br><br>**Measure the perimeter of simple 2-D shapes** | length, height, width, long, wide, perimeter, tall, high, ruler, longer, shorter, greater than (>), less than (, compare, convert, equivalent, equal, measurement , 'metres', 'centimetres' and 'millimetres'. | |
| Spring 2/Summer 1<br><br>Fractions | ● making the whole<br>● tenths<br>● count in tenths<br>● tenths as decimals<br>● fractions on a number line<br>● fractions of set of objects<br>● equivalent fractions | **3F–1** Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.<br>**3F–2** Find unit fractions of quantities using known division facts (multiplication tables fluency).<br><br>**3F–3** Reason about the location of any fraction within 1 in the linear number system.<br><br>**3F–4** Add and subtract fractions with the same denominator, within 1.<br><br>**Count up and down in hundredths.**<br><br>**Recognise, find and writefractions of a discrete setof objects: unit fractions and non-unit fractions with small denominators.** | : partition, split, share, group, combine, represent fractions, denominator, numerator, vinculum (fraction bar)<br><br>fractional part, and whole number (integer) . non-unit fraction', | |

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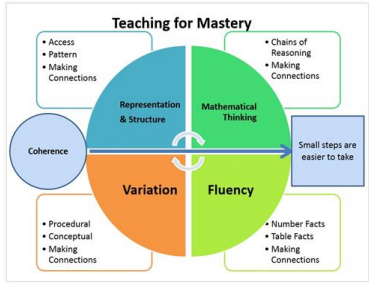


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|---|---|---|---|---|
| | ● compare fractions<br>● order fractions<br>● add fractions<br>● subtract fractions | **Recognise that tenths arise from**<br><br>**dividing an object into 10 equal parts and in dividing one –digit numbers or quantities by 10.**<br><br>**Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.**<br><br>**Recognise and show, using diagrams, equivalent fractions with small denominators.**<br><br>Add and subtract fractions with the same denominator within one whole (e.g. 5/7 + 1/7=6 /7) | 'denominator' and 'numerator': calculate, compare, difference, equal parts, share, measure, greater than (>), equal to (=), less than , equivalent | |
| Decimals/fractions- if you have time (non stat) | | Pupils connect tenths to place value, **decimal measures and to division by 10.**<br>**Identify the value of each digit in numbers given to three decimal places.**<br>**Solve problems which requireanswers to be rounded to specified degrees of accuracy** | | |
| Consolidate learning recap prior knowledge if needed use end of topic assessments and add to spreadsheet.<br><br>Complete Spring White Rose Assessment data. | | | | |
| **SMSC** | Calculate whether an answer is wrong | | | |
| **BV** | Discuss their work | | | |

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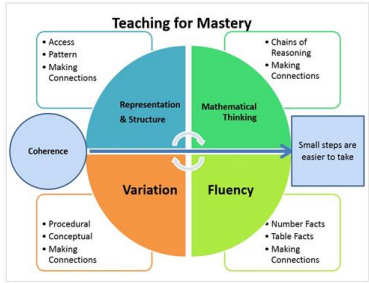


| | |
|---|---|
| | Explain their reasoning when solving problems |
| **Wider World** | Link to jobs- Baker, shop keeper, teacher, builder, architect,<br><br>Linked stories: RECOMMENDATIONS - MathsThroughStories.org - for specific topics |

| **Summer Term Year 1** | **National Curriculum Objectives:** |
|---|---|
| **Half term 26th May-9th June**<br><br>**Finish 18th July**<br><br>**13 weeks including; 2 enrichment weeks**<br><br>**19th-23rd May Health and Wellbeing week**<br><br>**14th-18th July** | Pupils should be taught to:<br><br>The principal focus of mathematics teaching in lower key stage 2 is to ensure that pupils become increasingly fluent with whole numbers and the four operations, including number facts and the concept of place value. This should ensure that pupils develop efficient written and mental methods and perform calculations accurately with increasingly large whole numbers. At this stage, pupils should develop their ability to solve a range of problems, including with simple fractions and decimal place value. Teaching should also ensure that pupils draw with increasing accuracy and develop mathematical reasoning so they can analyse shapes and their properties, and confidently describe the relationships between them. It should ensure that they can use measuring instruments with accuracy and make connections between measure and number.<br><br>By the end of year 4, pupils should have memorised their multiplication tables up to and including the 12 multiplication table and show precision and fluency in their work. Pupils should read and spell mathematical vocabulary correctly and confidently, using their growing word reading knowledge and their knowledge of spelling. |

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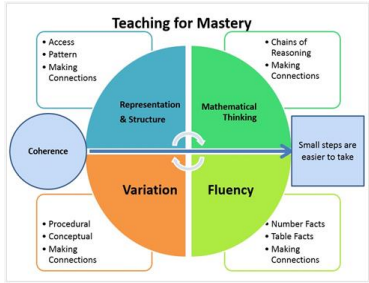


compare decimals with the same number of up to 2 dp, recognise and name 2D and 3D shapes, describe position and movement including half, quarter and three quarter turn, measurement in height, length and volume, time( hours, seconds and mins) Sequence events.

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| Topic | Small Steps | National Curriculum- Progression Document/Prioritisation | Vocabulary | Notes on provision and priority for teaching |
|---|---|---|---|---|
| Spring2/Summer 1<br>Fractions continued if needed. | | | | |
| Summer 1<br><br>Time | ● months and years<br><br>● hours in a day<br><br>● telling the time to 5 minutes<br><br>● telling the time to the minute<br><br>● using am and pm<br><br>● 24-hour clock | Roman numerals from I to XII, and 12-hour and 24-hour clocks<br><br>**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**<br><br>**Know the number of seconds in a minute and the number of days in each month, year and leap year** | o'clock, a.m./p.m., morning, afternoon, noon and midnight leap year, midnight, midday, noon, morning, afternoon, evening, night, halfway, Roman numerals, digital, am, pm, 12-hour clock, 24-hour clock, stopwatch, start time, end time, | |

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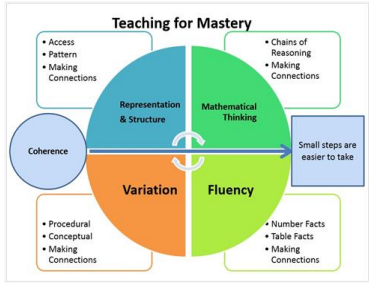


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| | ● finding the duration<br>● comparing durations<br>● start and end times<br>● measuring time in seconds | **Compare durations of events [for example to calculate the time taken by particular events or tasks].** | January, February, March, April, May, June, July, August, September, October, November, December | |
| Summer 2<br>Properties of Shape | ● turns and angles<br>● right angles in shapes<br>● compare angles<br>● draw accurately<br>● horizontal and vertical<br>● parallel and perpendicular<br>● recognise and describe 2D shapes<br>● recognise and describe 3d shapes<br>● make 3d shapes | **3G–1** Recognise right angles as a property of shape or a description of a turn and identify right angles in 2D shapes presented in different orientations.<br>**3G–2** Draw polygons by joining marked points and identify parallel and perpendicular sides.<br><br>Recognise angles as a property of shape or a description of a turn<br>Time<br>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<br>Recognising in the community<br>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines<br><br>Recognising in the community. ICT skills e.g. underlining text. | clockwise, and anti-clockwise quadrilateral, parallelogram, rhombus and trapezium triangle, rectangle, and square horizontal, vertical, perpendicular, parallel, | |
| Summer 2 | ● measure mass | **Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)** | weight, weigh, kilograms (kg), | |

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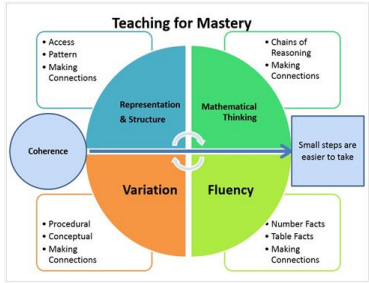
**Devonshire Primary Academy**

**Maths Long Term Plan**

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|---|---|---|---|---|
| Mass, Capacity and Temp | ● compare mass<br>● add and subtract mass<br>● measure capacity<br>● compare capacity<br>● add and subtract capacity | | estimate, measure, grams (g), compare, order mass', 'scale', 'interval' 'convert' measurement, scale, measure, interval, amount, order, convert, compare, estimate, more than (>), less than ( | |
| | Consolidate previous learning- Complete Summer Assessment grids for YEAR 3 Papers ready for Year 4.<br>introduce Year 4 type questions ready for September/ recap previous learning that needs addressing. | | | |
| **SMSC** | Calculate whether an answer is wrong | | | |
| **BV** | Discuss their work<br>Explain their reasoning when solving problems | | | |
| **Wider World** | Link to jobs- Baker, shop keeper, teacher, builder, architect,<br>Linked stories: RECOMMENDATIONS - MathsThroughStories.org - for specific topics | | | |