Curriculum Map for Year 4 2018-2019

WITH FLUENCY, REASONING, PROBLEM SOLVING

Autumn Term 14 weeks 6 + 8		Spring Term 12 weeks 6 + 6		Summer Term 12 weeks 5 + 7	
3 weeks	Number and place value	2 weeks	Decimals	2 weeks	Decimals
3 weeks	Additive thinking – mental methods secure Calculating + and -	2 weeks	Calculating + and -	2 weeks	Calculating + and -
		2 weeks	Geometry – Shapes Position and Direction	1 week	Calculating x and /
HALF TERM		HALF TERM		HALF TERM	
1 week	Measures - Time	2 weeks	Fractions of numbers	1 week	Calculating x and /
				2 weeks	Fractions
2 weeks	Fractions as numbers	2 weeks	Calculating x and /	1 week	Statistics
3 weeks	Calculating x and /	2 weeks	Measure	2 weeks	Geometry – Position and Direction And shape revision
2 weeks	Statistics			1 week	Calculating review of methods

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AUTUMN TERM

Week	Objective	Additional information and guidance
Aut 1 **1** **2** **3**	**Number and Place Value** ·count in multiples of 6, 7, 9, 25 and 1000 find 1000 more or less than a given number ·count backwards through zero to include negative numbers ·recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) ·order and compare numbers beyond 1000 ·identify, represent and estimate numbers using different representations ·round any number to the nearest 10, 100 or 1000 ·solve number and practical problems that involve all of the above and with increasingly large positive numbers Halving (this supports number line work by estimating where half way is)	Use Numicon to support Lots of step counting / chanting. Range of contexts Use Testbase for ideas for different formats https://www.ncetm.org.uk/resources/42476 Recognise the place value of each digit in a four digit number (thousands, hundreds, tens and ones) – the significance of the position of each digit to its value/size Partitioning using arrow cards, base ten and place value counters. Making numbers using digits cards. Partition numbers in different ways i.e. 1,256 = 1,000 + 200 + 50 + 6 = 1,000 + 200 + 40 + 16 etc. Explore these patterns. Explore questions such as 'how many ones in 80?' 'How many tens in 800?' to deepen understanding! Order and compare numbers beyond 1,000 – numbers in relation to each other Placing on a number line and finding nearest multiples of 10, 100 etc. Beginning rounding and estimating. Explore the idea of = as equivalence and balance using empty box partitions Round any number to the nearest 10, 100 or 1000. Use a number line to support this as a key image. Remember that number lines do not need to sit horizontally, or start at zero! Find 1000 more or less than a given number. Use number lines, broken number squares (e.g. a cross shape or L shape) Solve number and practical problems that involve all of the above and with increasingly large positive numbers. Solve empty box problems that rely on understanding of place value. Include problems with = and inequalities <>
Aut 1 **4** **5** **6**	**Addition and Subtraction** - mental strategies for additive understanding	* see Camden Think Piece – Moving into KS2 Keeping All Children On Board* Go through the Big Nine skills and make sure secure – all should be familiar from year 3 but focus on strategies that are not yet secure. Some children will need regular revision of these throughout the year – use starters and games

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	·add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction **where appropriate** ·estimate and use inverse operations to check answers to a calculation ·solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why Count in multiples of 6, 7 and 9 Play games such as Shall I risk it? Find rules and missing numbers in additive sequences. KS1 review: mental addition strategies without counting on! **Calculate don't count**: - Quick adds e.g. 20 + 7 then 23 + 6 'because I know 3 + 6 = 9' - Using bonds to 10 - Partitioning single digit numbers in different ways to bridge 10 e.g. 27 + 5 = 27 + 3 + 2 - Finding near doubles rather than adding e.g. 30 + 31 - Adding multiples of 10 and nearly numbers like 19 by spider counting and adjusting. Add strings of numbers by finding bonds and doubles. Reinforce law of commutativity for + so we don't have to do it from left to right!	Really applying skills from year – are chn systematic? Do they check? Do they keep working at something until they have solved it? Don't limit to just 'word problems' or context problems: use Testbase for a wider range of formats https://www.ncetm.org.uk/resources/42543 Add and subtract numbers mentally (take away not find the difference), with and without bridging including: a three-digit number and ones; a three-digit number and tens; a three-digit number and hundreds Write calculations horizontally and tell children to assess whether mental methods will be quick and efficient. If they will do it mentally, which method will they use? Use number lines for mental jottings. Estimate, check with inverse Subtract using informal mental methods – finding the difference Review of Y3: Begin slowly with the concept of difference. E.g. which numbers have a difference of 1, 2, 5 or 10? Use Numicon to show 'difference' Find the difference on a number line by counting up. NB numbers should not be far apart or lend themselves better to 'take away' Estimate, check with inverse Add numbers with up to four digits using compact columnar addition Use base 10, then place value counters to ensure understanding of compact method. Add numbers with multiple carrying. Add numbers with different numbers of digits. Add piles of numbers (more than 2 numbers) where the carry goes over 20. Find bonds to 10 and doubles in your pile to add quickly! Estimate, check with inverse and solve word problems which can be solved using this mental method. Use inverse to check subtraction… Subtract numbers with up to four digit numbers using compact columnar subtraction Y3 Review: Partition, use base 10 and then place value counters. Partition numbers in different ways as a precursor to columnar subtraction. E.g. 124 = 100 + 20 + 4 or 100 + 10 + 14 etc. Explore these types of patterns. Show expanded subtraction alongside compact to ensure understanding. Design calculations so they can't be done quickly mentally and use intelligent practice e.g. one exchange from tens to ones, then multiple exchanges, then what happens when there's a zero! Use base 10 and then place value counters. Solve word problems which can be solved using this written method. Estimate answers first using rounding and check with the inverse. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Write calculations in different ways e.g. 23 = ? + 12 ; 43 + 25 = ? – 8; and 12 + 15 < ? – 2 Use bar models to show whole part-part inverse relationships.

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HALF TERM		
Aut 2 **1**	*Catch up on Rounding and Negative numbers [counting back through zero] from last term in Starters.* **Measures - Time** ·convert between different units of measure [for example, hour to minute] ·read, write and convert time between analogue and digital 12- and 24-hour clocks ·solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. Count in 15s and 30s and 60s.	Review of Y3:*Tell and write the time from:* - an analogue clock and 12-hour and 24-hour clocks; - an analogue clock, including using Roman numerals from I to XII. *Read, write and convert time between analogue and digital 12- and 24-hour clocks.* Time is measured in base 60 not base 10 so columnar methods for calculating with time do not always work (sometimes they do, so be careful!) – chn should therefore always use number lines to calculate with time. https://www.ncetm.org.uk/resources/42733
Aut 2 **2** **3**	**Fractions** ·recognise and show, using diagrams, families of common equivalent fractions ·solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number ·add and subtract fractions with the same denominator Use a counting stick to count in 1/3s beyond 1 whole! Discuss equivalence… how else could we say 4/3? Find rules and missing fractions in sequences.	Pupils make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. Pupils use factors and multiples to recognise equivalent fractions and simplify where appropriate (for example, = or =). Review from Year 3: Count in fractions up to 10, starting from any number and using different fraction families i.e. 1/5 family or ¼ family. Explore equivalence as you go. Being able to convert between equivalent fractions gives chn much more flexibility and options when problem solving. https://www.ncetm.org.uk/resources/42648 Recognise and show, using diagrams, families of common equivalent fractions Review equal and unequal pieces and understanding of ½ family fractions and 1/10 family of fractions. Find fractions of shapes linking to equivalence e.g. If you have 3/6 shaded on a shape, this is the same as ½. Explore shapes with the same area (same fraction) but different shapes (not congruent) Use / build fraction walls showing equivalence between families. Use fraction cards to explore equivalence within one family …. 1/3 1/6 1/12 Add and subtract fractions with the same denominator Use fraction cards to add and subtract fractions within the same family, starting with those with the same denominator. These may tip over one whole into improper fractions and mixed numbers. https://www.ncetm.org.uk/resources/43609

		Some children can now compare and order unit fractions with different denominators within the same family i.e. They have a common denominator.
Aut 2 **4** **5** **6**	**Multiplication and Division** ·recall multiplication and division facts for multiplication tables up to 12 × 12 ·use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers ·recognise and use factor pairs and commutativity in mental calculations ·multiply two-digit and three-digit numbers by a one-digit number using formal written layout ·solve problems involving multiplying and dividing, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Doubling and halving by partitioning Multiply numbers by 10 and 100 and 1000 Divide multiples of 100 by 20 and 25 by chunking in 20s or 25s.	Strategies for learning times tables and remembering need to be taught / revised e.g. doubling, doubling again etc **Year 4 expectation is all multiplication and division facts.** Use Camden times table booklet resource for a range of activities. Link multiplication to division by showing inverse and highlighting use of inverse to check. Don't limit to just 'word problems' or context problems: use Testbase for a wider range of formats Include 'missing number' type problems Really applying skills from year – are chn systematic? Do they check? Do they keep working at something until they have solved it? Chn need to become fluent in formal methods – short multiplication and division – chn should be aware of these methods but think carefully about who these methods are right for. Explore the law of commutativity by showing arrays. These are factor pairs. Create 'If I know this… I know that… 'statements. Multiply by 0 and 1 and then divide by 1. Multiply three numbers together. Explain the ÷ as 'how many groups of this are in that' and as the inverse of multiplication. Use derived facts to divide mentally. Find remainders (picture this on a number line, chunking forwards or using arrays). Divide numbers related to times table facts mentally e.g. I know 42 ÷7 = 6 so 420 ÷7 = 60 Explore the effect of multiplying numbers by 10, 100 and 1,000 Use recall of multiplication and division facts and place value to multiply larger numbers mentally. Use procedural variation to explore patterns and the effect of multiplying a number by 10 or 100 e.g. 3 X 7 = 21 30 X 7 = 210 30 X 70 = 2100 3 X 70 = 210 etc.

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	Find rules and missing numbers in sequences.	This is the idea of scaling… one of the numbers is 10 times bigger than the one in a previous equation etc. Avoid misconceptions about 'adding zeros'. Multiply two digit and three digit numbers by a one digit number using formal written layout (short multiplication) Ensure that calculations don't lend themselves to using a mental method like doubling and doubling again to X4! For example, calculate 14 X 4 by…Doubling 14 and doubling again or 14 X 4 = (10 X 4) + (4 X 4) … the distributive law. Use grid method until the children are secure in their place value. Show expanded columnar multiplication next to grid method, examining the links. Show expanded columnar method next to compact short multiplication, examining the links. Explore misconceptions e.g. 50 X 8 within a grid is often mistakenly recorded as 40 rather than 400 Solve word problems which can be solved using this method. https://www.ncetm.org.uk/resources/42598
Aut 2 **7** **8**	**Statistics** ·interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ·solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. Counting in 10s 5s 20s 25s Finding missing numbers on scales and working out the intervals.	Pupils understand and use a greater range of scales in their representations. Pupils begin to relate the graphical representation of data to recording change over time. Use and apply calculating and problem solving skills to interpret data –interpreting language of questions. Emphasis on skills of being methodical and systematic when interpreting different data sources. Think of bar chart as vertical number line. https://www.ncetm.org.uk/resources/42962 *GARDEN*

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SPRING TERM

Week	Objective	Additional information and guidance
Spr 1 **1** **2**	**Decimals** ·recognise and write decimal equivalents of any number of tenths or hundredths ·recognise and write decimal equivalents to ¼, ½, ¾ ·find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths ·round decimals with one decimal place to the nearest whole number ·compare numbers with the same number of decimal places up to two decimal places ·solve simple measure and money problems involving fractions and decimals to two decimal places. Counting in 0.1s on a counting stick. Don't always start at 0 Count in 0.01s 0.05s and 0.1s	Write the decimal equivalent of any number of tenths. Use a counting stick, number lines and bar models to show tenths. Explain the use of the decimal point as a fixed point showing the difference between whole 1s and tenths. Explore what happens when you add 0.1 to 0.9… not 0.10 Use base ten rods of 10 to represent 'one tenth' and a slab of 100 to represent 1. Find complements of tenths to 1. Constantly linking between FDP Relate to money but use non money contexts as well Two top tips: 'Make them look the same' – draw in the zeroes. 'Imagine its money' – link 0.01 to 1p, 0.1 to 10p – draw in the zeroes. Find complements to 1 e.g. 0.35 and 0.65. https://www.ncetm.org.uk/resources/42648 Recognise that hundredths arise when dividing by 100 Explore different representations of hundredths including a Numicon 100 base, and a base 10 slab of 100 to represent 1. Each small cube – usually representing 1 – now represents 0.01. Zoom in on number lines to show 1 divided first into 10 pieces then into 100 pieces. Emphasise the significance of the position of each digit to its value/size using arrow cards and place value counters. Ask questions such as 'how many tenths in 2?' 'How many hundredths in 0.2?' to deepen understanding!

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Spr 1 **3** **4**	**Addition and Subtraction** ·add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction **where appropriate** ·estimate and use inverse operations to check answers to a calculation ·solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why Making and comparing numbers using digits cards Count in multiples of 6, 7 and 9 Step counting in multiples of 19 or 21 … you could use different starting points! Find rules and missing numbers in additive sequences. (Not always horizontally… show sequences with circles and arrows between, for example.)	Include 'missing number' type problems and balancing problems Really applying skills from year – are chn systematic? Do they check? Do they keep working at something until they have solved it? Don't limit to just 'word problems' or context problems: use Testbase for a wider range of formats Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Use base 10, then place value counters and show expanded and compact next to each other to see links. Estimate answers first using rounding and check with the inverse. Using addition to check these subtractions and vice versa… Partition use base 10 and then place value counters. Partition numbers in different ways as a precursor to columnar subtraction. E.g. 124 = 100 + 20 + 4 or 100 + 10 + 14 etc. Explore these types of patterns. Design calculations so they can't be done quickly mentally and use intelligent practice e.g. one exchange from tens to ones, then multiple exchanges, then what happens when there's a zero! Solve word problems which can be solved using these methods. Use base 10 and then place value counters. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Write calculations in different ways e.g. 123 =? + 112; 443 + 225 = ? – 18; and 102 - 15 < ? – 2 Use bar models to show whole part-part inverse relationships. Children can draw these to help them solve missing number problems by seeing which operation is required. Solve word problems which can be solved using written and mental methods. Solve simple money problems involving decimals to two decimal places. Use both mental (partition and add; add nearly numbers; partition and take away; subtract nearly numbers; find the difference on a number line to find change) and written methods to solve money problems. Make sure you have plenty of plastic money and you can use a money 100p square. https://www.ncetm.org.uk/resources/42543
Spr 1 **5** **6**	**Geometry – Properties of Shape** ·compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes	Use and apply knowledge of properties – investigate – try Nrich for ideas. Reasoning about shapes and properties. Visualising skills. https://www.ncetm.org.uk/resources/42842

	·identify acute and obtuse angles and compare and order angles up to two right angles by size **Geometry - Position and Direction** ·identify lines of symmetry in 2-D shapes presented in different orientations ·complete a simple symmetric figure with respect to a specific line of symmetry. Count in steps of 5 or 10° until you reach a right angle. Use a squeaky voice for all acute angles then a low voice for obtuse angles. Show angles with hands Chant weaker X tables	Unit repeated in summer – so any objectives not covered make sure focused on then and revise anything not secure with.
	HALF TERM	
Spr 2 **1** **2**	**Fractions** ·recognise and show, using diagrams, families of common equivalent fractions ·solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number ·add and subtract fractions with the same denominator	Pupils make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. Being able to convert between equivalent fractions gives chn much more flexibility and options when problem solving. https://www.ncetm.org.uk/resources/42648 Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. Find 1/10 and then 2/10 etc. of numbers by dividing by 10. Link this to work done previously on 0.1 of a number and dividing a number by 10. Find 1/6 of a number, linking to multiplication and division facts. Show this pictorially with a bar model. Don't just teach a trick of dividing by the denominator and multiplying by the numerator! Find 2/6 or 3/6 etc. of a shape or a number. Link to equivalence. Is this the same as 1/3 of the same number? Repeat with 1/8 after chanting the 8 times table and reviewing division facts. Solve word problems which relate to finding fractions of numbers in real life contexts.
Spr 2 **3** **4**	**Multiplication and Division** ·recall multiplication and division facts for multiplication tables up to 12 × 12 ·use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1; dividing by 1; multiplying together three numbers	Strategies for learning times tables and remembering need to be taught / revised e.g. doubling, doubling again etc Year 4 expectation is all multiplication and division facts. Link multiplication to division by showing inverse and highlighting use of inverse to check. Don't limit to just 'word problems' or context problems: use Testbase for a wider range of formats Include 'missing number' type problems Really applying skills from year – are chn systematic? Do they check? Do they keep working at something until they have solved it?

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	·recognise and use factor pairs and commutativity in mental calculations ·multiply two-digit and three-digit numbers by a one-digit number using formal written layout ·solve problems involving multiplying and dividing, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Chant and memorise weaker times tables. Explore the effect of multiplying numbers by 10, 100 and 1,000. Explore the 20 X table, the 30 X table etc. Create 'If I know this… I know that… 'statements to supersize numbers e.g. 6 X 7 = 42 so 6 X 70 = 420. Find rules and missing numbers in multiplicative/doubling or halving sequences. (Not always horizontally… show sequences with circles and arrows between, for example.)	Use the word 'factor' and 'multiple' when discussing properties and patterns in times tables. Use derived facts to divide mentally. Find remainders (picture this on a number line, chunking forwards or using arrays). Divide numbers related to times table facts mentally e.g. I know 42 ÷7 = 6 so 420 ÷7 = 60 Multiply three numbers together. Explain the ÷ as 'how many groups of this are in that' and as the inverse of multiplication. Use recall of multiplication and division facts and place value to multiply larger numbers mentally. Use procedural variation to explore patterns and the effect of multiplying a number by 10 or 100 e.g. 3 X 7 = 21 30 X 7 = 210 30 X 70 = 2100 3 X 70 = 210 etc. This is the idea of scaling… one of the numbers is 10 times bigger than the one in a previous equation etc. Avoid misconceptions about 'adding zeros'. Multiply two digit and three digit numbers by a one digit number using formal written layout (short multiplication) Ensure that calculations don't lend themselves to using a mental method like doubling and doubling again to X4! For example, calculate 14 X 4 by…Doubling 14 and doubling again or 14 X 4 = (10 X 4) + (4 X 4) … the distributive law. Move towards compact multiplication as soon as children are secure. Show expanded columnar multiplication next to grid method, examining the links. Show expanded columnar method next to compact short multiplication, examining the links. Solve word problems which can be solved using mental or written X Divide using a number line Use 'chunking forward' on a number line to solve problems such as 123 ÷ 3 by jumping forward in groups of 10 X 3 to 120 (or using 40 X 3) then showing one more group of 3 so the answer is 41. Solve word problems which can be solved using ÷. https://www.ncetm.org.uk/resources/42598

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Spr 2 **5** **6**	**Measures** ·convert between different units of measure [for example, kilometre to metre] ·calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres ·find the area of rectilinear shapes by counting squares ·estimate, compare and calculate different measures, including money in pounds and pence - temperature problems including negative numbers Doubling (link to perimeter) Multiplying and dividing by 10, 100 and 1,000 Estimating where numbers should be placed on different number lines (scales) Measure, compare, add and subtract mass (kg/g); Measure, compare, add and subtract volume/capacity (l/ml). Find rules and missing numbers in additive sequences. (Not always horizontally… show sequences with circles and arrows between, for example. Include missing numbers on measuring scales too!)	Perimeter can be expressed algebraically as 2(*a* + *b*) where a and b are the dimensions in the same unit. They relate area to arrays and multiplication. *Review from Y3 and link to lots of decimal work: Add and subtract amounts of money to give change, using both £ and p in practical contexts.* Find the change from £1, £5 etc. where columnar would not be as efficient. Chn must be able to convert between simple units of measure – kg to g etc. Do practical tasks where chn have to read scales, as well as reading scales on paper. Put into practice calculation and problem solving skills in a different range of contexts, include converting between units of measure (e.g. g and kg) https://www.ncetm.org.uk/resources/42733 Temperature – reading scales including negative numbers and simple calculations with them *GARDEN*

Summer Term

Week	Objective	Additional information and guidance
Sum 1 **1** **2**	**Decimals** ·recognise and write decimal equivalents of any number of tenths or hundredths ·recognise and write decimal equivalents to ¼, ½, ¾ ·find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths ·round decimals with one decimal place to the nearest whole number ·compare and order numbers with the same number of decimal places up to two decimal places ·solve simple measure and money problems involving fractions and decimals to two decimal places. Count up and down in tenths finding equivalents e.g. 5/10 = 0.5 = half Solving empty box/missing number problems including those with inequalities. Divide numbers by 10 including whole numbers which will become 1 place decimal numbers.	Use different models and images to explore decimals – counting sticks, number lines, and Dienes equipment where a 'flat' represents 1 not 100. Constant links between fractions, decimals and percentages – being able to quickly convert between gives chn much more flexibility and options for solving problems. Relate decimals to money but use non money contexts as well. Two top tips: 'Make them look the same' – draw in the zeroes. 'Imagine its money' – link 0.01 to 1p, 0.1 to 10p – draw in the zeroes. Find complements to 1 e.g. 0.35 and 0.65. https://www.ncetm.org.uk/resources/42648

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Sum 1 **3** **4**	**Addition and Subtraction** ·add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction **where appropriate** ·estimate and use inverse operations to check answers to a calculation ·solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why	Really applying skills from year – are chn systematic? Do they check? Do they keep working at something until they have solved it? Don't limit to just 'word problems' or context problems: use Testbase for a wider range of formats Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate Use base 10, then place value counters and show expanded and compact next to each other to see links. Estimate answers first using rounding and check with the inverse. Using addition to check these subtractions and vice versa… Partition use base 10 and then place value counters. Partition numbers in different ways as a precursor to columnar subtraction. E.g. 124 = 100 + 20 + 4 or 100 + 10 + 14 etc. Explore these types of patterns. Design calculations so they can't be done quickly mentally and use intelligent practice e.g. one exchange from tens to ones, then multiple exchanges, then what happens when there's a zero! Solve word problems which can be solved using these methods. Use base 10 and then place value counters. Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems. Write calculations in different ways e.g. 123 =? + 112; 443 + 225 = ? – 18; and 102 - 15 < ? – 2 Use bar models to show whole part-part inverse relationships. Children can draw these to help them solve missing number problems by seeing which operation is required. Solve word problems which can be solved using written and mental methods. Solve simple money problems involving decimals to two decimal places. Use both mental (partition and add; add nearly numbers; partition and take away; subtract nearly numbers; find the difference on a number line to find change) and written methods to solve money problems. Make sure you have plenty of plastic money and you can use a money 100p square. https://www.ncetm.org.uk/resources/42543
Sum 1 **5** **Sum 2** **1**	**Multiplication and Division** ·recall multiplication and division facts for multiplication tables up to 12 × 12 ·use place value, known and derived facts to multiply and divide mentally, including:	Recall and use multiplication and division facts for multiplication tables up to 12 X 12 Re-assess which times tables children have the most difficulty in recalling rapidly. Repeat teaching and chanting of these, making strategies explicit Make links with doubling and doubling where it is useful. Make links with properties of numbers. Use the word 'factor' and 'multiple' when discussing properties and patterns in times tables.

	multiplying by 0 and 1; dividing by 1; multiplying together three numbers ·recognise and use factor pairs and commutativity in mental calculations ·multiply two-digit and three-digit numbers by a one-digit number using formal written layout ·solve problems involving multiplying and dividing, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. Chanting 6 X table and the 8X table (review from Y3) Find rules and missing numbers in multiplication sequences, revising multiples they should know up to 12 X 12 (Not always horizontally… show sequences with circles and arrows between, for example. Include missing numbers on measuring scales too!)	Use derived facts to divide mentally. Find remainders (picture this on a number line, chunking forwards or using arrays). Divide numbers related to times table facts mentally e.g. I know 42 ÷7 = 6 so 420 ÷7 = 60 Find the effect of dividing a one-/two- digit number by 10 & 100, identifying the value of digits in answer as ones, tenths & hundredths. This is related to scaling and should be linked to work on products being 'ten times bigger' if multiplied by 10. Solve problems, including missing number problems, integer scaling problems, and correspondence problems involving multiplying and adding including using the distributive law to multiply TU by U Use known times table facts and derived facts. Solve word problems which can be solved using mental X Scaling examples: What is three times as long as 17cm? My ribbon is 4 times as long as Rosie's. Rosie's is 18cm. How long is mine? Use recall of multiplication and division facts and place value to multiply larger numbers mentally. Use procedural variation to explore patterns and the effect of multiplying a number by 10 or 100 e.g.3 X 7 = 21 30 X 7 = 210 30 X 70 = 2100 3 X 70 = 210 etc. This is the idea of scaling… one of the numbers is 10 times bigger than the one in a previous equation etc. Avoid misconceptions about 'adding zeros'. Solve word problems which can be solved using mental X and scaling. Multiply two digit and three digit numbers by a one digit number using formal written layout (short multiplication) Ensure that calculations don't lend themselves to using a mental method like doubling and doubling again to X4! For example, calculate 14 X 4 by…Doubling 14 and doubling again or 14 X 4 = (10 X 4) + (4 X 4) … the distributive law. Move towards compact multiplication as soon as children are secure. Show expanded columnar multiplication next to grid method, examining the links. Show expanded columnar method next to compact short multiplication, examining the links. Pose word problems which can be solved using written X. Divide using number line Use 'chunking forward' on a number line to solve problems such as 123 ÷ 3 by jumping forward in groups of 10 X 3 to 120 (or using 40 X 3) then showing one more group of 3 so the answer is 41. Pose word problems which can be solved using ÷. Include examples that give rise to remainders – think about how these are interpreted in different contexts https://www.ncetm.org.uk/resources/42598

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HALF TERM		
Sum 2 1	**Multiplication and Division Continued – see above**	Continued – see above
Sum 2 2 3	**Fractions** ·recognise and show, using diagrams, families of common equivalent fractions ·solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number ·add and subtract fractions with the same denominator Chanting weaker times tables needed up to 12 X 12. Finding division facts by using the inverse of times tables. Count in multiples of 6, 7, 9, 25 and 1000. Relate these to finding rules and missing numbers in multiplicative sequences. (Not always horizontally… show sequences with circles and arrows between, for example. Include missing numbers on measuring scales too!)	Pupils make connections between fractions of a length, of a shape and as a representation of one whole or set of quantities. Being able to convert between equivalent fractions gives chn much more flexibility and options when problem solving. https://www.ncetm.org.uk/resources/42648 Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number. Find 1/7 and then 2/7 etc. of numbers by dividing by 7. Link this to work done previously finding fractions of numbers. Use 'would you rather' style problems e.g. would your rather have 1/3 of £15 or 1/7 of £49? Begin to explore inverse problems i.e. 1/7 of my number is 5. What is my number? Use bar models to solve these. Pose word problems which can be solved by finding fractions of numbers in real life contexts.

Year 4 Curriculum Map

Sum 2 **4**	**Statistics** ·interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. ·solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. Count in multiples of 7. Chant the 7X table Count in multiples of 6, 7, 9, 25 and 1000. Relate these to finding rules and missing numbers in multiplicative sequences. (Not always horizontally… show sequences with circles and arrows between, for example. Include missing numbers on measuring scales too!)	Pupils begin to relate the graphical representation of data to recording change over time. Use and apply calculating and problem solving skills to interpret data –interpreting language of questions. Emphasis on skills of being methodical and systematic when interpreting different data sources. Think of bar chart as vertical number line. https://www.ncetm.org.uk/resources/42962 *GARDEN*
Sum 2 **5** **6**	**Geometry - Position and Direction** ·identify lines of symmetry in 2-D shapes presented in different orientations ·complete a simple symmetric figure with respect to a specific line of symmetry.	https://www.ncetm.org.uk/resources/42938 *ALSO ENSURE THAT SHAPE IS REVISED AND ANY OUTSNTADING AREAS COVERED*
Sum 2 **7**	Calculating – review of methods	