

Y 3,4	Autumn 1 and Spring 2		Autumn 2 and Summer 1		Spring 1 and Summer 2	
My Money modules	Year A - How can I keep my money safe? Year B - How can I pay for things?		Year A - How do I plan a simple budget? Year B - How can I use a bank account?		Year A - Raising money for Charity. Year B - What are the links between jobs and money?	
Times Tables	x3	Autumn 1 – x6 Spring 2 – x11	x4	Autumn 2 – x9 Summer 1 – x12	x8	Spring 1 – x7 Summer 2 – x7
	Place Value		Multiplication		Fractions	
Key Skills	<ul style="list-style-type: none"> I can count from 0 in multiples of 50 and 100. I can count from 0 in multiples of 4 and 8; find 10 or 100 more or less than a given number I can use multiples of 2, 3, 4, 5, 8, 10, 50 and 100 I can compare and order numbers up to 1000, using >, < and = I can compare and order numbers beyond 1000, using >, < and = I can add and subtract 10 or 100 from a number. I can recognise the place value of each digit in a three-digit number (hundreds, tens, ones) I can round numbers to nearest 10 or 100 I can identify, represent and 	<ul style="list-style-type: none"> I can count in multiples of 25 and 1000. I can count in multiples of 6, 9 I can count in multiples of 7 I can find 1000 more or less than a given number. I can recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones). I can identify, represent and estimate numbers using different representations. I can read, write and order numbers to 10 000 I can order and compare numbers beyond 1000 and negative numbers using >, < and = I can round any number to the nearest 10, 100 or 1000 	<ul style="list-style-type: none"> I can learn facts for 3 times tables and inverse. I can learn multiplication facts up to 12x3. I can derive facts for x4, x8 by doubling. I can recall and use multiplication and division facts for x 3, 4 and 8. I know facts for 2,3,4,5,8,10 times tables up to x12 I can solve mathematical statements for multiplication and division using known tables. I can write and calculate statements for multiplication and division using tables that I know, including 2-digit numbers x 1-digit numbers. I can solve missing number problems for x and ÷ 	<ul style="list-style-type: none"> I know multiplication and division facts for 6 and 9 times tables. I know the 7 and 11 times tables I can recall multiplication and division facts for all multiplication tables up to 12 x12 I can multiply by 0 and 1. I can divide by 1. I can use place value to multiply and divide mentally I can solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit. I can recognise and use factor pairs and commutativity in mental calculations I can multiply two-digit and three-digit numbers by a one-digit number using 	<ul style="list-style-type: none"> I can place fraction on a number line. I can compare and order unit fractions, and fractions with the same denominators. I can count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts I can recognise that tenths arise from dividing one-digit numbers or quantities by 10. I can recognise, find and write fractions of objects. I can recognise and use fractions as numbers. I can add and subtract fractions with the same denominator. I can recognise equivalent fractions with small denominators I can compare and order unit 	<ul style="list-style-type: none"> I can recognise and show, using diagrams, families of common equivalent fractions, $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$ I can count up in hundredths. I can count up and down in hundredths; recognise that hundredths arise when dividing by one hundred and dividing tenths by ten. I can connect hundredths to tenths. I can recognise and write decimal equivalents of any number of tenths or hundredths. I can calculate quantities using simple fractions. I can solve problems involving increasingly harder fractions to calculate quantities, and

	<p>estimate numbers in different ways</p> <ul style="list-style-type: none"> • I can read and write numbers up to 1000 in numerals. • I can read and write numbers up to 1000 in numerals and in words • I can read and write numbers beyond 1000. • I can partition 3 digit numbers into hundreds, tens and ones. • I can partition numbers in different ways eg 342 becomes 300 +20 +22 • I can use partitioning to solve problems • I can read Roman numerals up to 12 	<ul style="list-style-type: none"> • I can read Roman numerals to 100 (I to C) and know the numeral system changed to include zero. • I can count backwards through zero to include negative numbers • I can count forwards through zero from a negative number • I can begin to solve problems with negative numbers in context e.g. temperature 	<ul style="list-style-type: none"> • I can begin to use formal written methods to solve 2-digit numbers x 1-digit numbers. 	<p>formal written layout</p> <ul style="list-style-type: none"> • I can begin to divide two-digit and three-digit numbers by a one-digit number using formal written layout • I can divide a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths 	<p>fractions, and fractions with the same denominators using $<$, $>$ =</p>	<p>fractions to divide quantities.</p> <ul style="list-style-type: none"> • I can add and subtract fractions with the same denominator, within one. • I can add and subtract fractions with the same denominator • I can round decimals with one decimal place to the nearest whole number. • I can recognise and write decimal equivalents to $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ • I can compare decimal numbers up to 2d.p. • I can solve simple measure and money problems involving fractions and decimals to one decimal place. • I can solve simple measure and money problems involving fractions and decimals to two decimal places. • I can solve simple measure and money problems involving fractions and decimals to two decimal places, with mixed number of decimal places
--	--	---	---	---	---	--

<p>Activities and Context</p>	<p>Use manipulatives and objects to make and compare numbers. Explore a range of representations. Describe what the value of a digit is. Review mental strategies and develop them for use with bigger numbers. Daily counting on counting sticks and with objects and images to support. Investigating partitioning numbers in a variety of ways and exploring the rules for this. Lots of time spent partitioning practically with dienes and counters. Compare numbers in the context of money and measures. Use part, part, whole representations and bar models. Daily counting stick practise.</p>		<p>Regular lessons on times tables facts. Use relationship triangles, bar models and arrays to explore multiplication facts. Explore patterns from the times tables. Count objects and pictures. Explore fact families and write rules for them. Explore breaking apart and manipulating arrays. Link arrays to the grid method and to expanded column multiplication. Link expanded column multiplication to short form. Explore the rules when multiplying by ten looking at place value changes. Link this to decimals tenths and hundredths. Daily counting stick practise.</p>		<p>Find tenths of shapes, quantities and numbers. Explore what happens when you want more than one tenth. Use diagrams to find out what happens when you add and subtract fractions. When counting fractions use diagrams as well. Explore improper and mixed number equivalents. Explore fractions with lots of parts that make up the half. Link to equivalent fractions. Investigate the relationship between the numerator and denominator when finding equivalent fractions. Draw their own diagrams to represent fractions. Link fractions to multiplication and division and language of groups of. Link to division by ten and one hundred. Use ten frames and hundred squares to explore decimals. Explore word problems with money and measures context. Daily counting stick practise.</p>	
<p>Key Vocabulary previous</p>	<p>Number, Count, forwards, backwards, more, less, higher, lower, another, next, numerals, order, biggest, smallest, bigger, smaller, repeating, partition, odd, even, organising, conjecture, convince. Digit, Most, Least, Multiples, Place Value, Number Bonds, Represent, Compare, Order, Greater than, Less than, Equal, Place Holder, ascending order, Baker's dozen, Consecutive, Descending, score, face value, rounding, classify, imagine, express, specialize, generalise Negative, integer,</p>		<p>Double, Half, Patterns, Arrays, Groups of, Sharing, multiple, multiply, divide, commutative, remainders, product. Distributive, factors, quotient,</p>		<p>Half, quarter, numerator, denominator, parts, whole, bisect, improper, mixed number fractions, equivalent. Unit fractions, tenths, hundredths, decimals, decimal places,</p>	
	<p>Addition and Subtraction</p>		<p>Measures</p>		<p>Shape and Statistics</p>	
<p>Key Skills</p>	<ul style="list-style-type: none"> I can add or subtract two 2-digit numbers where answers may exceed 100. I can add and subtract 3 digits and one, 3 digits and tens and 3 	<ul style="list-style-type: none"> I can add and subtract 4 digits and hundred and 4 digits and thousands, mentally. I can add and subtract numbers with up to 4 digits 	<ul style="list-style-type: none"> I can measure and compare: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) I can add and subtract: lengths (m/cm/mm); mass 	<ul style="list-style-type: none"> I can convert between different units of measure. I can estimate, compare and calculate different measures, including money in pounds and pence 	<ul style="list-style-type: none"> I can measure the perimeter of simple 2-D shapes I can recognise and name prisms. I can recognise 3-D shapes in different orientations and describe them. 	<ul style="list-style-type: none"> I can identify acute and obtuse angles I can compare and order angles up to two right angles by size I know names of common quadrilaterals.

	<p>digits and hundreds mentally.</p> <ul style="list-style-type: none"> • I can add and subtract 4 digits and ones, 4 digits and tens and numbers with different numbers of digits mentally. • I can add and subtract numbers with up to three digits. • I can add and subtract numbers with up to three digits with answers exceeding 999 • I can use column method for + and – with 2-digit numbers, crossing tens. • I can estimate the answer to a calculation • I can estimate the answer to a calculation and use inverse operations to check answers • I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. 	<p>crossing the thousands barriers.</p> <ul style="list-style-type: none"> • I can add and subtract numbers with up to 4 digits. • I can estimate and use inverse operations to check my answers. • I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. • I can estimate and use inverse operations to check answers to a calculation with appropriate numbers • I can solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. 	<p>(kg/g); volume/capacity (l/ml)</p> <ul style="list-style-type: none"> • I can add and subtract amounts of money to give change, using both £ and p in practical contexts using appropriate amounts • I can tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour clock • I can tell and write the time from an analogue clock using 24-hour clocks • I can estimate and read time with increasing accuracy to the nearest minute using vocabulary of am/pm • I can record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, morning, afternoon, noon and midnight • I know the number of seconds in a minute. 	<ul style="list-style-type: none"> • I can use decimal notation to record money. • I can read unlabelled divisions • I can measure and calculate the perimeter of a rectangle in cm and m. • I can find the area of rectilinear shapes by counting squares • I can read, write and convert time between analogue and digital 12- and 24-hour clocks. • I can solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days using appropriate amounts 	<ul style="list-style-type: none"> • I can identify vertical and horizontal lines of symmetry in common 2-D shapes. • I can identify right angles. • I can recognise angles as a property of shape or a description of a turn. • I can identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn. • I can identify whether angles are greater than or less than a right angle. • I can identify horizontal and vertical lines. • I can identify pairs of perpendicular and parallel lines. • I know and use the terms 'North,' 'South,' 'East' and 'West.' • I know and use the terms 'North,' 'North-East,' 'East,' 'South-East,' 'South,' 'South-West,' 'West' and 'North-West.' 	<ul style="list-style-type: none"> • I know and name common triangles. • I can identify all lines of symmetry in common 2-D shapes. • I can identify lines of symmetry in 2-D shapes presented in different orientations • I can complete a simple symmetric figure using the line of symmetry. • I can compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes • I can use coordinates to describe position on a 2D grid. • I can read, write and use pairs of co-ordinates (2,5) • I can plot specified points and draw sides to complete a given polygon. • I can describe positions on a 2-D grid as coordinates in the first quadrant • I can describe movements between positions as translations of a given unit to the
--	---	---	---	--	---	---

			<ul style="list-style-type: none"> • I know the number of days in each month, year and leap year • I can compare durations of events. • I can read unlabeled divisions in measures. 		<ul style="list-style-type: none"> • I can move between compass directions in half and quarter turns • I can interpret and present data using bar charts, pictograms and tables • I can solve one-step questions using information presented in scaled bar charts and pictograms and tables. • I can solve two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. 	<p>left/right and up/down</p> <ul style="list-style-type: none"> • I can draw and read line graphs. • I can interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs. • I can solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.
Activities and Context	<p>Lots of time spent on practically regrouping using place value counters and dienes before moving to the abstract.</p> <p>Use a context of money and measures for numbers given.</p> <p>Use relationship triangles and bar models.</p> <p>Use balance bars.</p> <p>Lots of word problem practise as context once written methods are secure.</p> <p>Daily counting stick practise.</p>	<p>Lots of practical measuring with equipment.</p> <p>Word problems with a measures context using all four operations.</p> <p>Explore the rules for converting measures and link to multiplication.</p> <p>Use watches.</p> <p>Explore the rules for the 24hr clock.</p> <p>Link to science with comparing durations and data with recording results.</p> <p>Explore a range of scales all with unlabeled divisions.</p> <p>Investigate perimeter and area. Solve problems in context. Link area to arrays. Do not teach the formula for area yet.</p>	<p>Sort, make and draw shapes.</p> <p>Solve perimeter word problems.</p> <p>Investigate the angles of shapes. Link to clock faces and turns.</p> <p>Compare lines of symmetry to other properties – is there a relationship.</p> <p>Sort different triangles and quadrilaterals.</p> <p>Draw grids and describe the lines used.</p> <p>Use bee bots and maps to give directions.</p> <p>Present data from time and measures into charts and graphs.</p> <p>Use 4 operations to solve problems with a data context.</p> <p>Link data to science work.</p> <p>Daily counting stick practise.</p>			

		Use number lines to solve problems with time. Explore why not to use column. Link back to knowledge of base 10. Daily counting stick practise.	
Key Vocabulary previous	group, sort, add, subtract, difference, sum. Addition, Subtraction, Equal, Bar Model, Total, Altogether, Commutative, Inverse, Regrouping, equation.	length, longer, shorter, height, taller, shorter, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, Pennies, Pence, minute, First, second, third, fourth, fifth, last, lots, a few, some, same, different, weight, hours, January, February, March, April, May, June, July, August, September, October, November, December, capacity, ordinal number. mass, volume, coins, notes, pounds, pennies, before, after, next, first, today, yesterday, years, months, days, weeks, tomorrow, morning, afternoon, evening, hour, half past, quicker, slower, earlier, later, centimeters, meters, litres, mililitres, grams, kilograms, minutes, seconds, quarter past, degrees Celsius, Analogue, am, pm, o'clock, noon, midnight, leap year, divisions, convert, perimeter, area, digital,	circle, square, triangle, cube, cuboid, sphere, diagonal, corners, edges, cylinder, cone, pyramid, left, right, face, hexagon, line of symmetry, octagon, symmetrical, tally, rectangle. 2D, 3D, orientation, pentagon, vertices, vertex, faces, position, direction, movement, quarter, three quarter, clockwise, pictogram, tally, pattern, sequence, heptagon, oblong, tetragon, trigon, anti-clockwise, block diagrams. perimeter, vertical, horizontal, perpendicular, parallel, North, South, East, West, compass, bar chart, scales, acute, obtuse, quadrilaterals, scalene, equilateral, isosceles, rhombus, trapezium, kite, parallelogram, lozenge, co-ordinates, quadrant, translations, line graphs, discrete, continuous. axis of symmetry, angle, base, carroll diagrams, dimensions, dodecagon, exterior, hendecagon, irregular, oblique, adjacent, congruent,
Maths Superpowers	<p>Conjecture: Yr 3 - Work out the 10th in a sequence. Describe multiple changes. Explain why. Identify rules when calculating. Begin to generate their own examples to find rules. Yr 4 - Work out the hundredth in a sequence. Use accurate Mathematical vocabulary to describe what is changing and what is staying the same. Begin to explain why with examples. Identify some rules when calculating using their own examples.</p> <p>Convince: Yr 3 - Use the correct/accurate mathematical terminology to persuade others that their conjecture is correct. Begin to use examples to support their ideas. Yr 4 - Begin to use diagrams to persuade others that their conjecture is correct. Use examples and accurate mathematical terminology. Begin to connect Mathematical concepts together to support their explanations.</p> <p>Organising: Yr 3 - Use venn diagrams and begin to use carrol diagrams to sort objects, shapes and numbers with multiple criteria. Understand what systematic means. Yr 4 - Sort objects, shapes, numbers and calculations using multiple criteria. Set their own criteria and begin to explain their choices. Use diagrams to support sorting. Begin to create their own tables and grids to record information systematically.</p> <p>Classifying: Yr 3 - Explain why some items belong or do not belong in a group using mathematical vocabulary. Begin to explain why multiple criteria were used. Yr 4 - Explain their choices for multiple criteria. Describe what is the same and different in sets of calculations e.g. they all give the same answers; they all have answers that are multiples of 8. Classify different types of triangle and quadrilateral.</p>		

	<p>Imagine: Yr 3 - Organise their jottings to support problem solving. Begin to draw diagrams for support. Draw bar models, relationship triangles and part-part-whole diagrams to support with more complex problem solving. Yr 4 - Draw their own images to support their problem solving. Begin to use diagrams to explain patterns and rules.</p> <p>Express: Yr 3 - Present a problem and a solution to a range of audiences and begin to explain their thinking. Yr 4 - Present a problem and a solution to a range of audiences explaining their thinking. Challenge others mistakes in an appropriate way.</p> <p>Specialise: Yr 3 - Prove/disprove given rules by testing examples. With scaffolding, test in a systematic way. Yr 4 - Prove/disprove given rules by testing examples. Test in a systematic way.</p> <p>Generalise: Yr 3 - Identify rules for given examples and being to identify rules for their own examples. Record their rules. Yr 4 - Identify rules for their own examples and record them. Begin to link back to their examples to prove their rules.</p>
Possible books to support teaching.	<p>One hundred hungry ants by Elinor J Pinczes, How many Jelly beans by Andrea Menotti, A remainder of one by Elinor J Pinczes, Just a second by Steven Jenkins, How big is a Million by Anna Milbourne, Mr Base Ten invents Mathematics by Bethanie H Tucker, Sir Cumference and all the Kings Tens by Cindy Neuschwander, Sir Cumference and the round abouts battle by Cindy Neuschwander, The Great Graph contest by Loreen Leedy, Lemonade for Sale by Stuart J. Murphy, Math at the Art Museum by Group Majoongmul, How big was a dinosaur by Anne Milbourne, How high is the sky by Anne Milbourne, How deep is the Ocean by Anne Milbourne. Fractions in disguise by Edwin Einhorn, The Rabbit Problem by Emily Garrett, One Grain of Rice by Demi, Tables Fables by J.Wilson.</p>