Finstall First School

Overview of Mathematics Curriculum – EYFS

Year	Autumn 1 Topic: All About Me	Autumn 2 Topic: Celebrations	Spring 1 Topic: Pirates	Spring 2 Topic: All About Spring	Summer 1	Summer 2
Reception	**White Rose – Just Like Me!** ***Match and Sort*** What is the same/different? (Colour, shape, pattern, size, object, material, texture) ***Digging Deeper/Reasoning*** Reasoning for sorting, explanations in full sentences. ***Compare Amounts*** Use language of more and fewer to compare sets of objects within 5. ***Compare Size, Mass and Capacity*** Compare and order objects using language such as big, little, small, long, short, tall, heavy, light. ***Digging Deeper/Reasoning*** Explain in full sentences, how they know…can you find… ***Make Simple Patterns*** Copy, continue and create their own ABAB patterns using shapes, colours, sizes, actions and sounds. ***Digging Deeper/Reasoning*** Can they spot the mistake in the pattern? Explain how they know.	**White Rose – It's Me 123/Light and Dark** ***Representing 123*** Identify different representations of 123 objects. Match number names and numerals to quantities. Subitise up to 3 objects. Mark making 123. ***Comparing 123*** As we count, know each number is one more than the one before, one less as we count back. Understand how 123 can be represented in different ways. ***Composition of 123*** All numbers are made up of smaller numbers. Look at compositions of 123. E.g. 1+1, 1+2 ***Digging Deeper/Reasoning*** Explain in full sentences how we know how many there are. How can we check? ***Circles and Triangles*** Recognise shapes on everyday items. Build their own circles and triangles. Notice them in different orientations and sides of different lengths. Use the correct language: curved, straight, sides, corners. ***Spatial Awareness***	**White Rose – Alive in 5 / Growing 6, 7, 8** ***Introducing 0 and comparing numbers to 5*** Recognise the numeral 0, use language more, fewer to compare numbers to 5 ***Composition of 4 & 5*** Look at different ways of making 4 & 5, and remember number bonds to 5. ***Compare mass and capacity*** Use language related to mass and capacity, compare different containers and weights of objects, use balancing scales to weigh objects, use rice, sand and water to measure capacity of different sized containers, compare using vocabulary more, less, bigger, shorter, taller. ***6, 7, 8*** Look at numbers 6, 7, 8 and matching numeral to quantity. Make pairs of numbers, combine two groups to make 6, 7, 8 ***Length, height and time*** Compare height and length using vocabulary e.g. long, short, tall. Look at days of the week, time it takes to complete tasks.	***White Rose – Building 9 and 10*** ***Introducing 9 & 10*** Apply the counting principles when counting to 9 & 10 forwards and backwards. Represent 9 & 10 in different ways, subitise larger numbers and explore composition. ***Comparing numbers to 10*** Compare items using more, fewer, the same number. Compare 2 quantities and order 3 or more quantities. ***Know number bonds to 10*** Explore number bonds to 10 using real objects in different contexts. Use tens frames. ***Digging Deeper/ reasoning:*** How can you make 10? How do you know? How many more is 6 than 5? How do you know? If I have 7, how many more to make 10? ***3D shape*** name 3D shapes, look at nets of 3D shapes and how they make a shape, rotate and manipulate shapes to build bigger shapes	***White Rose – Phase 7: To 20 and beyond*** Consolidating key skills subitising, counting, composition, sorting and matching, comparing and ordering. ***Building numbers beyond 10*** Build and identify numbers to ten using Numicon, tens squares and blocks. Show numbers are comprised of full tens and part of the next ten – I full ten and 1, one full ten and 2 etc. ***Counting patterns beyond 10*** Count on and back beyond 10. Show representations of repeating 1-9 patterns which clearly shows the full tens and the part of 10 e.g. 24= two full tens and 4. Count on and back from different starting points. ***Digging deeper / reasoning:*** Estimation, Make collections of different numbers. ***Spatial reasoning (1)***	***White Rose – Phase 9*** Consolidating key skills subitising, counting, composition, sorting and matching, comparing and ordering. ***Doubling*** Opportunities to build doubles using real objects. ***Sharing and grouping*** Recognise and make equal groups. Notice that sometimes there are items left over when they share. ***Even and Odd*** Notice odd and even structure when sharing and grouping. ***Digging Deeper / reasoning:*** Add more/ less, notice when the number is odd or even. Make equal groups. ***Spatial reasoning (3)*** Replicate simple constructions, models, real places. Use positional language to describe where objects are. ***Digging Deeper /***

		Begin to use positional language to describe position of items in relation to other items. Build journeys, travel through them and explore them. Begin to represent journeys using drawings or maps. ***Digging Deeper/Reasoning*** Use full sentences to explain where objects are in relation to others. ***Four and Five:*** Count on and back to 5. Subitise up to 5. Match numeral to quantity. Use language more and fewer to describe sets. When counting know the final number they landed on names the quantity of that set. Mark making to represent numbers to 5. Represent numbers up to 5 on a fives frame. ***Digging Deeper/Reasoning*** Understand the different ways to make compositions of numbers up to 5. ***One more and one less:*** Count, subitise and compare as they explore one more and one less. How many if they add one, take away one? Use five frames. ***Digging***		***Pattern*** Copy, continue and create patterns that are not just ABAB patterns. Digging Deeper/ Reasoning: Find which pattern fits into the grid. How do you know? Test patterns that will fit in different sized grids, Which ones fitted exactly? How do you know? ***Consolidation of 9 & 10*** Understand the composition of numbers to 10, recall number bonds to at least 5.	Complete jigsaws and shape puzzles. Select and rotate shapes to fill a given space. Match arrangements of shapes, use positional language to describe where the shapes are in relation to one another. Complete picture boards or tangrams. ***Digging Deeper / reasoning:*** Match shapes with coloured pictures to pictures without outlines. Design pictures using pattern blocks and templates. Which one doesn't belong? ***Phase 8: First, Then, Now*** ***Adding more*** Use real objects to add more to a group. Count on from a number. ***Taking away*** Use real objects to see that a quantity gets smaller when taking away. ***Digging Deeper/ reasoning:*** Show a number. Cover it over, add some cubes. How many now? How many have been added? How many have been taken away? ***Spatial reasoning (2)***	***reasoning:*** Can you build a… Talk about what they have made. Which do you like best? Why? Compare the model to the picture. Could you make different models using the same pieces? ***<u>Phase 10 – On the move</u>*** ***Deepening understanding*** Give time and opportunities to engage in problem solving and develop critical thinking skills link to familiar stories. ***Patterns and relationships*** Explore and investigate relationships between numbers and shapes. Copy and continue and create patterns and symmetrical constructions. ***Spatial reasoning (4)*** Make maps and plans. Draw simple linear maps, use positional language to describe the position/location of things ***Digging Deeper / reasoning:*** Prepare maps and create routes. Timed activities.

		Deeper/Reasoning Order numbers 1 – 5. In full sentences, what can you tell me about…? E.g. 3 is one more than 2. ***Shapes with 4 sides:*** Know that squares and rectangles have straight sides and four corners. Recognise the shapes on everyday items. Build their own squares and rectangles in different sizes and orientations. Can they find any other shapes with 4 sides? ***Digging Deeper/Reasoning*** What shapes can be made by combining squares, rectangles and triangles in different ways? ***Night and Day:*** Talk about night and day and order key events in their daily routines. Use language E.g. night, day, morning, afternoon, before, after, today, tomorrow. Measure in simple ways. E.g. count the number of sleeps to Christmas, timers to measure durations. ***Digging Deeper/Reasoning*** Practical activities that involve timing events.			Combine and separate shapes to make new shapes. Investigate how many different ways a given shape can be built using smaller shapes. ***Digging Deeper / reasoning:*** Tangrams, stars and triangles. Build as many different versions of these shapes as you can.	

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Overview of Mathematics Curriculum – KS1

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	*Begin to count in 2s up to 24 and back again.* **Number and Place Value** • To estimate, count, read, write and compare numbers up to at least 20. • To count on and back in ones up to at least 20. • To count in 2s up to 24 with even numbers and supporting doubles. • To count in multiples of 10 in order up to 120.	*Accurately count in steps of 2 up to 24 and back again.* *Begin to count in steps of 10 up to 120 and back again.* **Number and Place Value** • To estimate, count, read, write and compare numbers up to at least 30. • To compare numbers and say which is more, less, equal to, greater than up to at least 30. • To count on and back in ones up to at least 30. • To count in 2s up to 24 with even numbers and supporting doubles – consolidation. • To count in multiples of 10 in order up to 120 – consolidation.	*Accurately count in steps of 2 to 24 and steps of 10 to 120 and back again.* *Begin to count in steps of 5 up to 60 and back again.* **Number and Place Value** • To estimate, count, read, write and compare numbers up to at least 50. • To write number up to at least 10 in words. • To order numbers to 50. • To compare numbers and say which are more, less, equal to, greater than up to at least 50. • To count on and back in ones up to at least 50. • To count in 2s up to 40 with even numbers and supporting doubles. • To count in multiples of 10 in order up to 150. • To count in 5s up to 50 and relate to counting in 10s.	*Accurately and fluently count in steps of 2 and 10, forwards and backwards to the value of 12 steps.* *Accurately count in steps of 5 up to 60 and back again.* **Number and Place Value** • To estimate, count, read, write and compare numbers up to at least 80. • To partition numbers into tens and ones. • To write numbers up to at least 10 in words. • To order numbers to 80. • To compare numbers and say which is more, less, equal to, greater than up to at least 80. • To count on and back in ones up to at least 80. • To count in 2s up to 40 with even numbers and supporting doubles – consolidation. • To count in multiples of 10 in order up to 150 – consolidation. • To count in 5s up to 50 and relate to counting in 10s – consolidation.	*Fluently and accurately count in steps of 2, 5 and 10, forwards and backwards to 12 steps.* **Number and Place Value** • To estimate, count, read, write and compare numbers up to at least 100. • To partition numbers into tens and ones. • To write numbers up to at least 20 in words. • To order numbers to 100. • To compare numbers and say which is more, less, equal to, greater than to at least 100. • To count on and back in ones up to at least 100. • To count in 2s, 5s and 10s in order with growing fluency.	*Fluently and accurately count in steps of 2, 5 and 10, in any order, forwards or backwards to include missing numbers.* **Number and Place Value** • To estimate, count, read, write and compare numbers to at least 100 – consolidation. • To partition numbers into tens and ones consolidation. • To write numbers up to at least 20 in words consolidation. • To order numbers to 100 – consolidation. • To compare numbers and say which is more, less, equal to, greater than up to at least 100 – consolidation. • To count on and back in ones up to at least 100. • To count in 2s, 5s and 10s in order fluently.

	Addition • To work out the number 1 more or 1 less up to 20. • To read, write and interpret mathematical statements involving addition to 10. • To represent and use number bonds within 10. • To add numbers up to 10. • To solve one-step problems that involve addition using concrete objects, pictorial representations and missing numbers up to 10. • To recognise coins and find totals of sets of coins of small amounts. **Measurement** • To compare, describe and solve practical problems for lengths and heights (for examples: long/short, longer/shorter, tall/short, double/half) **Geometry** • To know the names of common 2D shapes and know their properties.	**Addition** • To work out the number 1 more or 1 less up to 30. • To read, write and interpret mathematical statements involving addition up to 10 (consolidation) and begin to add up to 20. • To represent and use number bonds within 10. • To add numbers up to 10 and begin to add to 20. • To double numbers up to 10. • To solve one-step problems that involve addition using concrete objects, pictorial representations and missing numbers up to 10 – consolidation. • To recognise coins and double amounts. **Measurement** • To sequence events in chronological order using language – before, after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. • Recognise and use language relating to dates including days of the week, months and years. **Fractions** • To recognise, find and name a half as 1 or 2 equal parts of an object and shape.	**Subtraction** • To work out the number 1 more or 1 less up to 50. • To read, write and interpret mathematical statements involving subtraction up to 10. • To subtract numbers up to 10. • To solve one-step problems that involve subtraction using concrete objects, pictorial representations and missing numbers up to 10. • To know number bonds to 10 and related subtraction facts to 10. **Geometry** • To recognise and name common 3D shapes including cuboids, cubes, pyramids and spheres and know their properties. **Fractions** • To recognise, find and name a half as 1 or 2 equal parts of an object and shape – consolidation.	**Subtraction** • To work out the number 1 more or 1 less up to 80. • To read, write & interpret mathematical statements involving subtraction to 10 and begin to subtract to 20. • To subtract numbers up to 10 and begin to subtract to 20. • To solve one-step problems than involve subtraction using concrete objects, pictorial representations and missing numbers up to 10 consolidation. • To know number bonds to 10 and related subtraction facts to 10 – consolidation. **Measurement** • To tell the time to the hour and half past the hour and draw the hands on a clock to show these times. **Geometry** • To describe position, direction and movement including whole and half turns.	**Addition and Subtraction** • To work out the number 1 more or 1 less up to 100. • To read, write and interpret mathematical statements involving addition and subtraction up to 20. • To add and subtract numbers up to 20. • To solve one-step problems that involve addition or subtraction using concrete objects, pictorial representations and missing numbers up to 20. • To know number bonds to 20 and related subtraction facts to 20. **Multiplication and Division** • To solve one-step problems involving multiplication and division by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher. **Geometry** • To describe position, direction and movement including whole, ½ , ¼ and ¾ turns.	**Addition and Subtraction** • To work out the number 1 more or less up to 100 – consolidation. • To read, write and interpret mathematical statements involving addition and subtraction up to 20 – consolidation. • To add and subtract numbers up to 20. • To solve one-step problems that involve addition and subtraction using concrete objects, pictorial representations and missing numbers up to 20 – consolidation. • To know number bonds to 20 and related subtraction facts to 20 - consolidation. **Multiplication and Division** • To solve one-step problems involving multiplication and division by calculating the answer user concrete objects, pictorial representations and arrays with the support of the teacher – consolidation. **Fractions** • To recognise, find and name a half as 1 or 2 equal parts of an object, shape or quantity -consolidation.

			Measurement • To recognise and know the value of different denominations of coins and notes.	**Fractions** • To recognise, find and name a half as 1 or 2 equal parts of a quantity. • To recognise and name a quarter of a shape.	**Fractions** • To recognise, find and name a half as 1 or 2 equal parts of an object, shape or quantity – consolidation. • To recognise, find and name a quarter of a shape.	• To recognise, find and name a quarter of a shape or quantity consolidation.

Year 2	*Fluently count in steps of 2, 5 and 10, in any order – forwards or backwards and to include missing numbers.* **Number and Place Value** - Read and write two-digit and three-digit numbers in figures and words. - Represent numbers in different ways, particularly on a number line. - Recognise odd and even numbers. - Count in steps of 2, 5 and 10. - Find missing numbers. - Recognise the value of each digit in a 2-digit number. - Order and compare numbers up to 100 using the greater and less than signs. < >. - Begin to learn how to round 2-digit numbers to the nearest 10. - Estimate the number of objects in a group up to 20. - Recall multiples of 10 about and below a given number up to 120.	*Accurately count in multiples of 5, up to 12 x 5, in any order and related division facts.* *Accurately count in multiples of 2, up to 12 x 2, in any order and related division facts.* **Measurement – Money** - Identify and name coins and notes and understand their values. - Add together amounts of money. - Recognise and use the £ and p signs accurately. - Combine £ and p to make and count different amounts. - Make the same amount in different ways. - Make comparisons between 2 different amounts of money using <, > and =. - Add money including: 2-digit and 2-digit, 2-digit and ones, 2-digit and tens and 3 single-digit. - Find the difference between two amounts of money. - Be able to find change. - Solve 2-step problems involving money.	*Fluently and accurately recall multiples of 2 and 5, in any order, up to x12 and related division facts.* *Accurately recall multiples of 10 up to 12 x 10 and related division facts.* **Number and Place Value** - Recognise the place value of each digit in 2-digit and 3-digit numbers (hundreds, tens and ones). - Identify, represent and estimate numbers using different representations, continuing to use the number line. - Use knowledge of place value to identify odd and even numbers instantly. - Count fluently in steps of 2, 5 and 10. - Make patterns using numbers involving place value facts, repeated steps and odd and even numbers. - Fluently and accurately order and compare 2-digit numbers using the < > signs. - Round 2-digit numbers to the nearest 10. - Estimate the number of objects in a group up to 50.	*Fluently and accurately recall multiples of 2, 5 and 10 up to x12 and related division facts, in any order.* **Multiplication and Division** - With increased fluency, recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables. - Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs. - Solve problems involving multiplication or division with one step. - Show a full understanding of the commutative law. - Begin to show that division of one number by another is not commutative. - Solve problems involving x and ÷, using materials, arrays, repeated addition, metal methods and multiplication and division facts.	*Fluently and accurately count in multiples of 2, 5 and 10 up to x12, including missing numbers and related division facts.* *Accurately count in steps of 3 – forwards and backwards.* **Statistics** - 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. - Ask and answer questions about totalling and comparing categorical data.	*Fluently and accurately count in steps of 3, forwards and backwards.* *Fluently and accurately count in multiples of 2, 5 and 10 up to x12, including missing numbers and related division facts.* ***Consolidation of work over the year.*** **Multiplication and Division** - With accuracy and fluency, I can calculate mathematical statements for multiplication and division within the multiplication tables I know and write them using the x, ÷ and = sign. - Solve word problems involving multiplication and division with more than one step. **Fractions** - 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. For example, ½ of 6 = 3 and recognise the equivalence of $^2/_4$ and ½.

	Addition and Subtraction • Derive and recall all addition and subtraction facts for each number to at least 10, all pairs with totals to 20 and all pairs of multiples of 10 with totals up to 100. • Solve problems involving addition in contexts of numbers. • Use knowledge of number facts and operations to estimate and check answers to calculations. • Understand that subtraction is the inverse of addition and vice versa. • Add and subtract a 1-digit number from a 2-digit number without crossing 10s and add/subtract 10s from a given 2-digit number. • Know 10 more or 10 less than a given number.	**Multiplication and Division** • Begin to recall and use multiplication facts for the 2, 5 and 10 multiplication tables. • Count equal groups of 2, 5 and 10 and explore this within 50 (linking to real-life contexts). • Represent and make equal groups in various ways such as arrays, repeated addition, number sentences and bar models. • Show that multiplication of two number can be done in any order (commutative). • Build and draw arrays.	**Addition and Subtraction** • Use knowledge of number bonds to solve problems. • Solve additions by making 10s/ adding to the nearest 10. • Add 2-digit and 1-digit and two 2-digit numbers both without and with crossing 10. • Subtract 2-digit and 1-digit and two 2-digit numbers both without and with crossing 10. • Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Solve problems involving addition and subtraction in contexts of measures, pounds and pence, applying and increasing knowledge of mental and written methods.	**Fractions** • Find, represent and make equal parts of a whole (shapes and groups of objects). • Recognise, find, name and write fractions $^1/_3$, ¼, $^2/_4$ and ¾ of a length, shape, set of objects or quantity and demonstrate understanding that all parts must be equal parts of the whole. • Write simple fractions. E.g. ½ of 6 = 3. **Measurement – Mass, Capacity and Temperature** • Choose and use appropriate standard units to estimate and measure mass (kg/g), temperature (°C) and capacity (l/ml) to the nearest appropriate unit, using scales, thermometers and measuring vessels. • Read scales in divisions of ones, twos, fives and tens. • Read scales where not all numbers on the scale are given and estimate points in between. • Use their knowledge of the four operations to solve one-step and two-step problems relating to weight, capacity and temperature.	**Addition and Subtraction** • Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100. • Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: o A 2-digit number and ones o A 2-digit number and tens o Two 2-digit numbers o Three, 1-digit numbers. • Develop a full understanding that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Solve problems with addition and subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods to problems with more than one step. • Recognise and use the inverse relationship between addition and subtraction and use this to check	**Measurement – 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. ***Recap*** • Compare and sequence intervals of time. **Geometry** • Order and arrange combinations of mathematical objects in patterns and sequences. • Use mathematical vocabulary to describe position, direction, 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).

	Geometry • Recap 3D shapes from Year 1. • Compare and sort common 2D shapes. • Count the sides on 2D shapes. • Count the vertices on 2D shapes. • Draw common 2D shapes. • Identify one line of symmetry on common 2D shapes. • Make patterns with 2D shapes. • Count the faces on 3D shapes and identify the 2D faces on a 3D shape.	**Measurement – Length** • Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) • Measure lines with a ruler to the nearest cm. • Use a metre stick (measuring to the nearest 10 cm). • Compare and order lengths/heights using < > and =. • Use their knowledge of the four operations to solve one-step and two-step problems relating to length.	**Geometry** • Begin to identify and describe the properties of 3D shapes, including the number of edges, vertices and faces. • Compare and sort common 3D shapes. • Make patterns with 3D shapes. **Measurement – Time** • Understand the meaning of hours and days. • Remember the number of minutes in an hour and the number of hours in a day. • Read and write 0'clock, half past, quarter past and to times. • Tell the time to the nearest 5 minutes.		calculations and solve missing number problems. **Multiplication and Division** • Calculate mathematical statements for multiplication and division within the multiplication tables they know and write them using the x, ÷ and = sign. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, metal methods and multiplication and division facts, including problems in context. • Show a full understanding that the multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.	

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Overview of Mathematics Curriculum – KS2

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 3	*Fluently and accurately recall multiples of 2, 5 and 10 (revision of Year 2).* *Accurately count in multiples of 3, in any order, up to 12 x 3.*	*Fluently and accurately recall multiples of 3 up to 12 x 3, in any order and related division facts.* *Accurately count in multiples of 4, in any order, up to 12 x 4.*	*Fluently and accurately recall multiples of 4 up to 12 x 4, in any order and related division facts.* *Accurately count in multiples of 8, to 12 x 8, in any order.*	*Fluently and accurately recall multiples of 3 and 4 up to 12 x 3 and 12 x 4, in any order and related division facts.* *Fluently and accurately recall multiples of 8, to 12 x 8, in any order and corresponding division facts.*	*Fluently and accurately recall multiples of 3, 4 and 8, in any order, including missing numbers and related division facts.*	*Fluently and accurately recall multiples of 3, 4 and 8, in any order, including missing numbers and related division facts.* ***Consolidation of the work over the year.***
	Number and Place Value • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) • Read and write numbers up to 1000 in numerals. • Begin to read and write numbers up to 1000 in words.	**Number and Place Value** • Find 10 or 100 more or less than a given number. • Accurately and fluently, read and write numbers up to 1000 in words.	**Multiplication and Division** • Accurately and with some fluency, write and calculate mathematical statements for multiplication and begin to use division, using the multiplication tables that he/she knows including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	**Number and Place Value** • Begin to count from 0 in multiples of 50 and 100. • Estimate numbers using different representations, including the number line.	**Place Value** • Fluently and accurately count from 0 in multiples of 50 and 100. • Solve number problems and practical problems involving these ideas.	**Measurement – Time** • Accurately and fluently tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks. • Estimate and read time with increasing accuracy to the nearest minute. • Record and compare time in terms of seconds, minutes and hours. • Compare durations of events. (E.g. to calculate the time taken by particular events or tasks)

	Addition and Subtraction
	• Add and subtract mentally, including:
	  ○ A 3-digit number and ones.
	  ○ A 3-digit number and tens.
	  ○ A three-digit number and hundreds.
	• Add numbers with up to three digits, using formal written methods of
		Multiplication
		• Begin to write and calculate mathematical statements ***for multiplication*** and division using the multiplication tables that he/she knows including for two-digit numbers times one-digit numbers, using
			Fractions
			• Recognise, find and write fractions of a discrete set of objects; unit fractions and non-unit fractions with small denominators.
			• Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators.
				Addition and Subtraction
				• Add and subtract numbers with up to three digits using the formal method of columnar addition and subtraction.
				• Estimate the answer to a calculation and use inverse operations to check answers.
					Addition and Subtraction
					• Solve problems, including:
					  ○ Missing number problems.
					  ○ Using number facts.
					  ○ Place value
					  ○ More complex addition and subtraction.
					
					Measurement
					• Measure the perimeter of simple 2D shapes.
						Fractions
						• Compare and order unit fractions, and fractions with the same denominators.
						• Solve fraction problems.

	columnar addition. At this stage, children will be focussing on using the expanded method.
	
	Measurement
	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)
	
	Geometry – 2D Shape
	• Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line. (Revision of Band 2)
		mental and progressing to formal written methods. Accessing through the use of grid method.
		
		Measurement – Time
		• Begin to use vocabulary such as o'clock, am/pm, morning, afternoon and midnight.
		• Begin to know the number of seconds in a minute, and the number of days in each month, year and leap year.
		• Tell and write the time from an analogue clock, including:
		  ○ 12-hour clock
		
		Number and Place Value
		• Identify and represent numbers using different representations, including using the number line.
			• Recognise and show, using diagrams, equivalent fractions with small denominators.
			
			Measurement
			• Tell and write the time from an analogue clock, including:
			  ○ Using Roman numerals from I to XII.
			  ○ 12-hour and 24-hour clocks.
			
			Geometry – 3D Shape
			• Draw 2D shapes and make 3D shapes using modelling materials; recognise 3D shapes in different orientations and describe them.
			
			Statistics
			• Interpret and present data using bar charts, pictograms and tables.
				Fractions
				• Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10.
				• Record $^{1}/_{10}$ as 0.1, $^{3}/_{10}$ as 0.3 etc.
				
				Measurement
				• Add and subtract amounts of money to give change, using both £ and p in practical contexts.
					Geometry
					• Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.
					• Recognise angles as a property of shape or a description of turn.
					• Identify right angles and identify whether other angles are greater or less than a right angle.
					• Recognise that two right angles make a half turn, three make three quarters of a turn and four a complete turn.
					
					Statistics
					• Solve one-step and two-step questions using information presented in scaled bar charts and pictograms and tables.
						Multiplication and Division
						• With increased accuracy and fluency. write and calculate mathematical statements for multiplication and division using the multiplication tables that he/she knows including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
						• Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

Year 4	*Fluently and accurately recall multiples of 3, 4 and 8. (revision of Year 3)* *Accurately count in multiples of 6, in any order, up to 12 x 6.*	*Fluently and accurately recall multiples of 6, in any order, including missing numbers and related division facts.* *Accurately count in multiples of 7, in any order, up to 12 x 7.*	*Fluently and accurately recall multiples of 6 and 7, in any order, including missing numbers and related division facts.* *Accurately count in multiples of 9, to 12 x 9, in any order.*	*Fluently and accurately count in multiples of 9, to 12 x 9, in any order, including missing numbers and related division facts.* *Accurately count in multiples of 11, in any order and related division facts.*	*Fluently and accurately count in multiples of 11, in any order and related division facts.* *Fluently and accurately count in multiples of 12 (children should know through learning other tables), in any order and related division facts.*	*Fluently and accurately recall multiplication facts for all the tables up to 12 x 12, including missing numbers and related division facts.* ***Consolidation of the work over the year.*** ***MTC – children to take test. Intervention following test.***

	Number and Place Value
	• Begin to count in multiples of 25 and 1000.
	• Recognise the place value of each digit in a four-digit number.
	  ○ Children will revise the place value of 3-digit numbers.
	• Identify, represent and estimate numbers using different representations.
	  ○ Partitioning using standard and non-standard methods
	  ○ Bar models
	  ○ Part-whole models
	  ○ Base 10 equipment
	  ○ Place value counters
	• Order and compare numbers beyond 1000.
	• Find 1000 more or less than a given number.
	• Count backwards through zero to include negative numbers.
	
	Addition and Subtraction
	• Begin to add and subtract numbers with up to 4-digits using the formal written methods of columnar addition and subtraction, where appropriate.
		Number and Place Value
		• Accurately count in multiples of 25 and 1000.
		• Read Roman numerals to 100 (I to C) and know that over time, the numeral system has changed to include the concept of zero and place value.
			Number and Place Value
			• With increasing accuracy and fluency, count in multiples of 25 and 1000.
			• Identify, represent and estimate numbers using different representations.
			  ○ Focus on representing numbers on a number line to 10, 000
			  ○ Estimating numbers on a number line
				Number and Place Value
				• Confidently count, forwards and backwards, in multiples of 25 and 1000.
				• Rounding numbers to the nearest 10.
				• Rounding numbers to the nearest 100.
				• Rounding numbers to the nearest 1000.
					Number and Place Value
					• Solve number and practical problems involving the following concepts:
					  ○ Recognise the place value of each digit in a four-digit number.
					  ○ Identify, represent and estimate numbers using different representations.
					  ○ Order and compare numbers beyond 1000.
					  ○ Roman numerals to 100.
					
					Addition and Subtraction
					• Fluently add and subtract numbers with up to 4-digits using the formal written methods of columnar addition and subtraction, where appropriate.
						Number and Place Value
						• Solve number and practical problems involving the following concepts with increasingly large positive numbers.
						  ○ Rounding any number to the nearest 10, 100 and 1000.
						  ○ Negative numbers in context.
						• Additional work to be planned for to close any gaps in the children's learning.
						
						Multiplication and Division
						• Solve problems involving multiplication.
						• Consolidation of a written method for division.
						• Additional work to be planned for to close any gaps in the children's learning.

	Geometry
	• Identify acute and obtuse angles and compare and order angles up to two right-angles by size.
	• Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties.
	
	Statistics
	• Interpret and present discrete data using appropriate geographical methods, including bar charts and time graphs.
	  ○ This term focus on using tally charts, pictograms and bar charts
		Multiplication and Division
		• 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.
		• Begin to multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
		
		Fractions
		• Find fractions of amounts (include money and measure). Find unit fractions of amounts before moving onto non-unit fractions of amounts. (Year 3 revision)
		• Recognise and show, using diagrams, families of common equivalent fractions.
		• Recognise and write decimal equivalents to ¼, ½ and ¾.
		
		Measurement
		• Measure and calculate the perimeter of a rectilinear figure in cm and m.
		• Find the area of rectilinear shapes by counting in squares.
			Addition and Subtraction
			• With increasing fluency, add and subtract numbers with up to 4-digits using the formal written methods of columnar addition and subtraction.
			• Estimate and use inverse operations to check answers to a calculation. Use missing digit problems to reinforce this skill.
			
			Fractions
			• Add and subtract fractions with the same denominator.
			  ○ Add two or more fractions.
			  ○ Subtract two fractions.
			  ○ Subtract from whole amounts.
			  ○ Fractions greater than 1.
			• Continue to learn the relationship between ¼, ½ and ¾ and their corresponding decimals.
			
			Measurement
			• Read and write time using analogue and digital 12 and 24 hour clocks.
			• Solve problems involving converting from hours to minutes; minutes to seconds.
				Multiplication and Division
				• Recognise and use factor pairs and commutativity in mental calculations.
				• With increasing accuracy, multiply two-digit and three-digit numbers by a one-digit number using formal written layout.
				• Divide two and three-digit numbers by a 1-digit number, including leaving remainders.
				• Multiplying and dividing by 10 and 100.
				
				Measurement
				• Convert between different units of measure. E.g. kilometre to metre; hour to minute.
				• Estimate, compare and calculated different measures, including money in pounds and pence.
				
				Geometry
				• Describe positions on a 2D grid as coordinates in the first quadrant.
				• Plot specified points and draw sides to complete a given polygon.
					• Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.
					
					Fractions
					• Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and dividing tenths by ten.
					• 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 or hundredths.
					• Compare numbers with the same number of decimal places up to two decimal places.
					• Round decimals with one decimal place to the nearest whole number.
					
					Measurement – Money
					• Convert between pounds and pence.
					• Order amounts of money
					• Use rounding to estimate with money
					• Use money with the four operations.
						Geometry
						• Describe movements between positions as translations of a given unit to the left/right and up/down.
						
						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.
						• Solve simple money and measure problems involving fractions and decimals to two decimal places.

			Statistics • Interpret and present continuous data using appropriate geographical methods, including line graphs and comparative line graphs.		**Measurement - Time** • Read, write and convert time between analogue and digital 12 and 24-hour clocks. • Solve problems involving converting years to months; weeks to days. **Geometry** • Complete a symmetrical figure with respect to a specific line of symmetry. • Identify lines of symmetry in 2D shapes presented in different orientations.	

Throughout teaching in school:

- Weekly number bonds tests
  - This will be focussed on all children in KS1 and children who need further support in KS2
- Weekly multiplication tables tests
  - From Year 2 upwards, following the Multiplication Tables Planning Document but also taking into consideration the individual needs of the children. This is indicated on the Curriculum Map with blue objectives.
- Weekly practice of Multiplication Test Check
  - Year 4 only
- Use of Times Table Rock Stars to learn tables in school and at home.
  - From Year 2 upwards.
- Chanting of multiplication tables and counting in steps of differing amounts.
- Chanting of Key Instant Recall Facts (KIRFS)
- Use of I-Pads to reinforce learning and play games
- Use of manipulatives to aid teaching
- Five-A-Day to recall learnt facts and knowledge