'Shine like stars in the world. 'Philippians 2:15

St Paul's Church of England Primary School

Maths

Long Term Curriculum

<table>
<tr><td rowspan="3">EYFS Autumn term</td><td></td><td colspan="5">Repetition of counting, subitising, number fluency and patterns (+ shape/time/measure and spatial thinking)</td></tr>
<tr><td></td><td>Getting to know the children</td><td>Phase 1 – Match, sort and compare numbers to 5</td><td>Maths Storybook Week</td><td>Phase 2 – Number to 5 : 1,2,3</td><td>Numbers to 5: 4,5</td></tr>
<tr><td>Early Adopter Framework</td><td>• Opportunities for settling in, introducing the areas of provision and getting to know the children

Key times of day, class routines. Exploring the continuous provision inside and out. Where do things belong? Positional language.</td><td>• Sort and match objects – Same/different/belong
• Compare amounts
• Compare size, mass and capacity –
• More, larger, smaller
• Exploring pattern- word/sound, repeating patterns
• Odd one out
• What do you notice, is the pattern correct?
• Spot the mistake. Can you sort it?</td><td>The very Hungry Caterpillar</td><td>• Identify representations of 1,2,3
• Subitise or count
• match
• Comparing 1,2,3 -
• Composition of 1,2,3
• How many objects?
• One more/one less

Geometry and spatial thinking:
• Circles and triangles
• Spatial awareness</td><td>• Recognise and count on and back to 4
• Subitise upto 5
• count forwards and backwards
• 5 frames
• Songs and rhymes
• One more/one less
• Build and count – different shapes (with 5)
• Place numbers on a washing line
• Hidden objects – feely bags and predictions
Geometry and spatial thinking:
• Squares and rectangles
• Combining shapes
Measurement – time:
• Night and day</td></tr>
<tr><td colspan="6">Children should be able to:
• Count confidently,
• Develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers.
• Build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting
• Develop a secure base of knowledge and vocabulary from which mastery of mathematics is built.
The curriculum should include rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.
It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, ‘have a go’, talk to adults and peers about what they notice and not be afraid to make mistake</td></tr>
<tr><td>EYFS Spring</td><td></td><td colspan="5">Repetition of counting, subitising, number fluency and patterns (+ shape/time/measure and spatial thinking)</td></tr>
<tr><td></td><td colspan="2">Introducing 0 comparing Nos to 5</td><td>Growing 6,7,8</td><td>Building 9 & 10</td><td>Consolidation</td></tr>
</table>

		• **Nothing there / all gone = name zero and 0 representation** • Counting back songs • **Comparing numbers to 5** • **Subitising 0-5 with objects/dots** • Fewer/same/more • **Composition of 4 and 5** • Number shapes • **Number bonds to 5** • • **Compare mass** • **Compare capacity** **(Numicon shapes and balance)**	• **Counting, representing 6,7,8 in different ways** • **Count out from a larger group** • **Subitise – numbers made up of smaller groups** • **How many?** • **Making pairs** • **5 wise patterns/pair-wise patterns** • **Combining 2 groups – early doubling** • **Part whole model** • **Length and height** • **Time – yesterday, today, tomorrow** **Days of the week**	• **Counting, to 9 and 10 forwards and back** • **representing 9 and 10 in different ways** • **Comparing Nos to 10** • **Subitise larger numbers and explore their composition (eg 9 is 3,3,3)** • **Bonds to 10 –** ten frames, fingers, beads etc • **Repeat previous prompts for counting** • Halving/doubling/sharing • Number games and rhymes • **3D shape** • **Repeated patterns**	• **Number** • **Patterns** • **Shape** • **Measures** **(Prior learning)** Play games that involve moving along a numbered track and understand that larger numbers are further along the track. Begin to experience partitioning and combining numbers within 10. Distribute items fairly, for example, put 3 marbles in each bag. Recognise when items are distributed unfairly Understand the cardinal value of number words, for example understanding that 'four' relates to 4 objects. Subitise for up to 5 items. Automatically show a given number using fingers.
EYFS Summer Term		**Repetition of counting, subitising, number fluency and patterns (+ shape/time/measure and spatial thinking)**			
		20 and beyond	**First, then, now**	**Finding Pattern**	**TRANSITION**
		Consolidating key skills: • **Subitising** • **Counting** • **Composition** • **sorting and matching** • **comparing and ordering** • **Nos and counting patterns beyond 10** • **How many is 100?** **Spatial reasoning:** • **Jigsaws and shape puzzles** • **matching shapes and patterns**	**Consolidating key skills:** • **Subitising** • **Counting** • **Composition** • **sorting and matching** • **comparing and ordering** • **Adding more and taking away** • Number rhymes • **Devise and record number stories, using pictures, numbers and symbols** **Spatial reasoning:** • **shape puzzles – squares rectangles and triangles** • **tangrams**	**Consolidating key skills:** • **Subitising** • **Counting** • **Composition** • **sorting and matching** • **comparing and ordering** • **Doubling** • **Sharing and grouping** • **Even and odd** • **Find half / make equal groups** **Spatial reasoning:** • **Make models with 2D and 3D** • **shapes** • **compare models**	• **Number** • **Patterns** • **Shape** • **Measures** **(prior learning)** **Devise and record number stories, using pictures, numbers and symbols (such as arrows).** See, explore and discuss models of common 2D and 3D shapes with varied dimensions and presented in different orientations (for example, triangles not always presented on their base). Select, rotate and manipulate shapes for a particular purpose, for example rotating a cylinder so it can be used to build a tower or rotating a puzzle piece to fit in its place

	Early Adopter Framework	• **ELG: Number** Children at the expected level of development will: - Have a deep understanding of number to 10, including the composition of each number; - Subitise (recognise quantities without counting) up to 5; - Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **ELG: Numerical Patterns** Children at the expected level of development will: - Verbally count beyond 20, recognising the pattern of the counting system; - Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity; - Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Year 1 Autumn Term		Daily fluency practice - repetition, retrieval and consolidation of known skills					
		Number: Place Value: transition &consolidation	**Number: Addition and Subtraction** **Develop fluency in addition and subtraction facts within 10**	**Maths Storybook week** **Measurement: Length and Height**	**Number: Addition and Subtraction** **Develop fluency in addition and subtraction facts**	**Geometry : Shape**	**Consolidation**
	Sequence of lessons	• Sort, count and represent objects. • Develop fluency counting, reading and writing forwards and backwards from any number **to and and beyond 10**. • Count one more/one less. Compare numbers and groups using language such as equal, more/greater, less/fewer. • Introduce and use = , > and < symbols.. • Order groups of objects and numbers and use ordinal numbers (1st, 2nd, 3rd ….). • Understanding and using the number line to begin adding/ taking away numbers more than one (dice games).	• Use the Part whole model. • Understand and use the ddition symbol.. • Fact families – Addition facts. • Find, recognise and remember number bonds to 10 • Compare number bonds. • Addition: Adding together, adding more. • Finding a part. Use the addition (+) symbol • emphasis placed on problem solving with addition. • Subtraction: Taking away, how many left? Crossing out. • Finding a part, breaking apart. • Use the subtraction (-) symbol. • Subtraction: Counting back. Finding the difference. •	**Jim and the Beanstalk' by Raymond Briggs** • Compare lengths and heights. • Measure length • Introduce scales and compare **Key vocabulary:** Scale, measure, bigger, smaller, times (as large/small), around, width, depth, perimeter, size, multiply, centimetres, metres	• Comparing addition and subtraction statements • Subtraction using a number line • **Solve one step problems** that involve addition and subtraction,	• Recognise and name 3D shapes. • Sort 3D shapes. • Recognise and name 2D shapes. • Sort 2D shapes. • Patterns and compositions with 3D and 2D shapes (including manipulating shapes to place them in particular orientations).	Count forwards and backwards and write **numbers to 20 and beyond** in numerals and words Revisit number bonds to 10. Consolidate fluency in place value addition and subtraction facts
	National Curriculum	• Count to ten, forwards and backwards, beginningwith 0 or 1, or from any given number. • Count, read and write numbers to 10 in numeralsandwords. • Given a number, identify one more or one less. • Identify and represent numbers using	• Represent and use number bonds and related subtractionfacts within 10. • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Add and subtract one digit numbers to 10, including zero.	• Measurement: Length and Height Measure and begin to record lengths and heights. • Compare, describe	• **Solve one step problems** that involve addition and subtraction, using concrete objects and pictorial representations and	Recognise and name common 2-D shapes, including: (e.g. rectangles (including squares), circlesand triangles). • Recognise and name common 3-D shapes, including: (e.g. cuboids (including cubes),	

		objects and pictorial representations including the number line,and use the language of: equal to, more than, less than (fewer), most, least. • **Reason** about the location of numbers to 20 in the number system including comparing	• **Solve one step problems** that involve addition andsubtraction, using concrete objects and pictorial representations and missing number problems.	and solve practical problems for: lengths and heights (for example, long/short, longer/shorter, tall/short, double/half).	missing number problems.	pyramidsand spheres).
Year 1 Spring Term		**Daily fluency practice - repetition, retrieval and consolidation of known skills**				
		Number: Place Value	**Number: Addition and Subtraction**	**Number: Place Value (within 50) (including multiples of 2, 5 and 10)**		**Measurement: Weight and Volume**
	Sequence of lessons	• Count forwards and backwards and write numbers to 20 and beyond in numerals and words. • Begin with numbers from 11 to 20. • Tens and ones. • Count one more and one less, 2 more, 2 less etc • Compare groups of objects and numbers (equal to, more than, less than (fewer), most, least.) • Order groups of objects and numbers.	• Add by counting on. • Find and make number bonds to 20. • Add by making 10. • Subtraction – Not crossing 10. • Subtraction – Crossing 10 • Compare Number Sentences. • Read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols, • Relate additive expressions and equations to real-life contexts.	• Numbers to 50 and beyond. • Tens and ones – partition numbers. • Represent numbers to 50 and beyond. • More/greater, less/fewer • Compare objects and numbers within 50. • Order numbers within 50 – and beyond. • Count in 2s, including recognising odd and even numbers • Count in 5s. • Count in 10s		• Introduce weight and mass. • Measure mass. • Compare mass. • Introduce capacity. • Measure capacity. • Compare capacity.
	National Curriculum	• Count to twenty, forwards and backwards, beginningwith 0 or 1, from any given number. • Count, read and write numbers to 20 in numeralsand words. • Given a number, identify one more or one less. • Identify and represent numbers using objects and pictorial representations including the number line,and use the language of: equal to, more than, less than (fewer), most, least.	• Represent and use number bonds and related subtraction facts within 20. • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Add and subtract one-digit and two-digit numbers to 20, including zero. • Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7= □ –9.	• Count to 50 forwards and backwards, beginning with 0 or 1, or from any number. • Count, read and write numbers to 50 in numerals. • Given a number, identify one more or one less. • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least. • Count in multiples of twos, fives and tens.		• Measurement: Weight and Volume Measure and begin to record mass/weight, capacity and volume. • Compare, describe and solve practical problems for mass/weight:[for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]
		Daily fluency practice - repetition, retrieval and consolidation of known skills				
		Number: Multiplication and(including multiples of 2, 5 and 10)	**Number: Fractions**	**Geometry: Position and Direction**	**Number: Place Value(within 100)**	**Measurement: Money**	**Measurement: Time**
		• Count in 10s. • Make and add equal groups -grouping. • Make equal groups – sharing. • Make arrays.	• Halving shapes or objects. • Halving a quantity. • Find a quarter of a shape or object.	• Describe turns. • Describe Position • Select, rotate and manipulate	• Counting **within 100 and beyond,** forwards and backwards, starting with any number. • Partitioning numbers.	• Recognising coins. • Recognising notes. • Counting in coins. • Reason, add and	• Before and after. • Dates – days, months, years. • Time to the hour. • Time to the half hour./

		• Make doubles. • Distribute items fairly, for example, put 3 marbles in each bag. Recognise when items are distributed unfairly •	• Find a quarter of a quantity. • Solve one step worded and practical problems using halves and quarters.	shapes for a particular purpose, for example rotating a cylinder so it can be used to build a tower or rotating a puzzle piece to fit in its place •	• Comparing and ordering numbers. • Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =..	subtract coins – link to counting in 2s 5s and 10	• saying the time/showing time • Begin to write time in hours minutes and seconds. • Comparing time – earlier/ later.
Year 1 Summer Term	**National Curriculum**	• Count in multiples of twos, fives and tens. • 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.	• Recognise, find and name a half as one of two equal parts of an object, shape or quantity. • Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity. • **Compare, describe and solve practical problems** for: lengths and heights (for example, long/short, longer/shorter, tall/short, **double/half)** • Compare, describe and solve practical problems for: mass/weight [for example, heavy/light, heavier than, lighter than]; capacity and volume [for example, full/empty, more than, less than, **half, half full, quarter**]. •	• Describe position, direction and movement, including whole, half, quarter and three quarter turns	• Count, read and write numbers to 100 in numerals. • Given a number, identify one more and one less. • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than, most, least.	• Recognise and know the value of different denominations of coins and notes.	• Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening. • Recognise and use language relating to dates, including days of the week, weeks, months and years. • Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. • Compare, describe and solve practical problems for time [for example, quicker, slower, earlier, later]. • Measure and begin to record time (hours, minutes, seconds).
Year 2 Autumn Term		**Daily fluency practice - repetition, retrieval and consolidation of known skills**					
		Number: Place Value	**Number: Addition and Subtraction**	**Maths Storybook week**	**Number: Addition and Subtraction**	**Geometry: Properties of Shape**	
	Sequence of lessons	• Count objects to 100 by making 10s • Recognise tens and ones • Use a place value chart • Partition numbers to 100 • Write numbers to 100 in words • Flexibly partition numbers to 100 • Write numbers to 100 in expanded form	• Fact families – addition and subtraction bonds within 20 and related facts • Bonds to 100 (tens) • Add and subtract 1s • Add by making 10 • Add three 1-digit numbers • Add to the next 10/Subtract from a 10	**A Grain of Rice', by Demi** • To predict a sequence is and then continue it. • To	• **Add/subtract using column method at least 2 digit by 2 digits: tens and ones (CPA)** **Bonds to 10** • Mixed addition and subtraction • Compare number sentences	• Recognise 2-D and 3-D shapes • Count sides on 2-D shapes • Count vertices on 2-D shapes • Draw 2-D shapes • Lines of symmetry on shapes • Use lines of symmetry to complete shapes	

		• 10s and 1s on the number line to 100 • Estimate numbers on a number line • Compare objects and numbers • Order objects and numbers • Count in 2s, 5s and 10s • Count in 3s	• Add and and Subtract across 10 • count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and • backward • Subtract a 1-digit number from a 2-digit number and across 10 • 10 more, 10 less • Add and subtract 10s • Add two 2-digit numbers (not across a 10) • Add two 2-digit numbers (across a 10) • Subtract two 2-digit numbers (not across a 10) • Subtract two 2-digit numbers (across a 10)	investigate different ways of making a total.	• Missing number problems	• Sort 2-D shapes • Count faces, edges and vertices on 3D shapes • Sort 3-D shapes • Make patterns with 2-D and 3-D shapes • **Use precise language to describe the properties of 2D and 3D shapes and compare shapes by reasoning about similarities and differences in properties.** •
	National Curriculum Link	• Read and write numbers to at least 100 innumerals and in words. • Recognise the place value of each digit in atwo digit number (tens, ones) Identify, represent and estimate numbers using different representations including the number line. • Compare and order numbers from 0 up to100; use <, > and = signs. • Use place value and number facts to solveproblems. • Count in steps of 2, 3 and 5 from 0, and intens from any number, forward and backward.	• 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: a two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. • Show 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 andmeasures; applying their increasing knowledge of mental and written methods. • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.			• Identify and describe the propertiesof 2-D shapes, including the numberof sides and line symmetry in a vertical line. • Identify and describe the propertiesof 3-D shapes, including the numberof edges, vertices and faces. • Identify 2-D shapes on the surface of 3-D shapes, [for example, a circleon a cylinder and a triangle on a pyramid]. Compare and sort common 2-D and3-D shapes and everyday objects.
Year 2 Spring Term		**Daily fluency practice - repetition, retrieval and consolidation of known skills**				
		Measurement: Money	**Number: Multiplication and Division**		**Number: Fractions**	**Measurement: Length and Height**
	Sequence of lessons	• Count money – pence and pounds. (notes andcoins). • Select money. • Make the same amount. • Compare money. • Find the total. • Find the difference. • Find change. • Two-step problems	• Recognise and make equal groups. • Add equal groups. • Multiplication sentences using the x symbol. • Multiplication sentences from pictures. • Use arrays. • Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. • Count in muliples of 3 • Make equal groups of 2, 3 ,5 and 10 – sharing. • Make equal groups 2, 3 ,5 and 10 – grouping. • Divide by 2. • Odd and even numbers. • Divide by 5. • Divide by 10. • Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations.		• Make equal parts. • Recognise and find half. • Recognise and find quarter. • Recognise and find a third.. • Understanding unit fractions. • Non unit fractions. • Equivalence of ½ and $^2/_4$. • Find three quarters. • Count in fractions	• Measure length (cm). • Measure length (m). • Compare lengths. • Order lengths. • Four operations with lengths..

	National Curriculum Link	• Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. • Find different combinations of coins that equal the same amounts of money. • Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	• Recall and use multiplication and division facts for the 2, 5 and 10 times tables, including recognising odd and even numbers. • Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals(=) signs. • Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods and multiplicationand division facts, including problems in contexts. • Show that the multiplication of two numberscan be done in any order (commutative) anddivision of one number by another cannot.	• Recognise, find, name and write fractions 1/3, ¼, 2/4 and 3/4 of a length, shape, set of objects or quantity. • Write simple fractions for example, ½ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$.	• Choose and use appropriate standard unitsto estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. • Compare and order lengths, mass, volume/capacity and record the results using >, < and =.
Year 2 Summer Term		**Daily fluency practice - repetition, retrieval and consolidation of known skills**				
		Geometry: Position and Direction	**Measurement: Time**	**Statistics**	**Measurement: Mass, Capacity and Temperature**	**Consolidation and Problem- solving**
	Sequence of lessons	• Describing movement and turns. • Making patterns with shapes.	• O'clock and half past. • Quarter past and quarter to. • Telling time to 5 minutes. • Minutes in an hour, hours in a day. • Find durations of time. • Compare durations of time.	• Make tally charts. • Draw and Interpret pictograms • Draw pictograms (2, 5 and 10). • Interpret pictograms (2, 5 and 10). • Understand and interpret block/bar charts.	• Compare mass. • Measure mass in grams. • Measure mass in kilograms. • Compare capacity. • Millilitres. • Litres. • Temperature.	Revision and consolidation of all concepts including: • Number and Place value • Addition and subtravtion • Geometry • Measurement • Statistics (Fluency in number skills, vocabulary, reasoning, problem solving)
	National Curriculum	• Use mathematical vocabulary to describe position, direction and movement including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, halfand three-quarter turns (clockwise and anti-clockwise). • Order and arrange combinations of mathematical objects in patterns and sequences.	• 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. • Compare and sequence intervals of time.	• 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.	• Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity(litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels. • Compare and order lengths, mass, volume/capacity and record the resultsusing >, < and =.	All

				• Ask and answer questions about totaling and comparing categorical data.		
		Daily fluency practice - repetition, retrieval and consolidation of known skills				
		Number: Place Value	**Number: Addition and Subtraction**		**Maths Story book week**	**Number: Multiplication and Division**
Year 3 Autumn Term	**Sequence of lessons**	• Recap Hundreds.Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10 • Represent numbers to 1,000. • 100s, 10s and 1s Recognise the place value of each digit use standard and non-standard partitioning to 1,000. • Reason about the location of any three-digit • Find 1, 10, 100 more or less than a given number. • Understand and use number line to to deepen understanding of the relative position of numbers in the linear number system. • Compare objects and numbers to 1,000. • Order numbers. • Count in 50s. • Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.	• Add and subtract multiples of 100. • Add 3-digit numbers and ones – not crossing 10/crossing 10. • Subtract a 1-digit number from a 3-digit number –not crossing 10/crossing 10. • Add and subtract 3-digit numbers and tens – not crossing 100. • Add a 3-digit number and tens – crossing 100. • Investigating patterns – make connections • Add and subtract a 2-digit and 3-digit number – not crossing 10 or 100. Then crossing 10 or 100. • Subtract 2-digit number from a 3-digit number cross the 10 or 100. • Add two 3-digit numbers – not crossing 10 or 100/crossing 10 or 100. • Subtract a 3 –digit number from a 3-digit number – no exchange then exchange. Estimate answers • Check using inverse: understand and use the **commutative property** of addition and understand the related property for subtraction. • Make decisions: consider both the choice of operation when solving a problem, and what method would be most efficient so that they do not apply the formal method even when it is inappropriate to do so. •	**'How Big is a Million?' by Anna Milbourne and Serena Rigietti** • use knowledge of place value to make the biggest number,smallestnumber or thenumber closestto a given amount. • Estimate amounts	• Multiplication – equal groups. • Investigating patterns within tables and making connections • Recap 2, 5 and 10 • The 3 times-table. • The 4 times-table. • The 8 times-table. • **Recall multiplication facts, and corresponding division facts, in the multiplication tables to x12**, and recognise products in these multiplication tables as multiples of the corresponding number.
	National Curriculum	• Identify, represent and estimate numbersusing different representations. • Find 10 or 100 more or less than a given number. • Recognise the place value of each digit in a three-digit number (hundreds, tens, ones). • Compare and order numbers up to 1000. • Read and write numbers up to 1000 in numerals and in words. • Solve number problems and practical problems involving these ideas. • Count from 0 in multiples of 4, 8, 50 and 100. •	• Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit numberand tens, a three digit number and hundreds. • Add and subtract numbers with up to three digits, using formal written methods of columnar additionand subtraction. • Estimate the answer to a calculation and use inverseoperations to check answers. • Solve problems, including missing number problems,using number facts, place value, and more complex addition and subtraction.			• Count from 0 in multiples of 4, 8, 50 and 100. • Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. • Write and calculate mathematical statements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digit numbers, usingmental 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 areconnected to m objectives.

Year 3 Spring Term

	Daily fluency practice - repetition, retrieval and consolidation of known skills			
	Number: Multiplication and Division	**Measurement: Length and Perimeter**	**Number: Fractions**	**Measurement: Mass and Capacity**
Sequence of lessons	• Comparing statements. • Related calculations. • Multiply 2-digits by 1-digit CPA – use dienes • Multiply 2-digits by 1-digit -pictoral/abstract • Divide 2-digits by 1-digit CPA – use dienes • Divide 2-digits by 1-digit pictoral/abstract • Scaling; Apply place-value knowledge to known additive and multiplicative number facts • How many ways? Apply known multiplication and division facts to solve contextual problems with different structures • **Introduce short division CPA in books**	• Measure length. • Equivalent lengths – m & cm. • Equivalent lengths – mm & cm. • Compare lengths. • Add lengths. • Subtraction lengths. • Measure perimeter. • Calculate perimeter.	• Unit and non-unit fractions. • Making the whole. • Tenths. • Count in tenths. • Tenths as decimals. • Fractions of a number line. • Fractions of a set of objects/amounts	• Measure mass • Compare mass. • Add and subtract mass. • Measure capacity (l/ml) • Compare capacity.(kg/g) Add and subtract capacity.
National Curriculum	• Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. • Write and calculate mathematicalstatements for multiplication and division using the multiplication tables they know, including for two-digit numbers times one-digitnumbers, using mental and progressing to formal written methods. • Solve problems, including missingnumber problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objectives.	• Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml). • Measure the perimeter ofsimple 2D shapes.	• Count up and down in tenths; recognise that tenths arise fromdividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10. • Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators. • Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators. • Solve problems that involve allof the above.	• Measure, compare, add and subtract: lengths (m/cm/mm);mass (kg/g); volume/capacity (l/ml).

Year 3 Summer Term		Daily fluency practice - repetition, retrieval and consolidation of known skills					
		Number: Fractions	**Measurement: Money**	**Measurement: Time**	**Geometry: Property of Shapes**	**Statistics**	**Consolidation**
	Sequence of lessons	• Equivalent fractions :Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts • Compare and order fractions within 1 in the linear number system. • Add and subtract fractions with the same denominator, within 1 • Find unit fractions of quantities using known division facts (multiplication tables fluency)	• Pounds and pence. • Converting pounds and pence. • Adding money. • Subtractingmoney. • Giving change.	• Months and years. • Hours in a day. • Telling the time to 5 minutes. • Telling the time to the minute. • AM and PM. • 24 hour clock. • Finding the duration. • Comparing the duration. • Start and end times. • Measuring time in seconds.	• Turns and angles. • Right angles in shapes (presented in different orientations.) • Compare angles. • Draw angles accurately. • Precise language: Horizontal, vertical, parallel and perpendicular. • Recognise, reason and describe properties of 2D shapes. • Draw polygons • Recognise and describe 3Dshapes- • Make 3D shapes.	Draw and interpret: • Pictograms. • Bar charts. • Tables.	
	National Curriculum	• Recognise and show, using diagrams, equivalent fractions withsmall denominators. • Compare and order unit fractions, and fractions with the same denominators. • Add and subtract fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$]. • Solve problems that involve all ofthe above.	Add and subtract amounts of money to give change, using both £ and p inpractical contexts.	• 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. • Use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight. • Know the number of seconds in a minute and the number of days in each month, year and leap year. • Compare durations of events [for example to calculate the time takenby particular events or tasks].	• Recognise angles as a property ofshape or a description of a turn. • Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle. • Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. • Draw 2-D shapes and make 3-Dshapes using modelling materials. • Recognise 3-D shapes in differentorientations and describe them.	• Interpret and present data using bar charts, pictograms and tables. • Solve one-step and two-step questions [for example, 'How many more?' and 'How manyfewer?'] using information presented in scaled bar charts and pictograms and tables.	•

Year 4 Autumn Term		Daily fluency practice - repetition, retrieval and consolidation of known skills				
		Number: Place Value	**Number: Addition and Subtraction**	**Maths Storybook Week**	**Measurement: Length and Perimeter/Area**	**Number: Multiplication and Division**
	Sequence of lessons	• Roman numerals. • Count in 1,000s. • Understand 1,000s, 100s, 10s and 1s. • decompose four-digit numbers using standard and non-standard partitioning. • Number line to 10,000. • 1,000 more or less. • Estimate on a number line to 10,000 • Compare and order numbers. • Round to the nearest 10/100/1,000. • Count in 25s, **20s** • Negative numbers – using temperature and a numberline.	• Add and subtract 1s, 10s, 100s and 1000s. • Add two 4-digit numbers – no exchange. • Add two 4-digit numbers –one exchange. • Add two 4-digit numbers – more than one exchange. • Subtract two 4-digit numbers – no exchange. • Subtract two 4-digit numbers – one exchange. • Subtract two 4-digit numbers – more than one exchange. • Efficient subtraction. • Estimate answers and checking strategies.	**'365 Penguins' by Jean-Luc Fromental** To solve mathematical problems using properties of numbers • To explain reasoning and justify theories • To work systematically • To solve mathematical problems involving time	• Kilometres. • Perimeter on a grid. • Perimeter of a rectangle. • Perimeter of rectilinear shapes. • What is area? • Counting squares • Making shapes. • Comparing area • **Calculating areas and perimeters of rectangles using formulae**	• Multiply by 10 and 100 • Divide by 10 and 100. • Multiply and divide by 1 and 0.. • Recap multiplying and dividing by 3 and 6– patterns and strategies. • Learn 6, 7 and 9, 11 and 12 times-table and division facts. • Recall and use multiplication and division facts for multiplication tables up to 12 × 12.
	National Curriculum	• Count in multiples of 6, 7, 9. 25 and1000. • Find 1000 more or less than a given number. • Recognise the place value of each digitin a four digit number (thousands, hundreds, tens and ones). • Order and compare numbers beyond1000. • Identify, represent and estimate numbers using different representations. • Round any number to the nearest 10,100 or 1000. • Solve number and practical problemsthat involve all of the above and with increasingly large positive numbers. • Count backwards through zero to include negative numbers.	• Add and subtract numbers with up to 4digits using the formal written methodsof columnar addition and subtraction where appropriate. • Estimate and use inverse operations tocheck answers to a calculation. • Solve addition and subtraction two step problems in contexts, deciding which operations and methods to use and why.		• Measure and calculate the perimeter of a rectilinear figure (including squares)in centimetres andmetres. • Convert between different units of measure [for example, kilometer to metre]. • Find the area of rectilinear shapes bycounting squares.	• Recall and use multiplication and division facts for multiplication tables up to 12 × 12. • Count in multiples of 6, 7, 9. 25 and 1000. • 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. • Solve problems involving multiplying and adding, 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.

Year 4 Spring Term		Daily fluency practice - repetition, retrieval and consolidation of known skills		
		Number: Multiplication and Division	**Number: Fractions**	**Number: Decimals**
	Sequence of lessons	• Multiply 3 numbers. • Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts. • Factor pairs. • Efficient multiplication. • Written methods of multiplication and division. • Multiply 2-digits by 1 –digit. • Multiply 3-digits by 1-digit. • Divide 3-digits by 1-digit • Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context • Correspondence multiplication problems. • commutative property of multiplication. • distributive property of multiplication	• Recap what is a fraction? Unit and non unit and Fractions greater than 1. • Reason about the location of mixed numbers in the linear number system. • Equivalent fractions – using fraction wall/numberline • Count in fractions. • Add and subtract 2 or more like fractions. • Subtract from whole amounts. • .Convert mixed numbers to improper fractions and vice versa. • Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbersSubtract 2 fractions • Calculate fractions of a quantity **including non-unit fractions of quantities** • Problem solving – calculate quantities.	• Recognise tenths and hundredths. • Tenths as decimals. • Tenths on a place value grid. • Tenths on a number line. • Divide 1 digit by 10. • Divide 2 digits by 10. • Hundredths. • Hundredths as decimals. • Hundredths on a place value grid. • Divide 1 or 2 digits by 100. • **Begin to add and subtract using decimals**
	National Curriculum	• Recall and use multiplication and division facts for multiplication tablesup 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 usingformal written layout. • Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondenceproblems such as n objects are connected to m objects.	• Recognise and show, using diagrams,families of common equivalent fractions. • Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred anddividing tenths by ten. • 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 thesame denominator.	• Recognise and write decimal equivalentsof any number of tenths or hundredths. • Find the effect of dividing a one or twodigit number by 10 or 100, identifying the value of the digits in the answer asones, tenths and hundredths. • Solve simple measure and moneyproblems involving fractions and decimals to two decimal places. • Convert between different units of measure [for example, kilometre to metre].

Year 4 Summer Term

Daily fluency practice - repetition, retrieval and consolidation of known skills

	Number: Decimals	Measurement:Money	Measurement:Time	Geometry: Property of Shape	Statisics	Geometry: Position and Direction
Sequence of lessons	• Make a whole. • Write decimals. • Compare decimals. • Order decimals. • Round decimals. • Halves and quarters as decimals • **Recognise fractions and decimal equivalence**	• Pounds andpence. • Ordering amounts ofmoney. • Using rounding to estimate money. • Four operations and problem solving .	• Hours, minutesand seconds. • Years, months, weeks and days. • Analogue to digital – 12 hour. • Analogue to digital – 24 hour.	• Identify angles. • Compare and orderangles. • Identify **regular** polygons, including equilateral triangles and squares, lengths are equal, and the angles are equal. • Find the perimeter of regular and irregular polygons. • Quadrilaterals. • Lines of symmetry. • Complete a symmetricfigure. • **Measure angles using a protractor**	• Interpret charts. • Comparison, sum anddifference. • Introducing line graphs. • Line graphs.	• Describe position. • Draw polygons, specified by coordinates in the first quadrant, • Translate within the first quadrant. • Describe a movement on a grid.
National Curriculum	• Compare numbers with the same numberof decimal places up to two decimal places. • Round decimals with one decimal place to the nearest whole number. • Recognise and write decimal equivalents to ¼, ½ and ¾. • Find the effect of dividing a one or two digit number by 10 or 100, identifying the value of the digits in the answer as ones, tenths and hundredths.	• Estimate, compare andcalculate different measures, including money in pounds and pence. • Solve simple measure andmoney problems involving fractions and decimals to two decimal places.	• Read, write and convert time between analogue and digital 12- and 24-hour clocks. • Solve problems involving converting fromhours to minutes; minutes to seconds; years to months; weeks to days.	• Identify acute and obtuse angles and compare and order angles up to two right angles by size. • Compare and classify geometric shapes, including quadrilateralsand triangles, based on their properties and sizes. • 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.	• Interpret and present discrete and continuousdata using appropriate graphical methods, including bar charts andtime graphs. • Solve comparison, sum and difference problemsusing information presented in bar charts, pictograms, tables and other graphs.	• Describe positions on a 2-D grid as coordinates in the first quadrant. • Plot specified points and draw sides to completea given polygon. • Describe movements between positions as translations of agiven unit to theleft/ right and up/ down.

Year 5 Autumn Term

Daily fluency practice - repetition, retrieval and consolidation of known skills

	Number: Place Value	Number: Addition and Subtraction	Maths storybook week Statistics	Number: Multiplication and Division	Number: Fractions
Sequence of lessons	• Roman numerals to 1,000. • Numbers to 10,000, 100,000, Numbers to at least a million. • Read and write numbers to 1,000,000 • Compare and order numbers to 1,000,000. • Powers of 10 • 10/100/1,000/10,000/100,000 more	• Mental strategies • Add whole numberswith more than 4-digits (column method). • Subtract whole numbers with more than 4-digits (columnm method). • Round to estimate and check answers and approximate. • Inverse operations(addition and	• **'If the World Were a Village' by David J Smith & Shelagh Armstrong** • present data	• Find factors and multiples , including common factors and common multiples, and express a given number as a product of 2 or 3 factors • Identify Prime numbers. • Square numbers. • Cube numbers.	• Recognise and find equivalent fractions • Equivalent fractions by multiplying/dividing • Recap Improper fractions to mixed numbers and vice verse.. • Compare and order fractions less than 1 with different denominators. • Compare and order fractions greater than 1 with different denominators.

		or less • Partition numbers to 1,000,000 • use a umber line to 1,000,000 • Round to the nearest 10, 100 or 1,000 • Round within 100,000 • Round within 1,000,000 •	subtraction). • Multi-step addition and subtraction problems. • Compare calculations • Find missing numbers	as a pie chart. • interpret data and clearly present interpretations.	• Multiples of 10, 100 and 1000. • Multiplying by 10, 100 and 1000 • Dividing by 10, 100 and 1000	• Add and subtract proper fractions – find common denominators. • Add and subtract mixed numbers. • Subtract mixed numbers
	National Curriculum	• Read, write, order and compare numbers to at least1000000 and determine the value of each digit. • Count forwards or backwards in steps of powers of 10 for anygiven number up to 1000000. • Round any number up to 1000000 to the nearest 10, 100,1000, 10000 and 100000. • Solve number problems and practical problems that involveall of the above. • Read Roman numerals to 1000 (M) and recognise years writtenin Roman numerals.	• Add and subtract numbers mentally with increasingly largenumbers. • Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction). • Use rounding to checkanswers to calculations and determine, in the context of a problem, levels of accuracy. • Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.	• Solve comparison, sum and difference problems using information presented in a line graph. .	• Identify multiples and factors, including finding all factorpairs of a number, and common factors of 2 numbers. • Know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers. • Establish whether a number up to 100 is prime and recallprime numbers up to 19. • Multiply and divide numbers mentally, drawing uponknown facts. • Recognise and use square numbers and cube numbers,and the notation for squared (²) and cubed (³).	• Compare and order fractions whose denominators are multiples of the same number. • Identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths. • Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements >1 as a mixed number [for example ⅖ + ⅘ = ⁶⁄₅ = 1⅕]. • Add and subtract fractions with the same denominator and denominators that are multiples of the same number.
Year 5 Spring Term		**Daily fluency practice - repetition, retrieval and consolidation of known skills**				
		Number: Multiplication and Division	**Number: Fractions**	**Number: Decimals and Percentages**	**Measurement: Perimeter and Area**	**Statistics**
	Sequence of lessons	• Short multiplication: Multiply 4-digits by 1-digit using a formal written method. • Long Multiplication: Multiply 2-digits by 2-digits. Multiply 3-digits by 2-digits. Multiply 4-digits by 2-digits. • Divide 4-digits by 1-digit using a formal written method • interpret remainders appropriately for the context • fraction remainders • **Onto decimals where appropriate**	• Multiply mixed numbers by integers. • Fraction of an amount.Find non-unit fractions of quantities. • **Recall decimal fraction** equivalents for $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{5}$ and $\frac{1}{10}$ and for multiples of these proper fractions • Using fractions as operators. (division) • Solve problems with fractions	• Recognise the place value of each digit in numbers with up to 2 d.p. • Decimals as fractions • Understand thousandths - thousandths as decimals. • Rounding decimals to whole numbers/to 1dp • Order and compare decimals. • Understand percentages. • Percentages as fractions and decimals. • Equivalent F.D.P.	• Measure perimeter. • Calculate perimeter. • Area of rectangles. • Area of compound shapes. • Area of irregular shapes. • **Area of a triangle** Compare areas using standard units.	• Read and interpret line graphs. • Draw line graphs. • Use line graphs to solve problems. • Read and interpret ables. • Timetables.

	National Curriculum	• Multiply and divide numbers mentally drawingupon known facts. • Multiply numbers up to 4 digits by a one ortwo digit number using a formal written method, including long multiplication for 2digit numbers. • Divide numbers up to 4 digits by a one digitnumber using the formal written method ofshort division and interpret remainders appropriately for the context. • Solve problems involving addition and subtraction, multiplication and division and a combination of these, including understandingthe use of the equals sign • .Solve problems involving multiplication and division, including using their knowledge of factors and multiples, squares and cubes. • Solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign.	• Multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams. • Read and write decimal numbers as fractions [for example 0.71 = $^{71}/_{100}$]. • Solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates.	• Read, write, order and compare numbers with up to threedecimal places. • Recognise and use thousandths and relate them to tenths,hundredths and decimal equivalents. • Round decimals with two decimal places to the nearest whole number and to one decimal place. • Solve problems involving number up to three decimalplaces. • Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, andas a decimal. • Solve problems which require knowing percentage and decimal equivalents of ½, ¼, ⅕, ⅖, ⅘ and those fractionswith a denominator of a multiple of 10 or 25.	• Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres. • Calculate and compare the area of rectangles (including squares), including using standard units, square centimetres (cm^2) and square metres (m^2), and estimate the area of irregular shapes.	• Solve comparison,sum and difference problems using information presented in a linegraph. • Complete, readand interpret information in tables including timetables.
Year 5 Summer Term		**Daily fluency practice - repetition, retrieval and consolidation of known skills**					
		Geometry: Properties of Shape	**Geometry: Position and Direction**	**Number: Decimals**	**Negative Numbers**	**Measurement: Converting Units**	**Measurement: Volume**
	Sequence of lessons	• Compare angles, estimate, and measure angles in degrees (°) and draw angles of a given size with a protractor • Drawing lines and angles accurately. • Calculating angles on a straight line. • Calculating angles around a point. • Calculating lengths and angles in shapes. • Recap regular and irregular polygons. • Reasoning about 3D shapes.	• Position in the first quadrant • Reflection. • Reflection with coordinates. • Translation. • Translation with coordinates.	• Adding and subtracting decimals within 1. • Adding decimals – crossing the whole. • Adding decimals with the same numberof decimal places. • Subtracting decimals with the samenumber of decimal places. • Adding decimals with a different number of decimal places. • Subtracting decimals with a differentnumber of decimal places. • Adding and subtracting whole anddecimals. • Decimal sequences. Multiplying and dividing decimals by 10, 100 and 1000	Negative numbers – including calculating with and solving problems	• km and m; cm and m; cm and mm; g and kg; l and ml • Estimating • Metric units. • Imperial units. • Converting units of measure including using common decimals and fractions.	• Recap What is volume? • Compare volumes – counting cubes. • Estimate volume. • Estimate capacity • Compare volumes with capacity.

						• Converting units of time . Timetables.	
	National Curriculum	• Identify 3D shapes, including cubesand other cuboids, from 2D representations. • Use the properties of rectangles to deduce related facts and find missing lengths and angles. • Distinguish between regular and irregular polygons based on reasoning about equal sides and angles. • Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles. • Draw given angles, and measurethem in degrees. • Identify: angles at a point and one whole turn (total 360°), angles at a point on a straight line and ½ a turn(total 180°) other multiples of 90°	• Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, andknow that theshape has notchanged.	• Solve problems involving number up to three decimal places. • Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000. • Use all four operations to solve problemsinvolving measure [for example, length, mass, volume, money] using decimal notation, including scaling. Multiply and divide whole numbers and those involving decimals by 10, 100 and 1,000. •	• Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers including through zero	• Convert between different units of metric measure [for example, km and m;cm and m; cm and mm; g and kg; l and ml]. • Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints. • Solve problems involving converting between units of time.	• Estimate volume [for example using 1cm3 blocks to build cuboids (including cubes)]and capacity [for example, using water]. • Use all four operations to solve problems involving measure.
Year 6 Autumn Term		**Daily fluency practice - repetition, retrieval and consolidation of known skills**					
		Number: PlaceValue including decimals	**Four operations ofNumber: Addition, Subtraction, Multiplication and Division**	**Maths Storybook week** **measurement**	**Number: Fractions**		**Geometry: Position and Direction**
	Sequence of lessons	• Numbers to ten million. • Compare an orderany number. • Recap and consolidate Decimal place value • Three decimal places. • Multiply by 10, 100 and 1,000. • Divide by 10, 100 and 1,000. • Multiply decimals by integers. • Round any numbers to 1 or 2 dp. • Calculate with Negative numbers. • Read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.	• Add and subtract whole numbers and decimals • Multiply up to 4-digit by 1-digit number. • Long multiplication including decimals • Solve problems with multiplication • Short division.– fraction and decimal remainders. • Divide decimals by integers • Solve problems with division • Rules of divisibility • Division using factors. • Long division with remainders • Common factors and common multiples. • Primes, squares and cubes. • Order of operations: BIDMAS • Mental calculations and estimation. • Reasoning from known facts. • Solve multi-step problems	**'Titanic' Circles/Pythagoras/Percentages** To know the different parts of a circle To investigate the circumference and area of a circle	• Recognise equivalent fractions and when fractions can be simplified -use common factors to simplify fractions. • Fractions on a number line. • Compare & order (denominator). • Compare & order (numerator). • Add & subtract fractions • Mixed number addition and subtraction. • Multiply fractions by integers. • Multiply fractions by fractions. • Divide fractions by integers • Four rules and problem solving with fractions. • Fraction of an amount. • Multi-step fraction problems		• Coordinates inthe first quadrant. • Coordinate in four quadrants. • Translations. • Reflections.

	National Curriculum	• Read, write, order and compare numbers up to 10,000,000 and determine the valueof each digit. • Round any wholenumber to a • required degree ofaccuracy. • Use negativenumbers in • context, and calculate intervals • across zero. • Solve number andpractical • problems that involve all of the above. • Identify the value of each digit in numbers given to 3 decimal places and multiply numbers by 10, 100 and 1,000 giving answers up to 3 decimal places.	• Solve addition and subtraction multi step problems in contexts,deciding which operations and methods to use and why. • Multiply multi-digit number up to 4 digits by a 2-digit number using the formal written method of long multiplication. • Multiply one-digit numbers with up to 2 decimal places by whole numbers. • Use written division methods in cases where the answer has up to 2 decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy. • Divide numbers up to 4 digits by a 2-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding as appropriate for the context. • Divide numbers up to 4 digits by a 2-digit number using the formal written method of short division, interpreting remainders according to the context. • Perform mental calculations, including with mixed operationsand large numbers. • Identify common factors, common multiples and prime numbers. • Use their knowledge of the order of operations to carry outcalculations involving the four operations. • Solve problems involving addition, subtraction, multiplicationand division. • Use estimation to check answers to calculations and determine in the context of a problem, an appropriate degree of accuracy		• Use common factors to simplify fractions; use common multiples toexpress fractions in the same denomination. • Compare and order fractions, including fractions >1. • Add and subtract fractions with different denominators and mixednumbers, using the concept of equivalent fractions. • Multiply simple pairs of proper fractions, writing the answer in its simplest form (e.g. 1/4 × 1/2 = 1/8). • Divide proper fractions by whole numbers (e.g. 1/3 ÷ 2 = 1/6). • Associate a fraction with division to calculate decimal fraction equivalents (e.g. 0.375) for a simple fraction (e.g. 3/8). • Identify the value of each digit to three decimal places and multiply and divide numbers by 10, 100 and 1000 where the answers are upto three decimal places. • Multiply one digit numbers with up to two decimal places by wholenumbers. • Use written division methods in cases where the answer has up totwo decimal places. • Solve problems which require answers to be rounded to specified degrees of accuracy. • Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.	• Describe positions on thefull coordinate grid (all four quadrants). • Draw and translate simpleshapes on the coordinate plane, and reflect them in the axes.

Year 6 Spring Term		Daily fluency practice - repetition, retrieval and consolidation of known skills				
		Number: Fractions/Decimals/ Percentages	**Number: Ratio**	**Number: Algebra**	**Measurement: Converting Units**	**Measurement: Perimeter, Area andVolume**
	Sequence of lessons	• Decimals as fractions. • Fractions to decimals • Fractions to percentages. • Equivalent FDP. • Order FDP • Percentage of an amount • Percentages –missing values. • Percentage increase and decrease.	• Use ratio language. • Ratio and fractions – proportion • Bar model and unitary method. • Introducing the ratiosymbol. • Calculating ratio. • Using scale factors. • Calculating scale factors. • Ratio and proportionproblems.	• Finding formula • Using letters and symbols to represent unknowns • Use an algebraic rule. • Substitution. • Word problems. • Solve simple one step equations. • Solve two step equations. • Find pairs of values.	• Metric measures. • Convert between metric units of measure, including using common decimals and fractions. • Calculate with metric measures. • Miles and kilometres. • Imperial measures. • read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	• Compare areas and calculate the area of rectangles (including squares) using standard units • Shapes – same area. • Area and perimeter. • Area of a triangle, parallelogram and composite shapes • Volume – counting Cubes and formulae. • Volume of a cuboid and composite
	National Curriculum	• Solve problems involving the calculation of percentages [for example, of measures and suchas 15% of 360] andthe use of percentages for comparison. • Recall and use equivalences between simple fractions, decimals and percentages including in different contexts.	• .Solve problems involving the relative sizes of two quantitieswhere missing values can be found by usinginteger multiplication and division facts. • Solve problems involving similar shapes where the scale factor is knownor can be found. • Solve problems involving unequal sharing and groupingusing knowledge of fractions and multiples.	• Use simple formulae. • Generate and describe linear number sequences. • Express missing number problems algebraically. • Find pairs of numbers that satisfyan equation with two unknowns. • Enumerate possibilities of • combinations of two variables	• Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate. • Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smallerunit of measure to a larger unit, and vice versa, using decimal notation to up to 3 d.p. • Convert between milesand kilometres.	• Recognise that shapeswith the same areas can have different perimeters and vice versa. • Recognise when it is possible to use formulae for area andvolume of shapes. • Calculate the area ofparallelograms and triangles. • Calculate, estimate and compare volumeof cubes and cuboidsusing standard units,including cm3, m3 and extending to other units (mm3, km3).

Year 6 Summer Term		Daily fluency practice - repetition, retrieval and consolidation of known skills			
		Geometry: Properties of Shapes	**Consolidation/SATs practice**	**Statistics (& CC throughout Yr 6)**	**Consolidation, Investigations and preparations for KS3**
	Sequence of lessons	• Recap measuring with a protractor. • Calculate missing angles. • Vertically opposite angles. • Angles in a triangle – special cases. • Angles in special quadrilaterals. • Angles in regular polygons. • Draw shapes accurately. • Nets of 3D shapes. • Draw, compose, and decompose shapes according to given properties, including dimensions, angles, and area, and solve related problems	• Arithmetic – Fluency; 4 rules inc fractions • Problem Solving/Reasoning with Number • FDPR • Measures • Geometry • satistics All	• Read and interpret line graphs. • Draw line graphs. • Use line graphs to solve problems. • Circles. • Read and interpret pie charts. • Pie charts with percentages. • Draw pie charts. • The mean.	All
	National Curriculum	• Draw 2-D shapes using given dimensions and angles. • Compare and classify geometric shapes based on their properties and sizes and find unknown anglesin any triangles, quadrilaterals and regular polygons. • Recognise angles where they meetat a point, are on a straight line, orare vertically opposite, and find missing angles.	All	• Illustrate and name parts of circles,including radius, diameter and circumference and know that the diameter is twice the radius. • Interpret and construct pie chartsand line graphs and use these to solve problems. • Calculate the mean as an average.	All

For progression in written calculations, refer to St Paul's Written Calculation Policy