Year 4

Mathematics Medium Term Plan:

Journey Drivers

- **J**oyful Readers
- **O**pportunities to Build Upon Knowledge and Skills
- **U**nderstanding of British and Christian Values
- **R**esilience and Perseverance
- **N**urture Curiosity
- **E**ncourage Articulate Learners
- **Y**our Wellbeing and Health

J	Reading is embedded into our teaching of Mathematics through our day to day practice. Through each lesson children explore an 'In Focus' task which requires reading to understand the problem. We also explore a textbook approach to teaching, which allows the children explore methods to solve a problem. Reading is also central to our EYFS curriculum offer with picture books used throughout our teaching.
O	Subject planning and delivery sequenced through a spiral curriculum with extensive retrieval opportunities and revisiting of previous learning. Development of computational thinking, building on learning in Computing curriculum.
U	British Values (Rule of Law and Mutual Respect). Christian Values (Courage and endurance). SMSC woven throughout
R	Strategies for developing metacognition woven throughout the mathematics curriculum. Inclusive approach to lessons - "keep up with new content", as opposed to having to "catch up" for all learners.
N	Child led learning as a feature of the three-part lesson – children to articulate their own understanding and methods.
E	Use of STEM sentence starters and progressive vital vocabulary woven into all lessons and clearly displayed on working walls. Extensive opportunities to reason and discuss problems within journaling.
Y	Application of Mathematics to real life contexts.

Curriculum Intent:

At St James Church of England Primary School, we provide a high-quality mathematics education utilising a mastery approach so that all children: become fluent in the fundamentals of mathematics; are able to reason mathematically with increasing articulacy; and can solve problems by applying their understanding to a variety of problems. Our inclusive mathematics curriculum provides challenge for all pupils with teachers choosing to progress to new learning only when the majority of learners have a secure understanding. Challenge occurs through depth of understanding with an offer of rich and sophisticated problems rather than new content. Our mathematics curriculum aims to develop the five core mathematical competencies in all of our learners – therefore providing a foundation for our children to understand the world around them knowing both the beauty and power of mathematics in its own right and how it can be applied to other subjects across the curriculum including Science and Computing.

Programme of Learning:

At St James Church of England Primary School, our mathematics planning from Reception through to Year 6 is informed (not dictated) by use of Maths-No Problem! – a high-quality mastery scheme of work, setting high aspirations for all children, ensuring that all pupils can "keep up with new content", as opposed to having to "catch up" – particularly after periods of remote learning. Maths – No Problem! provides a series of carefully sequenced lessons enabling new knowledge and skills to be built upon what has been previously taught and pupils can work towards clearly defined end points. However, our highly skilled teachers are then able to reflect and adapt the teaching sequence appropriately (dependent on pupil's knowledge) to provide further opportunities for practise, consolidation and an increasing depth of conceptual understanding. The sequence and speed of lesson delivery is dictated by pupil understanding with whitespace lessons and prioritisation of 'key lessons' utilised where appropriate to embed the most fundamental concepts. This ensures that all statutory National Curriculum coverage is met, with additional coverage of deeper non-statutory content if time allows. 'Fluency Friday' (supporting the discrete teaching of multiplication tables) also takes place from Y1-Y6 providing students with an opportunity to recall prior learning and time to practice their key skills so they remain sharp and so they can retrieve information they've learned when

Lesson Structure:

Lesson Part:	Lesson Feature:	Five Core Competencies Demonstrated by Learners Throughout A Lesson:
Anchor Task (30 minutes)	Lesson opens with a potential real-life problem called an anchor task, which develops children's reading skills. Pupils tackle the problem, utilising concrete, pictorial, abstract approach. Record ideas in journaling after extensive opportunities for exploration and discussion	**Visualisation:** ask learners to show 'how they know' at every stage of solving the problem. **Generalisation:** challenge learners to dig deeper by finding proof. **Communication:** encourage learners to answer in full sentences. Try asking learners to talk about the work they're doing or use structured tasks centred around a class discussion. **Number sense:** a learner's ability to work fluidly and flexibly with numbers. **Metacognition:** teach learners to think about how they are thinking. This helps learners solve multi-step tasks and promotes the ability to keep complex information in mind.
Guided Practise (10 minutes)	With the methodology discussed, the children then used this learning in the Guided Practice section. Working through the problems together, children continue to talk to each other and share ideas.	
Independent Practise (15 minutes)	For the final part of the lesson, children complete the independent practice section of the workbook individually. Initially, the workbook questions are scaffolded. However, as pupils work through them, the scaffolding is reduced and the questions gradually become more challenging.	

Our Prioritisation of Key Learning:

- Maths - No Problem! Lesson Prioritisation:

Staff utilise Maths – No Problem! online for the short-term planning to analyse lesson prioritisation, potential methods, and teaching sequence.

- NCETM Ready – to -Progress Criteria Strands:

Ready-to-progress criteria strands	Code
Number and place value	NPV
Number facts	NF
Addition and subtraction	AS
Multiplication and division	MD
Fractions	F
Geometry	G

Summary of criteria provided within MT plan alongside focus 'ready-to-progress criteria' per unit of work. All teaching staff provided with full guidance to inform teaching strategy on a day-to-day basis.

Coverage of Mathematics in Year 4:

Numbers to 10,000 (4 weeks)

Addition and Subtraction Within 10,000 (3 weeks)

Multiplication and Division (4 weeks)

Further Multiplication (4 weeks)

Graphs (1 week)

Fractions (3 weeks)

Decimals (3 weeks)

Time (2 weeks)

Money (2 weeks)

Length, Mass and Volume (2 weeks)

Area and perimeter of figures (1 week)

Geometry (3 weeks).

Position and Movement (2 week)

Roman Numerals (1 week)

Discrete teaching of 4, 8, 11, 7, 3, 6, 9, 12 and times tables across the academic year. All times tables known by the end of Y4.

Fluency

Fluency Friday takes place once per week to provide additional fluency practise (that will develop accuracy, flexibility and appropriate response, efficiency, automaticity, and number sense) alongside the discrete teaching of multiplication tables. This is also supported by retrieval time daily across school each morning.

Long-Term Knowledge Retention:

In addition to the natural spiral curriculum embedded within Maths – No Problem, ready to progress statements are prioritised as long-term knowledge focus that all learners must achieve to move to their next stage of learning.

Ready-To-Progress Criteria Summary: Year 1 to Year 6

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NPV	1NPV–1 Count within 100, forwards and backwards, starting with any number.		3NPV–1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10. →	4NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. →	5NPV–1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01. →	6NPV–1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).
		2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning. →	3NPV–2 Recognise the place value of each digit in *three*-digit numbers, and compose and decompose *three*-digit numbers using standard and non-standard partitioning. →	4NPV–2 Recognise the place value of each digit in *four*-digit numbers, and compose and decompose *four*-digit numbers using standard and non-standard partitioning. →	5NPV–2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning. →	6NPV–2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.
	1NPV–2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and = →	2NPV–2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. →	3NPV–3 Reason about the location of any *three*-digit number in the linear number system, including identifying the previous and next multiple of 100 and 10. →	4NPV–3 Reason about the location of any *four*-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each. →	5NPV–3 Reason about the location of any number with up to 2 decimals places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each. →	6NPV–3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.

Ready-To-Progress Criteria Summary: Year 1 to Year 6

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NPV			3NPV–4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts. →	4NPV–4 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. →	5NPV–4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts. →	6NPV–4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.
					5NPV–5 Convert between units of measure, including using common decimals and fractions.	
NF	1NF–1 Develop fluency in addition and subtraction facts within 10. →	2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice. →	3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice.			
	1NF–2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers. →		3NF–2 Recall multiplication facts, and corresponding division facts, in the 10, 5, 2, 4 and 8 multiplication tables, and recognise products in these multiplication tables as multiples of the corresponding number. →	4NF–1 Recall multiplication and division facts up to 12×12, and recognise products in multiplication tables as multiples of the corresponding number. →	5NF–1 Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	
				4NF–2 Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.		
			3NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10). →	4NF–3 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100) →	5NF–2 Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).	

Ready-To-Progress Criteria Summary: Year 1 to Year 6

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
AS	1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.	2AS–1 Add and subtract across 10.	3AS–1 Calculate complements to 100.			6AS/MD–1 Understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships (multiplicative relationships restricted to multiplication by a whole number).
	1AS–2 Read, write and interpret equations containing addition (+), subtraction (−) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.	2AS–2 Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more…?".	3AS–2 Add and subtract up to three-digit numbers using columnar methods.			6AS/MD–2 Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.
		2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two-digit number.	3AS–3 Manipulate the additive relationship: Understand the inverse relationship between addition and subtraction, and how both relate to the part–part–whole structure. Understand and use the commutative property of addition, and understand the related property for subtraction.			6AS/MD–3 Solve problems involving ratio relationships.
		2AS–4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.				6AS/MD–4 Solve problems with 2 unknowns.

Ready-To-Progress Criteria Summary: Year 1 to Year 6

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
MD		2MD–1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	4MD–1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. →	5MD–1 Multiply and divide numbers by 10 and 100; understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.	For year 6, MD ready-to-progress criteria are combined with AS ready-to-progress criteria (please see above).
		2MD–2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).		4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.	5MD–2 Find factors and multiples of positive whole numbers, including common factors and common multiples, and express a given number as a product of 2 or 3 factors.	
				4MD–3 Understand and apply the distributive property of multiplication. →	5MD–3 Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	
					5MD–4 Divide a number with up to 4 digits by a one-digit number using a formal written method, and interpret remainders appropriately for the context.	

Ready-To-Progress Criteria Summary: Year 1 to Year 6

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
F			3F–1 Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.			6F–1 Recognise when fractions can be simplified, and use common factors to simplify fractions.
			3F–2 Find unit fractions of quantities using known division facts (multiplication tables fluency). →		5F–1 Find non-unit fractions of quantities.	6F–2 Express fractions in a common denomination and use this to compare fractions that are similar in value.
			3F–3 Reason about the location of any fraction within 1 in the linear number system. →	4F–1 Reason about the location of mixed numbers in the linear number system.		6F–3 Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.
				4F–2 Convert mixed numbers to improper fractions and vice versa.	5F–2 Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	
			3F–4 Add and subtract fractions with the same denominator, within 1. →	4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.	5F–3 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.	
G	1G–1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another. →	2G–1 Use precise language to describe the properties of 2D and 3D shapes, and compare shapes by reasoning about similarities and differences in properties. →	3G–1 Recognise right angles as a property of shape or a description of a turn, and identify right angles in 2D shapes presented in different orientations.		5G–1 Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.	

Ready-To-Progress Criteria Summary: Year 1 to Year 6

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
G					5G–2 Compare areas and calculate the area of rectangles (including squares) using standard units.	
	1G–2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations. →		3G–2 Draw polygons by joining marked points, and identify parallel and perpendicular sides. →	4G–1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant. →		6G–1 Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.
				4G–2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons.		
				4G–3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.		

Unit 1: Numbers to 10,000 (13 lessons – 4 weeks)	Unit 2: Add. and Sub. Within 10,000 (17 lessons – 5 weeks)	Unit 14: Roman Numerals (2 lessons – 1 week)
Progress in Learning: In this chapter, pupils will learn to count in multiples of 25, 100 and 1000 in order to count larger numbers comprehensively. They will learn about the relative size of numbers and complete number sequences within 10 000. Pupils will learn about place value to 4 digits and they will link numbers in numerals and in words. They will compare numbers using language such as 'greater', 'smaller', 'less' and 'more', using the mathematical symbols <, > and =. They will use their knowledge of number and place value to help complete number patterns. They will also learn about rounding numbers to the nearest 1000, 100 and 10; children will apply this knowledge to approximate, total and find the difference.	Progress in Learning: In this chapter pupils will be taught to add and subtract with numbers up to 10 000. They will use the column method for addition and subtraction and they will also learn mental methods for addition and subtraction. Pupils will be encouraged to think about when is the most appropriate time to use each method. They will use the methods taught to solve word problems: visualising the problems using the bar model.	Progress in Learning: In this chapter, pupils will learn to read and write Roman numerals. They will learn how Roman numerals were used and how they are still used today.
N.C Objectives: Count in multiples of 25. Count in multiples of 1000. Order and compare numbers beyond 1000. Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones). Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones). Identify, represent and estimate numbers using different representations. Order and compare numbers beyond 1000. Identify, represent and estimate numbers using different representations. Recognise the place value of each digit in a 4-digit number (thousands, hundreds, tens and ones). Identify, represent and estimate numbers using different representations. Find 1000 more or less than a given number. Count in multiples of 6, 7 and 9. Round any number to the nearest 10, 100 or 1000. Identify, represent and estimate numbers using different representations. Round any number to the nearest 10, 100 or 1000.	N.C Objectives: Add numbers with up to 4 digits using the formal written methods of columnar addition where appropriate. Estimate and use inverse operations to check answers to a calculation. Subtract numbers with up to 4 digits using the formal written methods of columnar subtraction where appropriate. Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why.	N.C Objectives: Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value.
Ready to Progress Statements (Key Learning): 4.NPV–1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100. 4.NPV–2 Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning. 4.NPV–3 Reason about the location of any four-digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.	Ready to Progress Statements (Key Learning): N/A	Ready to Progress Statements (Key Learning): N/A
Teaching Resources: Base 10 materials (between two), number lines in hundreds; twenty-fives and fifties (between two), place-value discs (between two), counting stick, place-value cards (between two), place-value charts (between two), 2; 3 and 5 digit cards, timer (useful but not essential), Number lines (in thousands)	Teaching Resources: Base 10 materials (between two), place-value charts (between two), place-value discs, 2–8 digit cards (between two), base 10 materials/place-value discs (useful but not essential), whiteboards and pens (between two).	Teaching Resources:
Revisited Vital Vocabulary/ New Vital Vocabulary: Equal to, Ones, tens, hundreds, thousands, place value,, multiple, number patterns,, greater than smaller than, estimate, numbers to 10,000 in numbers/words, 1000 less, 1000 more, rounding, approximation, approximately, equal to.	Revisited Vital Vocabulary/ New Vital Vocabulary: add, sum, total, renaming, approximately, place-value counters, altogether, difference, calculation, equation.	Revisited Vital Vocabulary/ New Vital Vocabulary: Roman numerals, numeral system
Sentence Starters: (Lesson specific language also online). We can count in ___. The digit __ has a value of ___. The __ is in the __ place. ___ is smaller than ___ but greater than_____. 1000 less than __ is __. __ is between __ and __. __ is nearer to __ than __. ___ is approximately equal to __ (rounded to the nearest 10)	Sentence Starters: (Lesson specific language also online). I can show the number with _____. The bar model shows me ___. I subtract the _____ (ones/tens/hundreds). I need to _____ to find the difference. I add the ones. Then I add the ___. Then I add the ___ and finally the ___. I rename the ___ (ones/tens). I rounded to the nearest ___ to estimate.	Sentence Starters: (Lesson specific language also online). ____ is used to represent _____. These Roman numerals represent _____. The rule for representing _____ is _____ ____ can be written as ____.

Unit 3: Multiplication and Division (18 lessons – 4 weeks)		Unit 4: Further Multiplication (18 lessons – 4 weeks		Unit 5: Graphs (5 lessons – 1 week)	
Progress in Learning: In this chapter, pupils will learn how to multiply and divide by 6, 7, 9, 11 and 12. They will begin to understand mathematical vocabulary such as 'quotient' in relation to division. They will learn how to calculate multiplication equations using the multiplication facts that they know. They will understand the difference between sharing and grouping and they will understand the commutative law in multiplication. They will also solve problems involving multiplication and division.		Progress in Learning: In this chapter, pupils will further develop their understanding of multiplication and division. They will learn how to divide and multiply by 1 and 0 and understand the law of commutativity. They will learn how to multiply three numbers together using prior knowledge of multiplication tables. Pupils will use their tables and knowledge of place value to multiply multiples of 10, leading to the multiplication of 2-digit numbers using short multiplication. They will use their knowledge of multiplying multiples of 10 when multiplying multiples of 100, leading to multiplying 3-digit numbers using short multiplication. Pupils will learn more about division and will divide 2-digit numbers using two methods, including numbers with remainders. They will learn to solve multiplication and division problems using the methods they have learned and will use bar models to visualise what the problem is asking them to do.		Progress in Learning: In this chapter, pupils will learn how to interpret picture graphs and bar graphs. They will be introduced to line graphs and how they are used to measure change over time. They will interpret line graphs and use information collated in a table to draw a line graph. Pupils will make predictions based on trends identified in data.	
N.C Objectives: Recall multiplication and division facts for multiplication tables up to 12 × 12. Recognise and use commutativity in mental calculations. Use place value, known and derived facts to multiply and divide mentally. Solve problems involving multiplication and addition. Solve problems involving multiplying and adding.		N.C Objectives: Use place value, known and derived facts to multiply and divide mentally, including: multiplying by 0 and 1. Recognise and use factor pairs and commutativity in mental calculations. Multiply 2-digit and 3-digit numbers by a 1-digit number. Multiply 2-digit and 3-digit numbers by a 1-digit number using formal written layout. Use place value, known and derived facts to multiply and divide mentally. Solve problems involving multiplying and adding.		N.C Objectives: Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts.. Solve comparison problems using information presented in bar charts.	
Ready to Progress Statements (Key Learning): 4.NF-1 Recall multiplication and division facts up to , and recognise products in multiplication tables as multiples of the corresponding number. 4.MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. 4.MD-2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. 4.MD-3 Understand and apply the distributive property of multiplication.		Ready to Progress Statements (Key Learning): 4.NF-1 Recall multiplication and division facts up to , and recognise products in multiplication tables as multiples of the corresponding number. 4.MD-1 Multiply and divide whole numbers by 10 and 100 (keeping to whole number quotients); understand this as equivalent to making a number 10 or 100 times the size. 4.MD-2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication. 4.MD-3 Understand and apply the distributive property of multiplication.		Ready to Progress Statements (Key Learning): N/A	
Teaching Resources: Objects for counting/counters, linking cubes, 6 times table cards (between two), counting stick, timer. 6; 7; 8 and 9 times tables cards (set between two).		Teaching Resources: Counters, laminated part-whole diagrams (between two), base 10 materials (between two), place-value discs (between two), place-value charts (between two).		Teaching Resources: Sugar paper (between four).	
Revisited Vital Vocabulary/ New Vital Vocabulary: Sharing, grouping, total, equals, equal groups, groups of, times, multiply, multiplication, groups of, double, divide, division, multiplication family, division family, commutative properties, inverse, commutativity, multiple, quotient, dividend, divisor, combinations.		Revisited Vital Vocabulary/ New Vital Vocabulary: sharing, grouping, multiple, multiply, quotient, dividend, divisor, inverse, commutativity, partition,		Revisited Vital Vocabulary/ New Vital Vocabulary: table, bar graph, line graph, pictogram, information, more, less, greatest, fewest, highest, x and y axis, scale,	
Sentence Starters: (Lesson specific language also online). There are ___ in each group. There are ___ groups. The quotient is ___. The remainder is ___.	There are ___ left over. I noticed that ... I solved the problem by ... I checked my answer by ...	Sentence Starters: (Lesson specific language also online). 3 × 4 is ____ 4 × 3. The product is the ____. The method I prefer is ____. I multiplied ____ first.	I divide___ hundreds by ___. I divide ___ tens by ___. I divide ___ ones by ___. The quotient in the equation is ___.	Sentence Starters: (Lesson specific language also online). The pictogram shows ... The bar graph shows ... The line graph shows... I predict that...	

Unit 6: Fractions (13 lessons – 3 weeks)	Unit 7: Time (6 lessons – 2 weeks)	Unit 11: Area of Figures (6 lessons – 1 week)
Progress in Learning: In this chapter pupils will be introduced to hundredths. They will learn about mixed number fractions and improper fractions. They will learn how to convert between mixed numbers and improper fractions. They will learn how to add and subtract fractions and will solve addition and subtraction word problems.	Progress in Learning: Pupils will learn about the 24-hour clock. They will learn how to use both the 12-hour clock and the 24-hour clock. They will convert between units of time, such as minutes and seconds, and hours and minutes. Pupils will learn how to solve time problems involving conversions and will calculate durations of time in relation to word problems.	Progress in Learning: In this chapter, pupils will learn about the concepts of area and perimeter. They will measure area by measuring surface coverage, i.e. counting squares before measuring area by using multiplication. They will find areas of figures that have squares and rectangles by counting and visualising. They will learn how to apply their knowledge of finding area to figures in different orientations.
N.C Objectives: Count up and down in hundredths; recognise that hundredths arise when dividing an object by 100 and by dividing tenths by 10. 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 problems involving increasingly harder fractions to calculate quantities. Recognise and show families of common equivalent fractions using diagrams. Recognise and show, using diagrams, families of common equivalent fractions. Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities. Recognise and show families of common equivalent fractions using diagrams. Recognise and show families of common equivalent fractions using diagrams. Add fractions with the same denominator. Subtract fractions with the same denominator. 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.	N.C Objectives: Read, write and convert time between analogue and digital 12-hour and 24-hour clocks. Convert between different units of measure. Solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. Convert between different units of measure.	N.C Objectives: Find the area of rectilinear shapes by counting squares.
Ready to Progress Statements (Key Learning): 4F–1 Reason about the location of mixed numbers in the linear number system. 4F–2 Convert mixed numbers to improper fractions and vice versa. 4F–3 Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.	Ready to Progress Statements (Key Learning): N/A	Ready to Progress Statements (Key Learning): N/A
Teaching Resources: Blank number line (increments marked), blank 100-square,, fraction cards (between two), blank number lines (increments marked) 0; 1; 3; 5 and 8 digit cards (between two)	Teaching Resources: Time number lines for 12-hour and 24-hour clocks. Blank number lines (between two)	Teaching Resources: Small paper square tiles (between two). Right-angled triangle tiles (same size as square tiles) (between two)
Revisited Vital Vocabulary/ New Vital Vocabulary: Fraction, sum, divide, part, whole, number line, numerator, denominator, hundredth, tenth, mixed number, equivalent, simplify, proper fraction, improper fraction,	Revisited Vital Vocabulary/ New Vital Vocabulary: Start, end, time, minutes, hours, days, month, year, arrival, departure, estimate, 12 hour, 24 hour, convert, duration, am, pm.	Revisited Vital Vocabulary/ New Vital Vocabulary: Centimetre metre, perimeter, quadrilateral, rectangle, area, square units, length, breadth.
Sentence Starters: (Lesson specific language also online). I can count in... ___ is closer to ___ than ___. I can simplify ___ by dividing by ___. I can divide the numerator and the denominator by ___. ___ thirds and ___ thirds make ___ thirds. 2/3 is greater than/less than ___. 1 whole is __ tenths.	Sentence Starters: (Lesson specific language also online). In the 12-hour clock, the day begins and ends at ___. In the 24-hour clock, the day begins at ___ and ends at ___. There are ___ seconds in ___ minutes. There are ___ minutes in ___ hours. The journey took ___ hours. The journey took ___ minutes. 1 h = ___ min. 1 year is ___ months. 1 week is ___ days.	Sentence Starters: (Lesson specific language also online). The side length is ___ cm / m. The perimeter of this shape is ___ cm / m. I found the perimeter of this shape by... The area of this figure is ___ square units. The perimeter of this figure is ___ units. There are ___ rows of 1-unit squares. Each row has ___ squares. The area of Rectangle ___ is ___ square units. The length is ___ units and the breadth is ___ units. I found the area of the rectangle by...

Unit 8: Decimals. (17 lessons – 3 weeks)		Unit 9: Money (8 lessons – 2 weeks)		Unit 13: Position and Movement. (5 lessons – 1 week)	
Progress in Learning: In this chapter, pupils will learn about tenths and hundredths. They will learn how to count, order and record the decimals in different ways. They will begin to see equivalence between tenths and hundredths and will be able to compare and order the numbers. Pupils will learn to continue linear number sequences as well as round decimals to the nearest whole number. They will also link tenths and hundredths with dividing by 10 and 100.		Progress in Learning: In this chapter, pupils will learn how to count and record in pounds and pence. They will make links between tenths and hundredths and decimal notation for money. They will learn how to compare amounts of money by looking at significant digits and by converting amounts from pounds to pence and vice versa. Pupils will be taught how to round money to the nearest pound and understand contexts in which this would be a useful skill to know. They will use this skill to estimate amounts and totals. They will apply these skills to problem-solving situations, finding totals and calculating change. They will also learn how to visualise a money problem using a bar model and begin to explore unequal sharing in the context of money.		Progress in Learning: In this chapter, pupils will learn how to describe the positions of objects and figures. They will learn how to describe positions on grids using coordinates. They will be introduced to the x-and y-axes and build an understanding of how coordinates are written. They will learn how to translate shapes using the terms 'left', 'right', 'upwards' and 'downwards' and will use coordinates to describe a figure following a translation.	
N.C Objectives: Recognise and write decimal equivalents of any number of tenths or hundredths. Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. Recognise and write decimal equivalents of any number of tenths or hundredths. Compare numbers with the same number of decimal places up to 2 decimal places. Round decimals with 1 decimal place to the nearest whole number. Recognise and write decimal equivalents to 1/4, 1/2, 3/4. Find the effect of dividing a 1- or 2-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths. Solve simple measure and money problems involving fractions and decimals.		N.C Objectives: Calculate different measures, including money in pounds and pence. Estimate, compare and calculate different measures, including money in pounds and pence.		N.C Objectives: Describe positions on a 2-D grid as coordinates in the first quadrant. Plot specified points and draw sides to complete a given polygon. Describe movements between positions as translations of a given unit to the left/right and up/down. Describe movements between positions as translations of a given unit to the left/right and up/down.	
Ready to Progress Statements (Key Learning): N/A		Ready to Progress Statements (Key Learning): N/A		Ready to Progress Statements (Key Learning): 4.G-1 Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	
Teaching Resources: Square cards divided into tenths (between two), place-value discs (between two), decimal place-value charts (between two), base 10 materials (between two), square cards divided into hundredths (between two), ten frames (between two).		Teaching Resources: Coins and notes (set between two), Laminated number lines (10 increments) (between two), bar model strips (between two), place-value charts (between two)		Teaching Resources: Square grids (one between two) Paper right-angled triangles (between two) Paper shapes for translation onto square grid (between two)	
Revisited Vital Vocabulary/ New Vital Vocabulary: Ones, tens, number pattern, greater than, less than, round, equivalent, numerator, denominator, tenths, hundredths, decimal, decimal point, mixed number,		Revisited Vital Vocabulary/ New Vital Vocabulary: tenths, hundredths, decimal, decimal point, decimal place, pounds, pence, estimate.		Revisited Vital Vocabulary/ New Vital Vocabulary: x-axis, y-axis, , vertex, isosceles triangle, right-angled triangle, scalene triangle, translation, co-ordinates	
Sentence Starters: (Lesson specific language also online). This shows ___ tenths. ___ tenths as a decimal is zero point ___. This shows ___ tenths and ___ hundredths. ___ tenths and ___ hundredths as a decimal is zero point ___ ___.	___ divided by 10 is ___. ___ divided by 100 is ___. I divided [whole number] by 10 / 100 by... [decimal] is closer to ___ than to ___. [decimal] is approximately equal to ___ to the nearest whole number. I rounded this decimal up / down because...	Sentence Starters: (Lesson specific language also online). [coin] has a value of ___. These coins have a total value of £___ and ___p. These coins are enough to buy ___. £___ is greater than £___. I compared these two amounts of money by...	[amount of money] is nearer to £___ than £___ to the nearest £1 / £10. [amount of money] is £___ to the nearest £1. [amount of money] is £___ to the nearest £10. I rounded this amount to the nearest £1 / £10 by...	Sentence Starters: (Lesson specific language also online). Ravi is ___ units from classroom ___. Ravi / Point ___ is ___ units from classroom ___ and ___ units from classroom ___. Point ___ is ___ units from the y-axis and ___ units from the x-axis.	The coordinates of point ___ are (___, ___). I/ We could plot point C at (__, __) to make a _____ triangle. The coordinates for point ___ are (___, ___). [shape] moves / translates ___ units to the right / left and ___ units up / down. The new coordinates are (___, ___).

Unit 10: Mass, Volume and Length. (12 lessons – 3 weeks)		Unit 12: Geometry. (10 lessons – 3 weeks)		
Progress in Learning: In this chapter, pupils will learn how to estimate and measure mass, volume and length. They will learn how to convert units of measure from larger to smaller and vice versa. Pupils will also be taught how to measure perimeter using centimetres and millimetres. They will use their knowledge of measures to solve problems involving all three aspects of measurement in this chapter.		Progress in Learning: In this chapter, pupils will learn about types of angles. They will name and compare angles and use this information to help when classifying triangles and quadrilaterals. Pupils will explore symmetry and symmetrical figures before applying this knowledge to the completion of symmetrical figures. They will draw lines of symmetry on shapes and figures and will combine this knowledge and understanding to sort a variety of 2-D shapes.		
N.C Objectives: Convert between different units of measure. Estimate, compare and calculate different measures. Estimate, compare and calculate different measures. Convert between different units of measure. Estimate, compare and calculate different measures. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Convert between different units of measure. Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres. Convert between different units of measure.		N.C Objectives: 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 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. Complete a simple symmetric figure with respect to a specific line of symmetry.		
Ready to Progress Statements (Key Learning):		Ready to Progress Statements (Key Learning): 4-G-2 Identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. Find the perimeter of regular and irregular polygons. G-3 Identify line symmetry in 2D shapes presented in different orientations. Reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.		
Teaching Resources: Weighing scales (dials) (between two), pre-measured items to weigh (between two), weighing scales (digital) (between two), various measuring beakers (scales marked) (between two), everyday examples of capacity (between two), measuring beakers (between two), laminated number lines (10 increments) (between two), height chart (between two), rulers (cm) (one between two), rulers (cm and mm) (between two), weighing scales (between two), measuring jugs (between two)		Teaching Resources: Rulers, right-angle checker (each), different paper triangles (between two), paper shapes: square; rectangles; circle; right-angled triangle; isosceles triangle; pentagon (between two), mirrors.		
Revisited Vital Vocabulary/ New Vital Vocabulary: Metre, centimetre, decimal, kilometre, estimate, gram, millilitre, litre.		Revisited Vital Vocabulary/ New Vital Vocabulary: Angle, right-angle, acute angle, obtuse angle, quadrilateral, equilateral triangle, isosceles triangle, scalene triangle, parallel, square, rectangle, rhombus, parallelogram, trapezium, kite, symmetrical.		
Sentence Starters: (Lesson specific language also online). The length / height of ____ is ___ m / cm. ___ m in centimetres is ___ cm. ___ cm in metres is ___ m. ___ m ___ cm in metres (as a decimal) is ___ m. ___ m ___ cm in centimetres is ___ cm.	The mass of ____ is ___ kg / g. ___ kg in grams is ___ g. ___ g in kilograms is ___ kg. ___ kg ___ g in kilograms (as a decimal) is ___ kg. ___ kg ___ g in grams is ___ g.	Sentence Starters: (Lesson specific language also online). This is a(n) ____ angle. Angle ____ is the smallest, and angle ____ is the greatest. I know this angle is greater than the other one because... This is a(n) ____ triangle.	I know this is a(n) ___ triangle because... This shape is/isn't symmetrical because... This is a line of symmetry. I completed the symmetrical figure by...	