Year 2

Mathematics Medium Term Plan:

Our Rainbow Promises:

Encourage Resilience and perseverance
Develop Articulate learners
Influence aspirations
Nurture curiosity
Instil British and Christian Values
Provide Opportunities to build upon knowledge and skills
Promote Wellbeing and Health

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.
A	Use of STEM sentence starters and progressive vital vocabulary woven into all lessons and clearly displayed on working wall. Extensive opportunities to reason and discuss problems within journaling.
I	Mathematical careers discussed. Deepening Understanding Maths Club, and Money Mentors in Y4/Y5/Y6. Utilise 'assessment as learning' to develop and support children's metacognitive skills - empowers a growth mindset where children can see their maths ability as something that can change and improve.
N	Child led learning as a feature of the three-part lesson – children to articulate their own understanding and methods.
B	British Values (Rule of Law and Mutual Respect). Christian Values (Courage and endurance). SMSC woven throughout
O	Subject planning and delivery sequenced through a spiral curriculum with extensive retrieval opportunities built around Rainbow Promises. Development of computational thinking, building on learning in Computing curriculum.
W	Application of Mathematics to real life contexts.

Curriculum Intent:

At Parish 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 Parish 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 needed.

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 2:

Numbers to 100 (2 weeks)

Addition and Subtraction. (4 weeks)

Multiplication 2s, 5s, and 10s. (3 weeks)

Multiplication and Division of 2, 5, 10 (3 weeks)

2D Shapes (2 weeks)

Length (2 weeks)

Mass (2 weeks)

Fractions (4 weeks)

Money (3 weeks)

Temperature (1 week)

Pictograms (1 week)

Word Problems (1 week)

3D Shapes (2 weeks)

Time (3 weeks)

Volume (2 weeks)

Discrete teaching of 2, 5 and 10 times tables across the academic year.

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 100 (6 lessons – 2 weeks)	Unit 2: Addition and Subtraction (14 lessons – 4 weeks)	Unit 3: Multiplication 2s, 5s and 10s (10 lessons – 3 weeks)
Progress in Learning: This chapter concentrates on various aspects of numbers to 100. Pupils will be able to count to 100 through different steps, including counting up in tens. Place value will have a major role throughout the chapter. Pupils will also look at comparing numbers using their place-value knowledge and they will go through number bonds. The final two chapters will allow pupils to explore numbers to see patterns within 100.	Progress in Learning: This chapter looks at addition and subtraction using number bond diagrams as well as the standard column method. Pupils will be taken through each lesson with slight variations in the learning objects so that they can reach a level of mastery.	Progress in Learning: This chapter investigates the multiplication of 2, 5 and 10. Pupils will also have the opportunity to understand what multiplication means and what it looks like. Patterns in multiplication and commutative law are also covered in this chapter.
N.C Objectives: Count in steps of 2, 3 and 5 from 0, and in tens from any number, forwards and backwards. Read and write numbers to at least 100 in numerals and in words. Recognise the place value of each digit in a 2-digit number (tens, ones). Compare and order numbers from 0 up to 100; use <, > and = signs. Use place value and number facts to solve problems.	N.C Objectives: Pupils can add numbers using concrete objects, pictorial representations and mentally, including a 2-digit number and ones. Add and subtract numbers using concrete objects, pictorial representations and mentally, including a 2-digit number and ones, and a 2-digit number and tens. Solve problems with addition using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Solve problems with addition applying increasing knowledge of mental and written methods. Recall and use addition facts to 20 fluently, and derive and use related facts up to 100. Subtract numbers using concrete objects, pictorial representations and mentally, including a 2-digit number and ones. Solve problems with subtraction using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Recall and use subtraction facts to 20 fluently, and derive and use related facts up to 100. Solve problems with subtraction applying an increasing knowledge of mental and written methods. Add numbers using concrete objects, pictorial representations and mentally, including adding three single-digit numbers.	N.C Objectives: Calculate mathematical statements for multiplication within the multiplication tables and write them using the multiplication (×) and equals (=) signs. Solve problems involving multiplication using materials, arrays, repeated addition, mental methods and multiplication facts, including problems in contexts. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables. Solve problems involving multiplication using materials, arrays, repeated addition, mental methods and multiplication and division facts, including problems in contexts. Show that multiplication of two numbers can be done in any order (commutative). Solve problems involving multiplication using materials, arrays, repeated addition, mental methods and multiplication facts, including problems in contexts.
Ready to Progress Statements (Key Learning): 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. 2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	Ready to Progress Statements (Key Learning): 2NF-1 Secure fluency in addition and subtraction facts within 10, through continued practice. 2AS-1 Add and subtract across 10. 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. 2AS-4 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.	Ready to Progress Statements (Key Learning): 2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. 2MD-2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division).
Teaching Resources: Tens and ones (to 100) (one set between two), Objects for counting (e.g. straws)/counters (100), Elastic bands, Laminated part-whole diagrams (one between two), Place-value charts (one between two), 0-9 digit cards (one between three to four), Coins/counters, 100-square (one between two)	Teaching Resources: 0-9 digit cards (one between two), Place-value charts (one between two), Laminated part-whole diagrams (one between two), Objects for counting, baskets/boxes, number lines, Tens and ones (to 100) (one set between two), Base 10 materials	Teaching Resources: Objects for counting, counters, linking cubes (20 between two) Cups (10 between two), 1-20 number tracks, 5 times table cards (arrays/dots) (one set between two) 1-50 number chart, 10 times table cards (arrays/dots), Base 10 rods (10 between two), 10 times tables (arrays), 2; 5 and 10 times table cards (shuffled) (one set between three), 2 times table cards (arrays/dots)
Revisited Vital Vocabulary/ New Vital Vocabulary: Numbers to 100, counting forwards/backwards/tens, tens, ones, number bond, place-value chart, number line greatest, smaller, more than, less than, equal to, tens, ones, place-value chart, counting on, counting backwards.	Revisited Vital Vocabulary/ New Vital Vocabulary altogether, ones, tens, addition equation, add the ones, add the tens, plus, equals, number line, addition equation, counting back, taking away, double, making 10, renaming, column method.	Revisited Vital Vocabulary/ New Vital Vocabulary: total, groups of, lots of equal, times, double, equal to, array, altogether, multiply, multiplication, multiplication equation,
Sentence Starters: (Lesson specific language also online). One part is ..... The other part is ..... The whole is .... There are .... tens and ..... ones. There are ..... altogether The whole is ..... and the parts are .... is greater than .... is less than .... is equal to..... 40, 50, ... 90, 80, ...	Sentence Starters: (Lesson specific language also online). The parts are ..... The whole is ..... I can partition ..... into .... And ..... I will regroup one ten for ten ones. How many more to make .... plus ..... is equal to ..... When we subtract, we start with the whole. ..... and .... .have a difference of ... I can break apart 30 into ___ and ___.	Sentence Starters: (Lesson specific language also online). There are ___ groups of ___ oranges. There are ___ oranges in total. 5 times 3 equals ___. Numbers in the .... times table always ,,,,, 0, 10, 20, 30... The next number in the 10 times table is always ___ more than the previous number.

Unit 4: Multiplication and Division 2s, 5s and 10s (8 lessons – 3 weeks)	Unit 11: 2D Shapes (10 lessons – 2 weeks)	Unit 5: Length (8 lessons – 2 weeks)
Progress in Learning: This chapter focuses on both the multiplication and division of 2, 5 and 10. Pupils will look at different ways of sharing, including sharing and grouping before covering division by 2, 5 and 10. Pupils will also investigate links between multiplication and division and odd and even numbers.	Progress in Learning: This chapter focuses on 2-D shapes and their different properties. It also explores how to draw shapes, make patterns with shapes and turn shapes using familiar language. The chapter begins by carefully moving pupils from identifying sides to identifying vertices before learning about lines of symmetry. Then they make figures using blocks and sort basic shapes using different criteria before drawing shapes using square grids and dot grids. Finally, pupils make and describe patterns in addition to moving and turning shapes.	Progress in Learning: In this chapter pupils will get a better understanding of how to measure length. They will begin by understanding what a metre is and what centimetres are and then progress to using them in real-life contexts.
N.C Objectives: Calculate mathematical statements for division within the multiplication tables and write them using the division (÷) and equals (=) signs. Recall and use division facts for the 2, 5 and 10 multiplication tables. Solve problems involving division using materials, arrays, repeated addition, mental methods and division facts, including problems in contexts. Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers.	N.C Objectives: Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Compare and sort common 2-D and 3-D shapes and everyday objects. Order and arrange combinations of mathematical objects in patterns and sequences. Order and arrange combinations of mathematical objects in patterns and sequences. 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, half and three-quarter turns (clockwise and anti-clockwise).	N.C Objectives: Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm) to the nearest appropriate unit, using rulers. Compare and order lengths. Compare and order lengths and record the results using >, < and =. Compare and order lengths. Use appropriate standard units to estimate and measure length/height in any direction.
Ready to Progress Statements (Key Learning): 2MD-1 Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables. 2MD-2 Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotative division).	Ready to Progress Statements (Key Learning): 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.	Ready to Progress Statements (Key Learning): N/A
Teaching Resources: Objects for counting, linking cubes (20 between three), Bags/boxes/plastic cups, counters (50 between two), Pieces of card (10 between two), cups (10 between two), 2, 5 and 10 times table cards (shuffled) (one set between three), 2, 5 and 10 times tables cards (set between two), Objects for counting/counters	Teaching Resources: 2-D shape sets, 2-D paper shapes, mirrors (set between two), pattern blocks Variety of 2D shapes.	Teaching Resources: Tape measures (one between two), Metre sticks, 15 cm rulers (one between two), 1 m tape measures (one between two)
Revisited Vital Vocabulary/ New Vital Vocabulary: Sharing, grouping, total, equals, equal groups, groups of, times, multiply, multiplication, groups of, double, divide, division, odd, even, division equation.	Revisited Vital Vocabulary/ New Vital Vocabulary: corner, side, point, circle, square, rectangle, pattern, pentagon, hexagon, octagon, symmetrical.	Revisited Vital Vocabulary/ New Vital Vocabulary: unit, less than, difference, sum, difference, total, length, unit, centimetre, metre, more than, less than, greater than, longest, shortest, estimate.
Sentence Starters: (Lesson specific language also online). ___ is an even number. ___ is an odd number. ___ children can be put into teams of ___. ___ divided by ___ equals ____. There are ___ groups of ___ children. There are ___ equal teams. ___ divided by ___ equals ___. There are ___ in each group.	Sentence Starters: (Lesson specific language also online). A ..... has ..... sides and ..... vertices. A ..... has .... Faces, ... edges and ..... vertices. This shape is a ..... because it has ..... An irregular shape is one without equal sides or equal angles.	Sentence Starters: (Lesson specific language also online). The cabinet is about ___ m long. The table is about ___ m long. The map is _____ than 1 m. The length of the bookcase is _____ than 1 m. The height of the door is about ___ . The _____ is the shortest/longest.

Unit 6: Mass (7 lessons – 2 weeks)	Unit 13: Fractions (13 lessons – 4 weeks)	Unit 10: Money (10 lessons – 2 weeks)
Progress in Learning: In this chapter, pupils will be learning about mass in the context of kilograms and grams. They will learn how to read a scale, to compare the weight of different objects and to solve word problems relating to mass	Progress in Learning: This is a large unit on fractions. It provides a review of previously-learnt concepts and extends pupils to find fractions of whole numbers/quantities by the end of the unit. The unit begins by having pupils make equal parts: focusing on making halves, quarters and thirds. Then pupils learn to name fractions of the same denominations. After this, pupils learn about equal fractions, primarily looking at halves and quarters. They then move on to comparing and ordering fractions and counting wholes and parts. Pupils learn to count in quarters and thirds, finishing the unit by finding parts of a set and part of a quantity.	Progress in Learning: This is the final chapter on money in Year 2. Pupils will be reviewing concepts on writing and counting money in addition to extending their knowledge of how to represent money using £ and p. They will be reinforcing previous counting methods using fives and tens to count quickly and efficiently. They will be required to show equal amounts of money and how to exchange money. By the end of the unit, they will be using bar modelling to calculate the total amount of money spent and then working out how much change is required from amounts below £100.
N.C Objectives: Choose and use appropriate standard units to estimate and measure mass (g and kg). Choose and use appropriate standard units to estimate and measure mass (kg, g) to the nearest appropriate unit, using scales. Compare and order mass and record the results using >, < and =.Compare and order mass.	N.C Objectives: Recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity. Write simple fractions, for example 1/2 of 6 = 3, and recognise the equivalence of 2/4 and 1/2. Compare and order unit fractions, and fractions with the same denominators. Recognise and show, using diagrams, equivalent fractions with small denominators. Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators.	N.C Objectives: Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value. 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. Find different combinations of coins that equal the same amounts of money.
Ready to Progress Statements (Key Learning): N/A	Ready to Progress Statements (Key Learning): N/A	Ready to Progress Statements (Key Learning): N/A
Teaching Resources: 1 kg mass (one between four), objects weighing 1 kg or less (one set between four), dial scales (between four), 1g mass, objects weighing 1 g	Teaching Resources: Various four-sided shapes on paper (each), fraction strips (card/paper) (between two), fraction number lines (between two), fraction cards (between two), circular representations of fractions (between two), fraction circles (set between two), lengths of ribbon, strips of card (between two), counters to represent objects.	Teaching Resources: Coins and notes (set between two) Cards showing amounts of money to match coins (set between two) Sterling notes set (between two) Coins (set between two) Envelopes with pre-made amounts of money enclosed (set between two) Labelled 'shop' objects (set between four)
Revisited Vital Vocabulary/ New Vital Vocabulary: Balance, weight, more, less, single, group, total, add, subtract, heavier, lighter, kilogram/kg, grams, mass, weight, heaviest, lightest.	Revisited Vital Vocabulary/ New Vital Vocabulary: Fraction, equal, half, halves, quarter, sharing, group, one quarter, unit fraction, numerator, denominator, third, equivalent.	Revisited Vital Vocabulary/ New Vital Vocabulary: Money, penny, note, coin, more than, less than, exchange, penny, pence, pound, cheaper, expensive.
Sentence Starters: (Lesson specific language also online). The [melon] has a mass of about _____. The mass of [the loaf of bread] is _____ (less / more) than 1 kg. The [the loaf of bread] is _____ (heavier / lighter) than the [cabbage]. The [sack of potatoes] has a mass of about ___ kg.	Sentence Starters: (Lesson specific language also online). How can we split this into ___ equal parts? _____ of this shape has been shaded. The fraction of this shape that has been shaded is ____.	Sentence Starters: (Lesson specific language also online). Does he/she have enough money to ____? How much change does ____? Check your answer using ____ Find the total cost of ____

Unit 7: Temperature (2 lessons – 1 week)	Unit 8: Pictograms (5 lessons – 1 week)	Unit 9: Word Problems (4 lessons – 1 week)
Progress in Learning: In this chapter, pupils will gain experience in measuring temperature. They will learn about Celsius, how to read thermometers to help them understand, and they will look at the different kinds of temperatures we can measure.	Progress in Learning: In this chapter, pupils will learn how to read, interpret, analyse and construct their own picture graphs with confidence.	Progress in Learning: In this chapter, pupils will be looking at using addition and subtraction to help them solve word problems. Initially, pupils will be looking at when addition and subtraction are most appropriate: teaching them decision making. The bar model method emphasis in this chapter focuses on modelling two different amounts by recognising what is the same about the two amounts (two equal bars) plus the difference (the greater amount). This is important for later constructions involving more complex problems.
N.C. Objectives: Choose and use appropriate standard units to estimate and measure temperature (°C) to the nearest appropriate unit, using thermometers	N.C. Objectives: Interpret and construct simple pictograms. Interpret and construct simple pictograms and tally charts. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity. Interpret and construct simple pictograms, tally charts and tables. Ask and answer questions about totalling and comparing categorical data. Interpret and construct simple pictograms, tally charts and tables. Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.	N.C. Objectives: Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures. Solve problems with addition and subtraction: applying their increasing knowledge of mental and written methods. 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: two 2-digit numbers.
Ready to Progress Statements (Key Learning): N/A	Ready to Progress Statements (Key Learning): N/A	Ready to Progress Statements (Key Learning): **2NF–1** Secure fluency in addition and subtraction facts within 10, through continued practice. **2AS–1** Add and subtract across 10. **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. **2AS–4** Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.
Teaching Resources: Cups of water (between four) Thermometer (between four) Room thermometer	Teaching Resources: Linking cubes	Teaching Resources: Objects for calculating: Base 10 materials; counters; place-value charts (one set between two) Strips of paper (for bar modelling)
Revisited Vital Vocabulary/ New Vital Vocabulary: Hotter, colder, temperature, more than, less than, equal to, degrees, estimate.	Revisited Vital Vocabulary/ New Vital Vocabulary: Picture graph, pictogram, tally chart, table, more, fewer, picture graph, pictogram, greatest number, smallest number.	Revisited Vital Vocabulary/ New Vital Vocabulary: more, word problems, bar model, altogether, the rest, total, less, fewer, equation, addition, subtraction, guess-and-check, difference, sum.
Sentence Starters: (Lesson specific language also online). The thermometer measures ___ degrees Celsius. The hottest/highest temperature is ___ degrees Celsius. The coldest/lowest temperature is ___ degrees Celsius. I estimate the temperature is ___ degrees Celsius. The temperature of the ____ is about ___ degrees Celsius.	Sentence Starters: (Lesson specific language also online). There are ___ groups of ___ oranges. There are ___ oranges in total. 5 times 3 equals ___. 10, 20, 30… The next number in the 10 times table is always ___ more than the previous number. 8 × 10 is one more group of 10 than ___ × 5. 5 × 10 is one less group of 10 than ___ × 10.	Sentence Starters: (Lesson specific language also online). How many ____ in total? How many ____ are there left? How many more ____ are there than ____? How many ____ are there altogether? How many ____ in total? Make an equation to describe ____. Write a word problem for ____.

Unit 12: 3D Shapes (6 lessons – 2 weeks)	Unit 14: Time (9 lessons – 3 weeks)		Unit 15: Volume (7 lessons – 2 weeks)	
Progress in Learning: This chapter follows on from the previous chapter on 2-D shapes. In a similar manner, pupils will be recognising, describing and grouping 3-D shapes, forming structures with them and making patterns using 3-D shapes.	Progress in Learning: This chapter explores concepts of time. It begins with recognising time to 5 minutes and progresses in a way that pupils will be able to tell time, sequence it and manipulate an analogue clock. Pupils will then be learning how to find the duration of time, the end of a length of time, the beginning of a length of time and finally, compare lengths of time.		Progress in Learning: This final chapter in Year 2 is on volume. It involves pupils comparing volume, measuring in litres and millilitres and solving word problems associated with volume.	
N.C. Objectives: Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Identify 2-D shapes on the surface of 3-D shapes [for example, a circle on a cylinder and a triangle on a pyramid]. Order and arrange combinations of mathematical objects in patterns and sequences. Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces. Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them. Order and arrange combinations of mathematical objects in patterns and sequences.	N.C. Objectives: 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. Compare and sequence intervals of time. Know the number of minutes in an hour and the number of hours in a day. Compare and sequence intervals of time. Know the number of minutes in an hour and the number of hours in a day.		N.C. Objectives: Choose and use appropriate standard units to estimate and measure capacity (litres/millilitres) to the nearest appropriate unit, using measuring vessels. Compare and order volume/capacity and record the results using >, < and =.	
Ready to Progress Statements (Key Learning): 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.	Ready to Progress Statements (Key Learning): N/A		Ready to Progress Statements (Key Learning): N/A	
Teaching Resources: 3-D shapes (one set between two), Everyday objects (3-D shape) (between two) Nets of common 3-D shapes (between two), Cone; cylinder; cube and cuboid sets (one set between four).	Teaching Resources: Teaching clock, individual clocks, digital time cards (set between three or four). clock (each).		Teaching Resources: Variety of containers (tall; short) (between four), measuring cylinders (between four), cups for measuring (between four), everyday objects with capacity labelled 'l' (between four), 1l measuring jug , different containers (between four), everyday objects with capacity labelled 'ml' (between four), measuring jugs (ml) (between four), small containers (between four)	
Revisited Vital Vocabulary/ New Vital Vocabulary: Dimension, face, edge, vertex, vertices, cube, cuboid, pyramid, sphere, cone, cylinder.	Revisited Vital Vocabulary/ New Vital Vocabulary: Next, last, before, after, first, time, evening, longer, most, minute, hour, minutes past, half past, quarter past, quarter to, o'clock.		Revisited Vital Vocabulary/ New Vital Vocabulary: Full, empty, more, less, greatest, least, lesser than, one unit, capacity, volume, litre, millilitre.	
Sentence Starters: (Lesson specific language also online). What is this shape? What are the faces of this shape? What is the next shape in this pattern? What is the missing shape in this pattern?	Sentence Starters: (Lesson specific language also online). It is ___ minutes past ___ o'clock. The time is _____. It is quarter past ___.	It is half past ___. The _____ started at ___ and finished at ___. The _____ was ___ minutes long.	Sentence Starters: (Lesson specific language also online). The volume is... ____ has the (greatest/least) volume of water/juice. ____ is (greater than/less than) ____	There is ___ l of _____ in the bottle. There is more than/less than ___ l of _____ in the bottle. The volume of _____ in the bottle is