Mathematics Knowledge Progression 2023

"Mathematics is not about numbers, equations, computations or algorithms; it is about UNDERSTANDING"
William Paul Thurston

	Autumn Term	Spring Term	Summer Term
EYFS	**Just Like Me!** **Number** -Matching and sorting -Comparing amounts **Measure, Shape and Spatial Thinking** -Comparing size, mass and capacity -Exploring patterns **It's Me 1, 2, 3!** **Number** -Representing 1, 2, 3 -Comparing 1, 2, 3 -Composition of 1, 2, 3 **Measure, Shape and Spatial Thinking** -Circles and Triangles -Positional Language **Light and Dark** **Number** -Representing numbers to 5 -One more/one less **Measure, Shape and Spatial Thinking** -Shapes with 4 sides -Time	**Alive in 5!** **Number** -Introducing zero -Comparing numbers to 5 -Composition of 4 and 5 **Measure, Shape and Spatial Thinking** -Compare Mass -Compare Capacity **Growing 6, 7, 8** **Number** -6, 7 and 8 -Making pairs -Combining two groups **Measure, Shape and Spatial Thinking** -Length and height -Time **Building 9 and 10** **Number** -9 and 10 -Comparing numbers to 10 -Bonds to 10 **Measure, Shape and Spatial Thinking** -3D shape -Patterns	**To 20 and Beyond** **Number** -Building numbers beyond 10 -Counting patterns beyond 10 **Measure, Shape and Spatial Thinking** -Match, Rotate, Manipulate (Spatial Reasoning) **First, Then, Now** **Number** -Adding more and taking away **Measure, Shape and Spatial Thinking** -Compose and Decompose (Spatial Reasoning) **Find My Pattern** **Number** -Doubling, sharing and grouping -Even and Odd **Measure, Shape and Spatial Thinking** -Visualise and build (Spatial Reasoning) **On the Move** **Number** -Deepening understanding of patterns and relationships **Measure, Shape and Spatial Thinking** -Mapping (Spatial Reasoning)

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	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
YEAR 1	**Place Value (within 10)** -Sort, count (with 1:1 correspondence) and represent objects -Recognise numbers as words -Count forwards and backwards within 10. -Find one more/one less -Compare and order objects and numbers -Language: fewer, more, same, less than, greater than, equal to **1-NPV-1, 1-NPV-2**	**Addition & Subtraction (within 10)** -Part-Part Whole model -Writing number sentences. -Addition facts and families -Number bonds within and to 10 -Addition: add together, add more -Find a part -Subtraction Facts and families -Subtraction: take away/cross out, on a number line -Add and subtract 1 or 2. **1-AS-1, 1-AS-2, 1-NF-1** **Shape** -Recognise and name 2D shapes -Sort and group 2D shapes -Recognise and name 3D shapes -Sort and group 3D shapes -Repeating patterns **1-G-1, 1-G-2**	**Place Value (within 20)** -Count forwards and backwards -Write in numerals and words -Partitioning into Tens and Ones -Compare and order numbers and groups of objects **1-NPV-1, 1-NPV-2** **Addition & Subtraction (within 20)** -Add by counting on -Add by making a Ten -Subtraction (including bridging a Ten) -Number bonds and related facts -Comparing number sentences **1-NPV-2, 1-NF-1, 1-AS-2**	**Place Value (within 50)** -Count to 50 -Partitioning into Tens and Ones -Represent numbers to 50 -Compare and order numbers and groups of objects -Count in 2s and 5s **1-NPV-1, 1-NPV-2** **Length & Height** -Comparing length and height -Measure length and height **Mass & Volume** -Introduce weight and mass -Measure mass -Compare mass -Introduce capacity and volume -Measure capacity -Compare capacity	**Multiplication & Division** -Count in 10s -Make equal groups -Add equal groups -Make arrays -Make doubles -Make equal groups (grouping and sharing) **1-NF-2** **Fractions** -Finding half of a shape or quantity -Finding a quarter of a shape or quantity **Position & Direction** -Describe turns -Describe position -Ordinal numbers	**Place Value (within 100)** -Count to 100 -Partitioning into Tens and Ones -Represent numbers to 100 -Compare and order numbers and groups of objects -Find one more/less **1-NPV-1, 1-NF-2** **Money** -Recognise coins -Recognise notes -Counting in coins **1-NF-2** **Time** -Before and after -Days and Months -Time to the hour (o'clock) -Time to the half hour (half past) -Writing time -Comparing time

	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
YAER 2	**Place Value** -Numbers to 20 -Count objects by making 10s -Recognise Tens and Ones -Using a Place Value Chart -Partition and flexibly partition numbers to 100 -Write to 100 in words and in expanded form -Tens and Ones on a number line to 100 -Estimate numbers on a number line -Comparing and ordering numbers and objects - Count in 2s, 5s, 10s -Count in 3s **2-NPV-1, 2-NPV-2** **Addition & Subtraction** -Bonds to 10, 20 and 100 -Related facts -Add and subtract Ones -Add by making 10 -Add three 1-digit numbers -Add to the next Ten -Add across a Ten -Subtract across/from a Ten **2-NF-1, 2-AS-1, 2-AS-3, 2-AS-4**	**Addition & Subtraction** -Subtract a 1-digit number from a 2-digit number - 10 more/less -Add and subtract two 2-digit numbers -Mixed addition and subtraction -Compare number sentences -Missing number problems **2-NF-1, 2-AS-1, 2-AS-3, 2-AS-4** **Properties of Shape** -Recognise and sort 2D and 3D shapes -Count the sides and vertices of a 2D shape -Draw 2D shapes -Lines of symmetry and using these to complete shapes -Count the faces, edges and vertices of a 3D shape -Sort 2D and 3D shapes -Make patterns with 2D and 3D shapes **2-G-1**	**Money** -Count money (in pounds and pence) -Count notes and coins -Make equivalent amounts -Compare money -Find the total -Find the difference -Calculate change -Two step problems involving money. **2-NPV-2, 2-AS-2, 2-AS-4** **Multiplication & Division** -Recognise, make and add equal groups -Multiplication using pictures and the x symbol -Use arrays -2, 5 and 10 times tables -Divide by two, five and ten -Odd and Even numbers **2-MD-1, 2-MD-2**	**Statistics** -Make Tally charts -Draw and interpret pictograms (1:1 and 1:2, 1:5 and 1:10 scale) -Draw and interpret block diagrams **2-MD-1** **Fractions** -Make equal parts -Recognise and find a half -Recognise and find a quarter -Recognise and find a third -Recognise and find three quarters -Recognise equivalence in fractions -Count in fractions -Unit (½, ¼, ⅓) and non-unit fractions (⅔, ¾)	**Length & Height** -Measure length and height (in cm and m) -Compare and order length and height -Four operations with length and height **2-AS-4** **Capacity, Mass & Temperature** -Compare mass -Measure mass in grams and kilograms -Compare volume -Measure volume in millilitres and litres -Measure and compare temperature **2-MD-1** **Red – Covered through guided Maths Terms 1-4.**	**Position & Direction** -Describe movement -Describe turns -Make patterns with shapes involving turns **Time** -O'clock and half past times -Quarter to and past times -Time to 5 minute intervals -Minutes in an hour, hours in a day -Find and compare durations of time **Red – Covered through guided Maths Terms 1-4.**

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	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
YEAR 3	**Place Value** -Represent and partition numbers to 100 -Number lines to 100 and 1000 -Estimating on number lines -Hundreds, Tens and Ones -Represent, partition and flexibly partition numbers to 1000 -Find 1, 10 and 100 more/less -Compare and order numbers to 1000 -Count in 50s **3-NPV-1, 3-NPV-2, 3-NPV-3, 3-NPV-4** **Addition & Subtraction** -Apply number bonds within 10 -Add and subtract Ones, Tens and Hundreds -Pattern spotting -Add and subtract Ones across a Ten -Add and subtract a Ten across a Hundred -Make connections -Add and subtract two numbers without exchange **3-NPV-1,3-NF-1, 3-AS-1, 3-AS-2, 3-AS-3**	**Addition & Subtraction** -Add and subtract two numbers across a Ten and Hundred -Add and subtract 2 and 3-digit numbers -Complements to 100 -Estimate answers -Inverse operations -Make decisions **3-NF-1, 3-AS-2, 3-AS-3** **Multiplication & Division** -Recall multiplication as equal groups -Use arrays -Multiples of 2, 5 and 10 -Sharing and grouping -Multiply and divide by 3 -Multiply and divide by 4 -Multiply and divide by 8 -2, 3, 4 and 8 times tables **3-NF-2, 3-MD-1**	**Multiplication & Division** -Compare multiplication and division facts using inequality symbols -Related multiplication and division facts -Multiply and divide a two-digit number by a one-digit number -Scaling and ratios -Systematically find all possible combinations of groupings **3-NF-3, 3-MD-1** **Length & Perimeter** -Measure length -Equivalent lengths (m, cm and mm) -Compare, add and subtract lengths -Measure perimeter -Calculate perimeter **3-NPV-3, 3-NF-3**	**Fractions** -Making a whole -Count in tenths -Tenths as decimals -Fractions on a number line -Fractions of a group of objects -Equivalent fractions -Comparing fractions -Ordering fractions -Add and subtract fractions **3-NF-3 3-F-1, 3-F-3** **Mass & Capacity** -Measure and compare mass -Add and subtract mass -Measure and compare capacity -Add and subtract capacity. **3-NPV-1, 3-NPV-4**	**Fractions** -Making a whole -Count in tenths -Tenths as decimals -Fractions on a number line -Fractions of a group of objects -Equivalent fractions -Comparing fractions -Ordering fractions -Add and subtract fractions **3-F-2, 3-F-3, 3-F-4** **Money** -Pounds and pence -Convert pounds and pence -Add and subtract money -Give change **3-NPV-1, 3-AS-2, 3-AS-3** **Time** -Months and years -Hours in a day -Telling the time to five-minute intervals -Telling the time to one-minute intervals -Using AM and PM -The 24-hour clock -Finding and comparing durations -Start and end times -Measuring time in seconds.	**Properties of Shape** -Turns and angles -Right angles in shapes -Comparing angles -Accuracy in drawing lines -Horizontal and Vertical lines -Parallel and perpendicular lines -Recognise and describe 2D shapes. -Recognise and describe 3D shapes. -Construct 3D shapes from nets. **3-G-1, 3-G-2** **Statistics** -Pictograms -Bar charts -Tables

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	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
YEAR 4	**Place Value** -Represent, partition and flexibly partition numbers to 1000 and then 10,000 -Number lines to 1000 and then 10,000 -Estimate numbers on a number line - Find 1, 10, 100, 1000 more/less -Compare and order numbers to 10,000 -Roman numerals -Round to the nearest 10, 100 and 1000 **4-NPV-1, 4-NPV-4** **Addition & Subtraction** -Add and subtract Ones, Tens, Hundreds, Tens and Thousands -Add and subtract four-digit numbers with no, one and multiple exchanges -Efficient subtraction -Estimate answers -Check strategies **4-NPV-2, 4-NPV-3, 4-NF-3**	**Area** -What is area? -Count squares -Make shapes -Compare areas **4-G-2** **Multiplication & Division** -Multiples of 3 -Multiply and divide by 6, 9 and 7 -3, 6, 9, 7, 11 and 12 Times Table and division facts -Multiply by 1 and 0 -Divide by 1 and itself -Multiply three numbers **4-NF-1, 4-NF-2, 4-NF-3, 4-MD-2**	**Multiplication & Division** -Factor pairs -Efficient multiplication -Written methods for multiplication and division -Multiply and divide two-digit and three-digit numbers by a one-digit number -Correspondence problems using multiplication and division **4-NPV-1, 4-NF-1, 4-NF-2, 4-NF-3, 4-MD-1, 4-MD-3** **Length & Perimeter** -Kilometres -Perimeter on a grid -Perimeter of a rectangle -Perimeter of rectilinear shapes **4-G-2**	**Fractions** -What is a fraction? - Equivalent fractions -Fractions greater than one -Counting in fractions -Adding two or more fractions -Subtracting two fractions -Subtract fractions from whole amounts -Calculate fractions of a quantity. -Problem solving involving fractions **4-F-1, 4-F-2, 4-F-3** **Decimals** -Recognise tenths and hundredths -Tenths as decimals, on a place value grid and number lines -Divide one and two digits by 10 --Hundredths as decimals and on a place value grid -Dive one and two digits by 100	**Decimals** -Make a whole -Write decimals -Compare and order decimals -Rounding decimals -Decimal equivalence for halves and quarters. **Money** -Pounds and pence -Ordering money -Estimating money -Four operations involving money **Time** -Hours, minutes and seconds -Days, weeks, months and years -Covert between analogue and digital (12-hour and 24-hour clock)	**Properties of Shape** -Identify angles -Compare and order angles -Triangles -Quadrilaterals -Lines of symmetry -Complete a symmetric figure **4-G-1, 4-G-2, 4-G-3** **Statistics** -Interpret charts -Comparison, sum and difference -Line graphs **4-NPV-4** **Position & Direction** -Describe position -Draw on a grid -Move on a grid -Describe movement on a grid **4-G-1**

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	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
YAER 5	**Place Value** -Roman numerals to 1000 -Numbers to 10,000/100,000 and 1,000,000 -Read and write numbers to 1,000,000 -Powers of 10 -10/100/1000/10,000/ 100,000 more or less -Partition numbers to 1,000,000 -Number lines to 1,000,000 -Compare and order numbers to 100,000 and 1,000,000 -Round to the nearest 10, 100 and 1000 -Round within 100,000 and 1,000,000 **Addition & Subtraction** -Mental strategies -Add and subtract whole numbers with more than four digits -Rounding to check answers -Inverse operations (addition and subtraction) -Multi-step addition and subtraction problems -Compare calculations -Find missing numbers	**Multiplication & Division** -Multiples and common multiples -Factors and common factors -Prime, square and cube numbers -Multiply and divide by 10, 100 and 1000 -Multiples of 10, 100 and 1000 **5-NF-1, 5-MD-1, 5-MD-2** **Fractions** -Find fractions equivalent to a unit and non-unit fraction -Recognise equivalent fractions -Convert improper fractions to mixed numbers and vice versa -Compare and order fractions less/greater than 1 -Add and subtract fractions with the same denominator -Add fractions within 1 and totalling more than 1. -Add to a mixed number and two mixed numbers -Subtract fractions, including from a mixed number and two mixed numbers **5-F-2**	**Multiplication & Division** -Multiply and divide four-digit numbers by one and two-digit numbers - Multiply and divide three-digit numbers by one and two-digit numbers -Multiply and divide two-digit numbers by one and two-digit numbers -Divide with remainders **5-NF-1, 5-MD-3, 5-MD-4** **Fractions** -Multiply unit, non-unit and mixed fractions by an integer -Fractions of an amount -Using fractions as operators **5-F-1**	**Decimals & Percentages** -Decimals to 2 decimal places -Decimals as fractions -Thousandths as decimals -Round, order and compare decimals -Percentages as fractions and decimals -Equivalent fractions, decimals and percentages **5-NPV-1, 5-NPV-2, 5-NPV-3, 5-NPV5, 5-NF-2, 5-F-3** **Perimeter & Area** -Measure and calculate perimeter -Area of rectangles -Area of compound shapes -Area of irregular shapes **5-G-2** **Statistics** -Read and interpret line graphs -Draw line graphs -Use line graphs to solve problems -Read an interpret tables -Two-way tables -Timetables **5-NPV-4**	**Properties of Shape** -Measure angles in degrees -Measuring using a protractor -Drawing lines and angles accurately -Calculating angles on a straight line -Calculating angles around a point -Calculating lengths and angles in shapes -Regular and irregular polygons -Reasoning about 3D shapes **5-G-1** **Position & Direction** -Position in the first quadrant -Translation -Translation with coordinates -Reflection -Reflection with coordinates **Decimals** -Add and subtract decimals within one -Compliments to one -Add and subtract decimals (including crossing the whole, same and different number of decimal places) -Add and subtract wholes and decimals -Decimal sequences -Multiply and divide decimals by 10, 100 and 1000 **5-NF-2, 5-MD-1**	**Negative Numbers** **Converting Units** -Kilograms and Kilometres -Milligrams and Millilitres -Metric and Imperial units -Converting units of time -Timetables **5-NPV-5** **Volume** -Compare volumes -Estimate volumes -Estimate capacity

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	TERM 1	TERM 2	TERM 3	TERM 4	TERM 5	TERM 6
YEAR 6	**Place Value** -Numbers to 1,000,000 and 10,000,000 -Read and write numbers to 10,000,000 -Powers of 10 -Number line to 10,000,000 -Compare, order and round any integer -Negative numbers **6-NPV-1, 6-NPV-2, 6-NPV-3, 6-NPV-4** **Addition, Subtraction, Multiplication & Division** -Add and subtract integers -Common factors and multiples -Rules of divisibility -Primes to 100 -Square and cube numbers -Multiply up to a 4-digit number by a 2-digit number -Solve problems with multiplication and division -Short division and using factors -Long division including remainders -Solve multi-step problems -Order of operations -Mental calculations and estimation -Reason from known facts **6-AS/MD-1, 6-AS/MD-2** **Decimals** -Three decimal places -Multiply and divide by 10, 100 and 1000 -Multiply and divide decimals by integers -Division to solve problems -Decimals as fractions -Converting between fractions and decimals **6-NPV-1, 6-NPV-2**	**Fractions** -Equivalent fractions and simplifying -Equivalent fractions on a number line -Compare and order fractions (numerator and denominator) -Add and subtract simple fractions and mixed numbers -Multi-step problems **6-F-1, 6-F-2, 6-F-3** **Fractions** -Multiply fractions by integers and fractions -Divide fractions by an integer -Mixed questions with fractions -Fractions of an amount, including finding the whole **6-F-1, 6-F-2, 6-F-3** **Position & Direction** -The first quadrant -The four quadrants -Translations -Reflections	**Fractions, Decimals and Percentages** -Fractions to percentages -Equivalent fractions, decimals and percentages -Order fractions, decimals and percentages -Percentages of an amount -Percentages to find a missing value **Algebra** -Find a rule (one and two step) -Forming expressions and equations -Substitution -Formulae -Solve simple one and two step problems -Find pairs of values -Enumerate possibilities **6-AS/MD-4** **Converting Units** -Metric measures -Convert metric measures -Calculate with metric measures -Miles and kilometres -Imperial measures **6-NPV-4**	**Perimeter, Area & Volume** -Shapes (same area) -Area and perimeter -Area of a triangle -Area of a parallelogram -Volume (counting cubes) -Volume of a cuboid **5-G-2** **Ratio** -Ratio language -Ratio and fractions -Ratio symbol -Calculating ratios -Using scale factors -Calculating scale factors -Ratio and proportion problems **6-AS/MD-3** **Statistics** -Read and interpret line graphs -Draw line graphs -Use line graphs to solve problems -Circles -Read and interpret pie charts -Pie charts with percentages -Draw pie charts -The mean **6-NPV-4** **Properties of Shape** -Measure with a protractor -Introduce angles -Calculate angles -Vertically opposite angles -Angles in a triangle (including special cases and missing angles) -Angles in special quadrilaterals -Angles in regular polygons -Draw shapes accurately -Draw nets of 3D shapes **6-G-1**	**SATs Consolidation**	**Themed Projects, Consolidation and Problem Solving**

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Ready to Progress Criteria (shown in bold under each unit)

Year 1:

1NPV-1	1NPV-2
Count within 100, forwards and backwards, starting with any number.	Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =

1NF-1	1NF-2
Develop fluency in addition and subtraction facts within 10	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.

1AS-1	1AS-2
Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.	Read, write and interpret equations containing addition (+), subtraction (−) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.

1G-1	1G-2
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.	Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.

Year 2:

2NPV-1	2NPV-2
Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.	Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.

2NF-1
Secure fluency in addition and subtraction facts within 10, through continued practice.

2G-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.

2AS-1	2AS-2	2AS-3	2AS-4
Add and subtract across 10	Recognise the subtraction structure of 'difference' and answer questions of the form, "How many more...?".	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.	Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract any 2 two-digit numbers.

2MD-1	2MD-2
Recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).

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Year 3:

	3NPV-1	3NPV-2	3NPV-3	3NPV-4
RTP Criteria	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	Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.	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	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.

	3NF-1	3NF-2	3NF-3
RTP Criteria	Secure fluency in addition and subtraction facts that bridge 10, through continued practice. .	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.	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10).

	3AS-1	3AS-2	3AS-3
RTP Criteria	Calculate complements to 100	Add and subtract up to three-digit numbers using columnar methods.	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.

	3MD-1
RTP Criteria	Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.

	3F-1	3F-2	3F-3	3F-4
RTP Criteria	Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.	Find unit fractions of quantities using known division facts (multiplication tables fluency).	Reason about the location of any fraction within 1 in the linear number system.	Add and subtract fractions with the same denominator, within 1

	3G-1	3G-2
RTP Criteria	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.	Draw polygons by joining marked points, and identify parallel and perpendicular sides.

Year 4:

	4NPV-1	4NPV-2	4NPV-3	4NPV-4
RTP Criteria	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.	Recognise the place value of each digit in four-digit numbers, and compose and decompose four-digit numbers using standard and non-standard partitioning.	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	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.

	4NF-1	4NF-2	4NF-3
RTP Criteria	Recall multiplication and division facts up to 12 × 12 and recognise products in multiplication tables as multiples of the corresponding number.	Solve division problems, with two-digit dividends and one-digit divisors, that involve remainders, and interpret remainders appropriately according to the context.	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100)

	4MD-1	4MD-2	4MD-3
RTP Criteria	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.	Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.	Understand and apply the distributive property of multiplication.

	4F-1	4F-2	4F-3
RTP Criteria	Reason about the location of mixed numbers in the linear number system.	Convert mixed numbers to improper fractions and vice versa.	Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.

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4G-1	4G-2	4G-3
Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	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.	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.

Year 5:

5NPV-1	5NPV-2	5NPV-3	5NPV-4	5NPV-5
Know that 10 tenths are equivalent to one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 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	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.	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.	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.	Convert between units of measure, including using common decimals and fractions.

5NF-1	5NF-2
Secure fluency in multiplication table facts, and corresponding division facts, through continued practice.	Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 1 tenth or 1 hundredth).

5MD-1	5MD-2	5MD-3	5MD-4
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.	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.	Multiply any whole number with up to 4 digits by any one-digit number using a formal written method.	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.

5F-1	5F-2	5F-3
Find non-unit fractions of quantities.	Find equivalent fractions and understand that they have the same value and the same position in the linear number system.	Recall decimal fraction equivalents for $\frac{1}{4}, \frac{1}{2}, \frac{1}{5}$ and $\frac{1}{10}$ and for multiples of these proper fractions.

5G-1	5G-2
Compare angles, estimate and measure angles in degrees (°) and draw angles of a given size.	Compare areas and calculate the area of rectangles (including squares) using standard units.

Year 6:

6NPV-1	6NPV-2	6NPV-3	6NPV-4
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).	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.	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.	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.

6AS/MD-1	6AS/MD-2	6AS/MD-3	6AS/MD-4
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).	Use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place-value understanding.	Solve problems involving ratio relationships.	Solve problems with 2 unknowns.

For more in-depth information, please refer to the White Rose Maths documents found here: https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/

	6F-1	6F-2	6F-3
RTP Criteria	Recognise when fractions can be simplified, and use common factors to simplify fractions.	Express fractions in a common denomination and use this to compare fractions that are similar in value.	Compare fractions with different denominators, including fractions greater than 1, using reasoning, and choose between reasoning and common denomination as a comparison strategy.

	6G-1
RTP Criteria	Draw, compose, and decompose shapes according to given properties, including dimensions, angles and area, and solve related problems.

For more in-depth information, please refer to the White Rose Maths documents found here: https://whiterosemaths.com/resources/schemes-of-learning/primary-sols/