

**Fluency Development (Key Instant Recall Facts and Skills)**

**Key Skills**

<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
Representations of numbers Counting in multiples Y3 - 2, 5, 10, 4 Y4 - 3, 6, 9, 25, 100 and 1000 Find ___ more and ___ less than a number Ordering numbers Read and write numbers in numerals and words Partitioning of numbers Mental addition and subtraction	Representations of numbers Counting in multiples Y3 - 2, 5, 10, 4, 8, 3 Y4 - 3, 6, 9, 7, 11, 25, 100, 1000  Find ___ more and ___ less than a number Ordering numbers Read and write numbers in numerals and words Partitioning of numbers Mental addition and subtraction Roman numerals Comparing numbers (<, > or =) Rounding	Representations of numbers Counting in multiples Y3 - 2, 5, 10, 4, 8, 3 Y4 - 3, 6, 7, 9, 11, 12, 25, 100 and 1000 Find ___ more and ___ less than a number Ordering numbers Read and write numbers in numerals and words Partitioning of numbers Mental addition and subtraction Roman numerals Comparing numbers (<, > or =) Rounding Year 4 - Counting through negative numbers

**Key Instant Recall Facts**

<b>Autumn 1</b>	<b>Spring 1</b>	<b>Summer 1</b>
Year 3 - I know number bonds for all numbers to 20. Year 4 - I know number bonds to 100.	Year 3 - I know the multiplication and division facts for the 8 times table Year 4 - I can multiply and divide single-digit numbers by 10 and 100.	Year 3 - I can recall facts about durations of time. Year 4 - I can recognise decimal equivalents of fractions. I can convert between the 12 hour and 24 hour clock.
<b>Autumn 2</b>	<b>Spring 2</b>	<b>Summer 2</b>
Year 3 - I know the multiplication and division facts for the 4 times table. Year 4 - I know the multiplication and division facts for the 6 times table.	Year 3 - I know the multiplication and division facts for the 3 times table. Year 4 - I know the multiplication and division facts for the 9, 11 and 7 times tables.	Year 3 - I know doubles and halves of <ul style="list-style-type: none"> <li>• All numbers to 20</li> <li>• All multiples of 10 to 500</li> <li>• All multiples of 100 to 5000.</li> </ul> Year 4 - I know doubles and halves of <ul style="list-style-type: none"> <li>• All numbers to 50</li> <li>• All multiples of 5 to 1000</li> <li>• All multiples of 50 to 5000.</li> </ul>

\*\* Ensure revision of previous KIRFs. See KIRF progression map at the end of this document\*\*

**Topic Progression**

Autumn 1	Spring 1	Summer 1
<p><b>Number</b> Both - Place Value (4 weeks) (Application of measure throughout)</p> <p>Both - Addition and subtraction (3 weeks) (Application of measure (incl. money) throughout)</p> <p>(7 weeks)</p>	<p><b>Number</b> Both - Multiplication and Division (2 weeks) (Application of measure (incl. money) throughout)</p> <p><b>Geometry (2 weeks) (Application of number (PV, A&amp;S, M&amp;D) throughout)</b> Year 3 - Length and Perimeter Year 4 - Length, Perimeter and Area</p> <p><b>Number (2 weeks) (Application of measure (incl. time and money) throughout)</b> Year 3 - Fractions Year 4 - Fractions and Decimals</p> <p>(6 Weeks)</p>	<p><b>Geometry (1 week)</b> Both - Mass, Capacity and Temperature</p> <p><b>Measure</b> Money (incl. decimals) (1 week)</p> <p>Time (3 weeks)</p> <p>(5 Weeks)</p>
Autumn 2	Spring 2	Summer 2
<p><b>Number</b> Both - Addition and Subtraction (2 weeks) (Application of measure (incl. money) throughout)</p> <p><b>Number</b> Both - Multiplication and Division (5 weeks) (Application of measure (incl. money) throughout)</p> <p>(7 Weeks)</p>	<p><b>Number (4 weeks) (Application of measure (incl. time and money) throughout)</b> Year 3 - Fractions Year 4 - Fractions and Decimals</p> <p><b>Geometry (2 weeks)</b> Both - Mass, Capacity and Temperature</p> <p>(6 Weeks)</p>	<p><b>Statistics (2 weeks)</b></p> <p><b>Geometry</b> Properties of Shape (3 weeks)</p> <p><b>Consolidation/ Geometry (2 weeks)</b> Y3 - Consolidation and retrieval Y4 - Position and Direction</p> <p>(7 Weeks)</p>

Strand	Year 3			Year 4		
	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
Number and Place Value	Know that 10 ones are equivalent to 1 ten, and that 40 (for example) can be composed from 40 ones or 4 tens. Know how many tens there are in multiples of 10 up to 100.	<b>3NPV-1</b> 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.	Represent numbers to 100 Tens and ones using addition Hundreds Numbers to 1,000 Numbers to 1,000 on a place value grid activity 100s, 10s and 1s (1) 100s, 10s and 1s (2) Number line to 100 Number line to 1,000 Find 1, 10, 100 more or less Compare objects Compare numbers Ordering numbers Count in 50s	<b>3NPV-1</b> Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply <i>this</i> to identify and work out how many 10s there are in other three-digit multiples of 10.	<b>4NPV-1</b> 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.	Numbers to 1,000 100s, 10s and 1s Number line to 1,000 Round to the nearest 10 Round to the nearest 100 Count in 1000s Represent numbers to 10,000 activity 1000s, 100s, 10s and 1s Partitioning The number line to 10,000 Find 1, 10, 100 more or less 1,000 more or less Compare 4-digit numbers Order numbers Round to the nearest 1,000 Count in 25s Introducing negative numbers activity Negative numbers Roman numerals
	Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.	<b>3NPV-2</b> Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.		<b>3NPV-2</b> Recognise the place value of each digit in three-digit numbers, and compose and decompose three-digit numbers using standard and non-standard partitioning.	<b>4NPV-2</b> 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 two-digit number in the linear number system, including identifying the previous and next multiple of 10.	<b>3NPV-3</b> 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.		<b>3NPV-3</b> 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.	<b>4NPV-3</b> 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.	

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	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
					<p><b>4NPV-4</b> 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.</p>	
					<p><b>4NF-3</b> Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), for example:  <math>8+6=14</math> and <math>14-6=8</math>            So  <math>800+600 = 1400</math>  <math>1400-600=800</math></p> <p><math>3 \times 4=12</math> and <math>12 \div 4=3</math>            So  <math>300 \times 4=1200</math>  <math>1200 \div 4=300</math></p>	
Number Facts/: Addition and Subtraction	<p>Add and subtract across 10, for example:  <math>8+5=13</math>  <math>13-5=8</math></p>	<p><b>3NF-1</b> Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</p>	<p>Add and subtract multiples of 100            Add and subtract 1s            Add and subtract 3-digit and 1-digit numbers - not crossing 10            Add a 2-digit and 1-digit number - crossing 10            Add 3-digit and 1-digit numbers - crossing 10            Subtract a 1-digit number from 2-digits - crossing 10            Subtract a 1-digit number from a 3-digit number - crossing 10            Add and subtract 3-digit and 2-digit numbers - not crossing 100</p>	<p><b>3NF-1</b> Secure fluency in addition and subtraction facts that bridge 10, through continued practice.</p>		<p>Add and subtract 1s, 10s, 100s and 1,000s            Add two 3-digit numbers - not crossing 10 or 100            Add two 4-digit numbers - no exchange            Add two 3-digit numbers - crossing 10 or 100            Add two 4-digit numbers - one exchange            Add two 4-digit numbers - more than one exchange            Subtract a 3-digit number from a 3-digit number - no exchange O            Subtract two 4-digit numbers - no exchange            Subtract a 3-digit number from a 3-digit number - exchange            Subtract two 4-digit numbers - one exchange            Subtract two 4-digit numbers - more than one exchange</p>
	<p>Automatically recall addition and subtraction facts within 10, and across 10.            Unitise in tens: understand that 10 can be thought of</p>	<p><b>3NF-3</b> Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example:</p>	<p><b>3NF-3</b> Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 10), for example:</p>			

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	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
	as a single unit of 1 ten.	80+60=140 140-60=140  30 X4 = 12- 120÷4=30	Add 3-digit and 2-digit numbers - crossing 100 Subtract a 2-digit number from a 3-digit number - crossing 100 Add and subtract IOOs	80+60=140 140-60=140  30 X4 = 12- 120÷4=30		Efficient Subtraction Estimate answers Checking strategies
	Automatically recall number bonds to 9 and to 10. Know that 10 ones are equivalent to 1 ten, and 10 tens are equivalent to 1 hundred.	<b>3AS-1</b> Calculate complements to 100, for example: 46+?=100	Spot the pattern - making it explicit Add two 2-digit numbers - crossing 10 - add ones & add tens O Subtract a 2-digit number from a 2-digit number - crossing 10 -O subtract ones and subtract tens Mixed addition and subtraction problems	<b>3AS-1</b> Calculate complements to 100, for example: 46+?=100		
	Automatically recall addition and subtraction facts within 10 and across 10. Recognise the place value of each digit in two- and three-digit numbers. Know that 10 ones are equivalent to 1 ten, and 10 tens are equivalent to 1 hundred.	<b>3AS-2</b> Add and subtract up to three-digit numbers using columnar methods.	Add and subtract 2-digit & 3-digit numbers - not crossing 10 or 100 Add 2-digit and 3-digit numbers - crossing 10 or 100 Subtract a 2-digit number from a 3-digit number - crossing 10 or 100 Add two 3-digit numbers - not crossing 10 or 100 Add two 3-digit numbers - crossing 10 or 100 Subtract a 3-digit number from a 3-digit number - no exchange Subtract a 3-digit number from a 3-digit number - exchange	<b>3AS-2</b> Add and subtract up to three-digit numbers using columnar methods.		
	Have experience with the commutative property of addition, for example, have recognised that 3+2 and 2+3 have the same sum. Be able to write an equation in different ways, for example, 2+3=5 and 5=2+3 Write equations to represent addition and subtraction contexts.	<b>3AS-3</b> 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	Estimate answers to calculations Check answers	<b>3AS-3</b> 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		

Strand	Year 3			Year 4		
	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
Number Facts/ Multiplication and Division	Count in multiples of 2, 5 and 10.	related property for subtraction. <b>3NPV-4</b> 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.	Multiplication - equal groups Multiplication using the symbol Using arrays 2 times-table 5 times-table Make equal groups - sharing Make equal groups - grouping Divide by 2 Divide by 5 Divide by 10 Multiply by 3 Divide by 3 The 3 times-table Multiply by 4 Divide by 4 The 4 times-table Multiply by 8 Divide by 8 The 8 times-table Consolidate 2, 4 and 8 times-tables Comparing statements Related calculations Multiply 2-digits by 1-digit - no exchange - activity Multiply 2-digits by 1-digit (1) Multiply 2-digits by 1-digit - exchange - activity Multiply 2-digits by 1-digit (2)	related property for subtraction. <b>3NPV-4</b> 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.		
	Calculate products within the 2, 5 and 10 multiplication tables.	<b>3NF-2</b> 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.	Divide 2-digits by 1-digit (1) Divide 2-digits by 1-digit (2) Divide 100 into 2, 4, 5 and 10 equal parts - activity Divide with remainders activity Divide 2-digits by 1-digit (3) Scaling How many ways?	<b>3NF-2</b> 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.	<b>4NF-1</b> Recall multiplication and division facts up to, and recognise products in multiplication tables as multiples of the corresponding number.	Multiply by 10 Multiply by 100 Divide by 10 Divide by 100 Multiply by 1 and 0 Divide by 1 and itself Multiply and divide by 3 The 3 times-table Multiply and divide by 6 6 times-table and division facts Multiply and divide by 9 9 times-table and division facts Multiply and divide by 7 7 times-table and division facts 11 and 12 times-table Multiply 3 numbers Factor pairs Efficient multiplication Written methods Multiply 2-digits by 1-digit Multiply 2-digits by 1-digit Multiply 3-digits by 1-digit Divide 2-digits by 1-digit Divide 2-digits by 1-digit (1) Divide 2-digits by 1-digit Divide 2-digits by 1-digit (2) Divide 3-digits by 1-digit Correspondence problems

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	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
	Recognise repeated addition contexts and represent them with multiplication equations. Relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations (quotitive division).	<b>3MD-1</b> Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.		<b>3MD-1</b> Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.	<b>4NF-3</b> Apply place-value knowledge to known additive and multiplicative number facts (scaling facts by 100), for example:  $3 \times 4 = 12$ and $12 \div 4 = 3$ So $300 \times 4 = 1200$ $1200 \div 4 = 300$	
				Multiply two-digit numbers by 10, and divide three-digit multiples of 10 by 10.	<b>4MD-1</b> 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.	
				Understand the inverse relationship between multiplication and division. Write and use multiplication table facts with the factors presented in either order.	<b>4MD-2</b> Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.	

Strand	Year 3			Year 4		
	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
					<b>4MD-3</b> Understand and apply the distributive property of multiplication.	
Fractions		<b>3F-1</b> Interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.	Working with wholes and parts activity Recap - Make equal parts Recognise a half Find a half Recognise a quarter Find a quarter Recognise a third Find a third Unit fractions Non-unit fractions Equivalence of a half and 2 quarters Count in fractions Making the whole Tenths Count in tenths Fractions on a number line Fractions of a set of objects (1) Fractions of a set of objects (2) Fractions of a set of objects (3) Equivalent fractions (1) Equivalent fractions (2) Equivalent fractions (3) Compare fractions Order fractions Add fractions	Reason about the location of fractions less than 1 in the linear number system.	<b>4F-1</b> Reason about the location of mixed numbers in the linear number system.	Unit and non-unit fractions What is a fraction? Tenths Count in tenths Equivalent fractions (1) Equivalent fractions (2) Equivalent fractions (1) Equivalent fractions (2) Fractions greater than 1 Count in fractions Add fractions Add 2 or more fractions Subtract fractions Subtract 2 fractions Subtract from whole amounts Fractions of a set of objects (1) Fractions of a set of objects (2) Calculate fractions of a quantity Problem solving - calculate quantities
		<b>3F-2</b> Find unit fractions of quantities using known division facts (multiplication tables fluency).		Identify unit and non-unit fractions.	<b>4F-2</b> Convert mixed numbers to improper fractions and vice versa.	Tenths and hundredths activity Recognise tenths and hundredths Tenths as decimals Tenths on a place value grid Tenths on a number line Divide 1-digit by 10

Strand	Year 3			Year 4		
	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
	Reason about the location of whole numbers in the linear number system.	<b>3F-3</b> Reason about the location of any fraction within 1 in the linear	Subtract fractions	Add and subtract fractions with the same denominator, within 1 whole, for example:	<b>4F-3</b> Add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers, for example:	Divide 2-digits by 10 Hundredths Hundredths as decimals Hundredths on a place value grid Divide 1 or 2-digits by 100  Bonds to 10 and 100 Make a whole Write decimals activity Write decimals Compare decimals Order decimals Round decimals activity Round decimals Halves and quarters
	Automatically recall addition and subtraction facts within 10. Unitise in tens: understand that 10 can be thought of as a single unit of 1 ten, and that these units can be added and subtracted.	<b>3F-4</b> Add and subtract fractions with the same denominator, within 1.		Automatically recall addition and subtraction facts within 10. Unitise in tens: understand that 10 can be thought of as a single unit of 1 ten, and that these units can be added and subtracted.		
<b>Geometry: Shape &amp; Position and Direction</b>	Recognise standard and non-standard examples of 2D shapes presented in different orientations. Identify similar shapes.	<b>3G-1</b> 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.	Turns and angles Right angles in shapes Compare angles Draw accurately Horizontal and vertical Parallel and perpendicular Recognise and describe 2-D shapes Recognise and describe 3-D shapes Make 3-D Shapes	Draw polygons by joining marked points.	<b>4G-1</b> Draw polygons, specified by coordinates in the first quadrant, and translate within the first quadrant.	Turns and angles Right angles in shapes Compare angles Identify angles Compare and order angles Recognise and describe 2-D shapes Triangles activity Triangles Quadrilaterals activity Quadrilaterals Topic Symmetry activity Horizontal and vertical

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	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
	Compose 2D shapes from smaller shapes to match an exemplar, rotating and turning over shapes to place them in specific orientations.	<b>3G-2</b> Draw polygons by joining marked points, and identify parallel and perpendicular sides.		Measure lines in centimetres and metres. Add more than 2 addends. Recall multiplication table facts.	<b>4G-2</b> 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.	Lines of symmetry Complete a symmetric figure  Describe position Draw on a grid Move on a grid Describe movement on a grid
					<b>4G-3</b> 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.	
Measurement: Length/ Height			Measure length Measure length (m) Equivalent lengths (m and cm) Equivalent lengths (mm and cm) Compare lengths Compare lengths Add lengths Subtract lengths What is perimeter? Activity Measure perimeter Calculate perimeter Calculate perimeter			Equivalent lengths - m and cm Equivalent lengths - mm and cm Kilometres Add lengths Subtract lengths Measure perimeter Perimeter on a grid Perimeter of a rectangle Perimeter of rectilinear shapes  What is area? Counting squares Making shapes Comparing area

Strand	Year 3			Year 4		
	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps	Previous Experience (Check and Consolidate)	Ready-to-Progress Criteria	Suggested Small Steps
Measurement: Weight/Volume			Measure mass activity Compare mass Measure mass (1) Measure mass (2) Compare mass Add and subtract mass Measure capacity activity Compare volume Measure capacity (1) Measure capacity (2) Compare capacity Add and subtract capacity Temperature activity			
Measurement: money			Count money (pence) Count money (pounds) Pounds and pence Convert pounds and pence Add money Subtract money Give change			Pounds and pence Ordering money Estimating money Convert pounds and pence Add money Subtract money Find change Working with money activity Four operations
Measurement: Time			O'clock and half past Quarter past and quarter to Months and years Hours in a day Telling the time to 5 minutes Telling the time to the minute Using a.m. and p.m. 24-hour clock activity 24-hour clock Finding the duration Comparing durations Start and end times Measuring time in seconds Problem solving with time			Telling the time to 5 minutes Telling the time to the minute Using a.m. and p.m. 24-hour clock Hours, minutes and seconds Years, months, weeks and days Analogue to digital - activity Analogue to digital - 12 hour Analogue to digital - 24 hour
Statistics: Graphs and Charts			Make tally charts Draw pictograms (1-1) Interpret pictograms (1-1) Draw bar charts - activity Bar charts Tables			Interpret charts Comparison, sum and difference Introducing line graphs Line graphs

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
Number Place Value and Counting	Number, Whole. More, Less/ fewer. Subitise Cardinal value, Counting, Digit, Place Value, Tens, Ones, Part, Greater, Fewer, Zero (number names), Subitise, Cardinal value, Odd, Even, Infinite, Quantity, Appropriate number names, Hundred, Ordinal,	Boundary Thousand <b>Composed</b> <b>Composition</b> <b>Decomposed</b> Round(ed) Distribution Integer (positive and negative) Interval <b>Ordinal</b> Roman Numerals	<p><b>Composition of 100</b></p> <ul style="list-style-type: none"> <li>There are ___ tens in one hundred.</li> <li>There are ___ ones in one hundred.</li> <li>One hundred is divide into ___ equal parts, so each part has a value of ___.</li> </ul> <p><b>3 Digit Numbers - Composition and Calculation</b> E.g. 150 is ...</p> <ul style="list-style-type: none"> <li>___ is ___ ones.</li> <li>___ is ___ hundreds and ___ ones.</li> <li>___ is ___ tens and ___ ones.</li> </ul> <p>E.g. 157 is ...</p> <ul style="list-style-type: none"> <li>___ is ___ hundreds, ___ tens and ___ ones.</li> <li>The value of the ___ digit is ___.</li> <li>The ___ represents ___.</li> </ul> <p><b>Positioning Numbers</b></p> <ul style="list-style-type: none"> <li>___ is between ___ and ___.</li> <li>___ is the previous multiple of 100.</li> <li>___ is the next multiple of 100.</li> </ul> <p><b>Unitising</b> E.g. 620 is ...</p> <ul style="list-style-type: none"> <li>This is ___ hundreds and ___ tens.</li> <li>This is ___ tens.</li> </ul>	Number, Whole. More, Less/ fewer. Subitise Cardinal value, Counting, Digit, Place Value, Tens, Ones, Part, Greater, Fewer, Zero (number names), Subitise, Cardinal value, Odd, Even, Infinite, Quantity, Appropriate number names, Hundred, Ordinal, Boundary, Thousand, Composed, Composition, Decomposed, Round(ed), Distribution, Integer (positive and negative), Interval, Roman Numerals	Hundred Thousand Positive numbers Negative numbers Place holder/ Decimal place holder	<p><b>Unitising</b></p> <ul style="list-style-type: none"> <li>There are ten hundreds in one thousand.</li> <li>There are one hundred tens in one thousand.</li> <li>There are one thousand ones in one thousand.</li> <li>One thousand is divided into ___ equal parts, so each part has a value of ___.</li> <li>___ hundred plus ___ hundred is equal to ___ hundred,</li> <li>We know there are ten hundreds in 1000, so ___ hundreds plus ___ hundreds is equal to ___ thousand ___ hundred.</li> <li>We know there are ten hundreds in 1000, so ___ thousand ___ hundred is equal to ___ hundred.</li> <li>___ hundred minus ___ hundred is equal to ___ hundred.</li> </ul> <p><b>Ordering and Comparing</b></p> <ul style="list-style-type: none"> <li>The ___ represents ___ ones.</li> <li>The ___ represents ___ tens.</li> <li>The ___ represents ___ hundreds.</li> <li>The ___ represents ___ thousands.</li> <li>Look at the thousands digit. If they are the same, look at the hundreds digit.</li> <li>If the hundreds are the same, look at the tens digit.</li> </ul> <p><b>Positioning and Rounding</b> We are counting in multiples of five hundred not we counting in five hundreds.</p>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
						<ul style="list-style-type: none"> <li>• ___ is between ___ and ___.</li> <li>• The previous multiple of one thousand is ___.</li> <li>• The next multiple of one thousand is ___.</li> <li>• ___ is nearest to ___ thousand.</li> <li>• ___ is nearest when rounded to the nearest thousand.</li> <li>• When rounding to the nearest thousand, if the hundreds digit is four or less we round down.</li> <li>• If the hundreds digit is five or more we round up.</li> <li>• When rounding to the nearest ten, the ones digit is the digit to consider. If it is four or less we _____. If it is five or more, we _____.</li> <li>• When rounding to the nearest hundred, the tens digit is the digit to consider. If it is four or less we _____. If it is five or more, we _____.</li> <li>• When rounding to the nearest thousand, the hundreds digit is the digit to consider. If it is four or less we _____. If it is five or more, we _____.</li> </ul> <p><b>Rounding</b></p> <ul style="list-style-type: none"> <li>• ___ is between ___ and ___.</li> <li>• ___ is the previous whole number.</li> <li>• ___ is the next whole number.</li> <li>• ___ is the closest whole number.</li> <li>• When we round to the nearest whole number, we need to look at the tenths digit.</li> <li>• ___ is halfway between ___ and ___.</li> <li>• If there are five tenths or more, round up to the next whole number.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
						<ul style="list-style-type: none"> <li>If there are fewer than five tenths, round down to the previous whole number.</li> <li>___ is between ___ and ___.</li> <li>___ is the previous tenth.</li> <li>___ is the next tenth.</li> <li>If there are 5 hundredths or more, round up to the next tenth.</li> <li>If there are fewer than 5 hundredths, round down to the previous tenth.</li> </ul> <p><b>Decimals (Hundredths and Thousandths)</b></p> <ul style="list-style-type: none"> <li>The whole is divided into 100 equal parts, each part is one hundredth of the whole.</li> <li>One tenth is divided into 10 equal parts, each part is one hundredth of the whole.</li> <li>Ten hundredths is equal to one tenth.</li> <li>If a digit is moved one column to the right, the number represented becomes ten times smaller; we can also say it becomes one tenth of the size.</li> <li>If a digit is moved one column to the left, the number represented becomes ten times bigger/ten times the size.</li> <li>___ is ten times bigger than ___.</li> <li>___ is ten times smaller than/one tenth of the size of ___.</li> <li>___ is one hundred times bigger than ___.</li> <li>___ is one hundred times smaller than/one hundredth of the size of ___.</li> <li>One hundredth can be written as 0.0___, so ___ hundredths can be written as 0.0___.</li> <li>I say ___ point ___ but I think ___ and ___ hundredths.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
						<ul style="list-style-type: none"> <li>___ is greater than 4.31 because _____.</li> <li>To compare 2 numbers, we compare digits with the same place value, starting with the largest place value digit.</li> </ul>
Addition	Part, Whole, Addition, Add, Total, <b>Sum</b> , Equal, Composition, Number sentence, Part, Whole, Addition, Add, Equal, Total, <b>Sum</b> , Amount, Inverse, Calculation, <i>Associative Law</i> , <i>Aggregation</i> , <i>Augmentation</i> , <i>Commutative</i> , <i>Addend</i> , <i>Bridge</i> , <i>Regroup</i> , <i>Column addition</i> , <i>Triangular number</i>	<i>Aggregation</i> <i>Augmentation</i> <i>Commutative</i> <i>Addend</i> Additively Compensation	<b>Bond and Complements to 100</b> <ul style="list-style-type: none"> <li>I know that ___ plus ___ is equal to 10, so I know that ___ tens plus ___ tens is equal to 10 tens. ___ + ___ = 100.</li> <li>I know that ___ + ___ = 10, so I know that ___ + ___ = 100.</li> <li>I know that ten minus ___ is equal to ___, so I know that ten tens minus ___ tens is equal to _____. 100 - ___ = ____.</li> <li>I know that 10 - ___ = ___ so I know that 100 - ___ = ____.</li> <li>First, we make ten ones. We have one ten from the ones digit, so we need ___ more tens.</li> <li>Addition/Subtraction of Multiples of Ten, Crossing the 100.</li> </ul> <p>E.g. 130</p> <ul style="list-style-type: none"> <li>There are 13 groups of ten.</li> <li>There is one group of 100 and 3 more tens.</li> <li>There is/are _____.</li> <li>There is one group of 100 and 3 more tens. There is/are ____.</li> </ul> <p>E.g. 80+40.</p> <ul style="list-style-type: none"> <li>I know that ___ plus ___ is equal to ___ (single digit addends), so ___ tens plus ___ tens is equal to ___ tens (multiples of</li> </ul>	Part, Whole, Addition, Add, Total, <b>Sum</b> , Equal, Composition, Number sentence, Part, Whole, Addition, Add, Equal, Total, <b>Sum</b> , Amount, Inverse, Calculation, <i>Associative Law</i> , <i>Aggregation</i> , <i>Augmentation</i> , <i>Commutative</i> , <i>Addend</i> , <i>Bridge</i> , <i>Regroup</i> , <i>Column addition</i> , <i>Triangular number</i> , <i>Additively</i> , <i>Compensation</i>	Complement	<b>Tenths - Unitising/ Using Known Facts</b> <ul style="list-style-type: none"> <li>___ tenths plus/minus ___ tenths is equal to ___ tenths.</li> <li>___ tenths plus ___ tenths is equal to ___ ten tenths, which is equal to one.</li> <li>One is equal to ten tenths, ten tenths minus ___ tenths is equal to ___ tenths.</li> </ul> <p><b>Column Method Addition:</b></p> <ul style="list-style-type: none"> <li>First, line up the digits.</li> <li>Next, look at the tenths: ___ tenths add ___ tenths equals ___ tenths.</li> <li>Then, look at the ones: ___ ones add ___ ones equals ___ ones. Then, look at the tens: ___ tens add ___ tens equals ___ tens.</li> <li>If we have a total of ten or more in any column we have to exchange (or regroup). E.g. ten tenths is equal to one so we have to exchange.</li> </ul> <p><b>Subtraction:</b></p> <ul style="list-style-type: none"> <li>First, line up the digits.</li> <li>Next, look at the tenths: ___ tenths minus ___ tenths equals ___ tenths.</li> <li>Then, look at the ones: ___ ones minus ___ ones equals ___ ones. Then, look at the tens: ___ tens minus ___ tens equals ___ tens.</li> <li>If the number in the ones/tens/hundreds is too large to subtract, we must exchange (or regroup).</li> <li>Once the children are familiar with the language, move this onto:</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<p>tens adds). ___ plus ___ is equal to one hundred and ___ (number names).</p> <ul style="list-style-type: none"> <li>I know that ___ minus ___ is equal to ___ (bridging ten), so ___ tens minus ___ tens is equal to ___ tens (bridging ten tens).</li> <li>One hundred and ___ minus ___ is equal to ___ (number names).</li> </ul> <p><b>Adjusting and Equivalent Calculations</b> E.g. 136+29</p> <ul style="list-style-type: none"> <li>Is there anything that can help us?</li> <li>29 is close to a 'friendly number' - 30 so:</li> <li>First, we add: <math>136+30 = 166</math>.</li> <li>Then, we adjust: 30 minus 1 is equal to 29.</li> <li>So, 136 plus 29 is equal to 136 plus 30 minus 1.</li> </ul> <p>E.g. 346+ 299 (turn into 345+300).</p> <ul style="list-style-type: none"> <li>I have added ___ to this addend, so I need to subtract ___ from the other addend.</li> <li>For calculations that involve both + and - steps, we can add then subtract or we can subtract then add - the final answer is the same.</li> </ul> <p><b>Column Methods</b> General</p> <ul style="list-style-type: none"> <li>When first learning to record in the column format:</li> <li>The ___ is in the ones column- it represents ___ones.</li> </ul>			<ul style="list-style-type: none"> <li>'If the subtrahend is greater than the minuend, you must exchange.'</li> </ul> <p><b>Hundredths - Unitising/ Using Known Facts</b></p> <ul style="list-style-type: none"> <li>___ hundredths plus/minus ___ hundredths is equal to ___ hundredths,</li> <li>___ hundredths plus ___ hundredths is equal to ten hundredths, which is equal to one tenth.</li> <li>One tenth is equal to ten hundredths; ten hundredths minus ___ hundredths is equal to ___ hundredths.</li> <li>Ten hundredths is equal to one tenth. Ten tenths is equal to one.</li> </ul> <p><b>Column Method Addition:</b></p> <ul style="list-style-type: none"> <li>First, line up the digits.</li> <li>Next, look at the hundredths: ___ hundredths add ___ hundredths equals ___ hundredths.</li> <li>Next, look at the tenths: ___ tenths add ___ tenths equals ___ tenths.</li> <li>The, look at the ones: ___ ones add ___ ones equals ___ ones.</li> <li>Then, look at the tens: ___ tens add ___ tens equals ___ tens. etc.</li> <li>If we have a total of ten or more in any column we have to exchange (or regroup). E.g. ten hundredths are equal to one tenth so we need to exchange.</li> </ul> <p><b>Subtraction:</b></p> <ul style="list-style-type: none"> <li>First, line up the digits.</li> <li>Next, look at the hundredths: ___ hundredths minus ___ hundredths equals ___ hundredths.</li> <li>Next, look at the tenths: ___ tenths minus ___ tenths equals ___ tenths.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<ul style="list-style-type: none"> <li>The ___ is in the tens column- it represents ___tens.</li> <li>In column addition/subtraction, we start at the right-hand side.</li> <li>First, we line up the ones: ___ones plus/minus ___ ones is equal to ___ ones.</li> <li>Next, we line up the tens; ___ tens plus/minus ___ tens is equal to ___ ones.</li> </ul>			<ul style="list-style-type: none"> <li>Then, look at the ones: ___ ones minus ___ ones equals ___ ones. Then, look at the tens: ___ tens minus ___ tens equals ___ tens.</li> <li>If the number in the ones/tens/hundreds is too large to subtract, we must exchange (or regroup). Move this onto:</li> <li>•If the subtrahend is greater than the minuend, you must exchange' once the children are familiar with the language.</li> </ul>
Subtraction	Part, Whole, Take away, Equal, Total, Amount, Number sentence, Part, Whole, Take away, Equal, Total, Subtraction, Subtract, Minus, Calculation, Partition, Difference, Partitioning, Reduction, Subtrahend, Minuend, Inverse, Bridge, Exchange, Column subtraction,	Partitioning Reduction Subtrahend Minuend Working Forwards/ Exchange Column subtraction Compensation Decomposition	<p>Leading to:</p> <ul style="list-style-type: none"> <li>First, line up the digits.</li> <li>Next, look at the ones: ___ ones add/subtract ___ ones = ___ ones.</li> <li>Next, look at the tens: ___ tens add/subtract ___ tens = ___ tens.</li> <li>Next, look at the hundreds: ___ hundreds add/subtract ___ hundreds = ___ hundreds.</li> </ul> <p><b>Addition</b></p> <ul style="list-style-type: none"> <li>Addend plus addend is equal to the sum (or total).</li> <li>Addend plus addend plus addend is equal to the sum (or total).</li> <li>If the column sum is equal to 10 or more, we must exchange (or regroup).</li> </ul> <p><b>Column method - Subtraction</b></p> <ul style="list-style-type: none"> <li>Minuend minus subtrahend is equal to the difference.</li> <li>If the number in the ones/tens/hundreds is</li> </ul>	Part, Whole, Take away, Equal, Total, Amount, Number sentence, Part, Whole, Take away, Equal, Total, Subtraction, Subtract, Minus, Calculation, Partition, Difference, Partitioning, Reduction, Subtrahend, Minuend, Inverse, Bridge, Exchange, Column subtraction, Working Forwards, Compensation, Decomposition		



Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<p>product in the 4 times table.</p> <ul style="list-style-type: none"> <li>The product of a even number and 4 is a product in the 8 times table.</li> <li>Products in the two and four times table are all even numbers.</li> <li>Four is double two, so ___ fours is double ___ twos.</li> <li>Two is half of four, so ___ twos is half of ___ fours.</li> <li>___ times four is equal to double ___ times two.</li> <li>___ times two is equal to half of ___ times four.</li> <li>8 is double 4, so ___ 8s is double ___ 4s.</li> <li>4 is half of 8, so ___ 4s is half of ___ 8s.</li> </ul> <p><b>Short Multiplication</b></p> <ul style="list-style-type: none"> <li>If there are ten or more ones, we must exchange(or regroup) the ones for tens and ones.</li> <li>If there are ten or more tens, we must exchange (or regroup) the tens for hundreds and tens.</li> <li>If there are ten or more hundreds, we must exchange (or regroup) the hundreds into thousand and hundreds.</li> </ul> <p>E.g. 32x4</p> <ul style="list-style-type: none"> <li>First, write the largest factor: thirty-two.</li> <li>Then, write the smallest factor below, lining up the digits: four.</li> <li>Now, multiply starting with the ones: four times two ones is equal to eight</li> </ul>			<ul style="list-style-type: none"> <li>The product of ___ and ___ = the product of ___ and ___.</li> <li>___ times ___ = ___ times ___.</li> <li>___ is equal to ___ plus ___.</li> <li>So ___ times ___ is equal to ___ times ___ plus ___ times ___. E.g. 5=4+1, so 5x8 = 4x8 + 1x8.</li> <li>___ is equal to ___ minus ___.</li> <li>So ___ times ___ is equal to ___ times ___ minus ___ times ___. E.g. 4=5-1, so 4x8 = 5x8 - 1x8.</li> <li>___ is equal to ___ plus ___.</li> <li>So ___ times ___ is equal to ___ times ___ plus ___ times ___.</li> </ul> <p>E.g. 9=5+4, so 3x9= 3x5 + 3x4.</p> <p><b>12x Table</b></p> <ul style="list-style-type: none"> <li>For every one group of ____, there are two groups of ___.</li> <li>Products in the ___ times table are also in the ___ times table.</li> <li>The product of a even number and ___ is a product in the ___ times table.</li> <li>Twelve is double six, so ___ twelves is double ___ sixes.</li> <li>Six is half of twelve, so ___ sixes is half of ___ twelves.</li> </ul> <p><b>Rules of Divisibility (11x, 12x Tables)</b></p> <ul style="list-style-type: none"> <li>A 2 digit number is divisible by 11 if the digits are the same.</li> <li>For a number to be divisible by 12, it must be divisible by both 3 and 4.</li> </ul> <p><b>Multiplying by 10</b></p> <p>E.g. For every one pencil of Emily's, Jamie has ten.</p> <ul style="list-style-type: none"> <li>Think of <u>1 pencil</u> and make it ten times the size.</li> <li>Think of ___ and multiply it by ten.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<p>ones, so write 8 in the ones column.</p> <ul style="list-style-type: none"> <li>Then, move to the tens: four times three tens is equal to twelve tens, so exchange/regroup: twelve is equal to one hundred and two tens, so write 1 in the hundred column and 2 in the tens column.</li> </ul> <p><b>General Tables</b></p> <ul style="list-style-type: none"> <li>If both factors are odd, the product is odd.</li> <li>If both factors are even, the product is even.</li> <li>If one of the factors is even the product is even.</li> </ul> <p><b>Square Numbers</b></p> <ul style="list-style-type: none"> <li>When both factors have the same value, the product is called a square number.</li> <li>Square numbers can be represented by square shaped arrays.</li> <li>We can write this as ___ times ___ is equal to ___.</li> <li>Both factors are the same, so we can also write this as ___ squared is ___.</li> </ul> <p><b>Inverse Operations</b></p> <ul style="list-style-type: none"> <li>The product in the multiplication equation has the same value as the dividend in the matching division equation.</li> </ul>			<ul style="list-style-type: none"> <li>___ multiplied by 10 is equal to ___.</li> <li>___ is ten times the size of ___.</li> <li>___ pencils is ___ times as many as ___.</li> <li>___ is a multiple of ten because it has a tens digit of ___.</li> <li>To find ten times as many, <u>multiply by ten.</u></li> <li>All multiples of ten have <u>a ones digit of zero.</u></li> <li>When a number is multiplied by 10, the product is <u>a multiple of ten.</u></li> <li>To multiply a whole number by 10, <u>place a zero after the final digit of that number.</u></li> <li>Think of ___ and make it ten times the size. Think of ___ and multiply it by ten.</li> <li>If one factor is made ten times the size, the product will be ten times the size.</li> <li>If the dividend is made ten times the size, the quotient will be ten times the size.</li> </ul> <p><b>Multiplying by 100</b></p> <ul style="list-style-type: none"> <li>Think of ___ and make it 100 times the size.</li> <li>Think of ___ and multiply it by 100.</li> <li>___ multiplied by 100 is equal to ___</li> <li>___ is 100 times the size of ___</li> <li>___ pencils is ___ times as many as ___</li> <li>To find 100 times as many, multiply by 100.</li> <li>All multiples of 100 have both a tens and ones digit of zero.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
						<ul style="list-style-type: none"> <li>To multiply a whole number by 100, place two zeros after the final digit of that number.</li> <li>When a number is multiplied by 100, the product is a multiple of 100.</li> <li>Multiplying by 100 is equivalent to multiplying by 10, then multiplying by 10 again.</li> <li>If one factor is made 100 times the size, the product will be 100 times the size.</li> <li>If the dividend is made 100 times the size, the quotient will be 100 times the size.</li> </ul>
Division	Half, Part, Whole, Equal, Unequal, Group, Groups of, Unitising, Repeated subtraction, Number sentence, Grouped equally, Remainder, Divided, Repeated subtraction	<i>Divisor</i> <i>Dividend</i> <i>Quotient</i> Divisibility Partitioning Short division Compensation	<b>Rules of Divisibility</b> <b>Rules of Divisibility</b> <ul style="list-style-type: none"> <li>If the ones digit of a number is even, the number can be divided by 2.</li> <li>If a number is divisible by 4, halving it twice gives a whole number.</li> <li>If a number is divisible by 4, halving it gives an even number.</li> <li>For numbers with more than two digits, if the final two digits are divisible by four then the number is divisible by 4.</li> <li>If a number is divisible by 8, halving it twice gives an even number.</li> </ul> <b>Short Division</b> 10s   1s $\begin{array}{r} 2 \\ 4 \overline{) 84} \end{array}$ <ul style="list-style-type: none"> <li>First, write the divisor: 4</li> </ul>	Half, Part, Whole, Equal, Unequal, Group, Groups of, Unitising, Repeated subtraction, Number sentence, Grouped equally, Remainder, Divided, Repeated subtraction, Divisibility, Partitioning, Short division, Compensation	<i>Divisor</i> <i>Dividend</i> <i>Quotient</i> Distributive law Generalise	<b>Division – Grouping (Quotitive)</b> (We can skip count using the divisor to find the quotient) <ul style="list-style-type: none"> <li>___ is divided into groups of ___. There are ___ groups.</li> <li>The ___ represents the total number of ___.</li> <li>The ___ represents the number of ___ in each group.</li> <li>___ is divided into ___ groups of ___ with a remainder of ___.</li> </ul> <b>Division – Sharing (Partitive)</b> (We can skip count using the divisor to find the quotient.) <ul style="list-style-type: none"> <li>We can represent this as ___ divided between ___.</li> <li>___ divided between ___ is equal to ___ each.</li> <li>One ___ is one each. That's ___. (With practical equipment, then visuals).</li> <li>Two ___ is two each. That's ___.</li> <li>___ divided between ___ is equal to ___ each.</li> </ul> E.g. We can represent this as <u>10</u> divided between <u>2</u> .

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<ul style="list-style-type: none"> <li>Then, draw the frame.</li> <li>Then, write the dividend: 84</li> <li>Now, divide starting with the tens:</li> </ul> <ul style="list-style-type: none"> <li>8 tens divided by 4 is equal to 2 tens; write 2 in the tens column.</li> <li><math>8 \text{ tens} \div 4 = 2 \text{ tens}</math></li> <li>Then, move to the ones; 4 ones divided by four is equal to one one; write 1 in the ones column.</li> </ul> <ul style="list-style-type: none"> <li>If dividing the tens gives a remainder of one or more tens, we must exchange the remaining tens for ones.</li> <li>If dividing the hundreds gives a remainder of one or more hundreds, we must exchange the remaining hundreds for tens.</li> </ul> <div style="text-align: center;"> <math display="block">\begin{array}{r} 14 \\ 4 \overline{) 56} \end{array}</math> </div> <ul style="list-style-type: none"> <li>First, write the divisor: 4. The draw the frame.</li> <li>Then write the dividend: 56</li> <li>Now divide starting with the tens: 5 tens divided by 4 is equal to 1 ten with a remainder of one ten; write two in the tens column and exchange the remainder. One ten is ten ones; write 1 to the left of the ones digit of the</li> </ul>			<ul style="list-style-type: none"> <li><u>10</u> divided between <u>2</u> is equal to <u>5</u> each.</li> <li>One <u>5</u> is one each. That's <u>5</u>. (With practical equipment, then visuals).</li> <li>Two <u>5s</u> is two each. That's <u>10</u>.</li> <li><u>10</u> divided between <u>2</u> is equal to <u>5</u> each.</li> </ul> <p><b>Times Table Link</b></p> <ul style="list-style-type: none"> <li><u>   </u> <u>tens</u> are equal to <u>   </u>, so <u>   </u> divided into groups of <u>ten</u> is equal to <u>   </u>.</li> <li>If the divisor is <u>ten</u>, we can use the <u>ten</u> times table to find the quotient.</li> <li>If the divisor is <u>five</u>, we can use the <u>five</u> times table to find the quotient.</li> <li>A number is divisible by two if the ones digit is <u>even</u>.</li> <li>A number is divisible by ten if the ones digit is <u>zero</u>.</li> </ul> <p>A number is divisible by five if the ones digit is <u>five or zero</u>.</p> <p><b>Division with Remainders</b></p> <p><b>Grouping</b></p> <ul style="list-style-type: none"> <li><u>   </u> is divided into groups of <u>   </u>.</li> <li><u>   </u> divided into groups of <u>   </u> is equal to <u>   </u> each, with a remainder of <u>   </u>.</li> <li>There are <u>   </u> groups and a remainder of <u>   </u>.</li> </ul> <p><b>Sharing</b></p> <ul style="list-style-type: none"> <li><u>   </u> is divided between <u>   </u>.</li> <li><u>   </u> divided between <u>   </u> is equal to <u>   </u> each, with a remainder of <u>   </u>.</li> </ul> <p><b>Generalisations</b></p>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<p>dividend to make 16 ones.</p> <ul style="list-style-type: none"> <li>Then, move to the ones: 16 ones divided by 4 is equal to four ones: write 4 in the ones column.</li> </ul> <p>Shortening to:</p> <ul style="list-style-type: none"> <li>Five divided by four is one ten remainder one ten.</li> <li>Sixteen divided by 4 is equal to 4.</li> </ul> <p><b>Division - Grouping.</b></p> <ul style="list-style-type: none"> <li>There are ___ in total.</li> <li>They are divided into groups of ___.</li> </ul> <p>___ ÷ ___ = ___.</p> <p><b>Division - Sharing.</b></p> <ul style="list-style-type: none"> <li>There are ___ in total.</li> <li>They are divided between ___.</li> </ul> <p>___ ÷ ___ = ___.</p> <p><b>Rules of Divisibility</b></p> <ul style="list-style-type: none"> <li>For a number to be divisible by 3, the sum of the digits of the number must be divisible by 3.</li> <li>For a number to be divisible by 6, the number must be divisible by both 2 and 3.</li> <li>For a number to be divisible by 9, the sum of the digits of the number must be divisible by 9.</li> </ul>			<ul style="list-style-type: none"> <li>The largest multiple of ___ that is less than or equal to ___ is ___.</li> <li>___ is a multiple of ___, so when it is divided into groups of ___ there are none left over; there is no remainder.</li> <li>___ is not a multiple of ___, so when it is divided into groups of ___ there are some left over; there is a remainder.</li> <li>If the dividend <u>is</u> a multiple of the divisor, there is <u>no remainder</u>.</li> <li>If the dividend <u>is not</u> a multiple of the divisor, there <u>is a remainder</u>.</li> <li>The remainder is always less than the divisor.</li> </ul>
Fractions	Part, Whole, Equal, Fraction, Half, Third, Quarter, Notation, Numerator, Denominator, Equivalent	Unit Non-unit Fifths Sixths Sevenths Eighths Ninths Tenths Common fraction/ Simple	<p><b>Unit Fractions</b> - Identifying, representing, comparing fractions</p> <p><b>Numerators and Denominators</b></p> <ul style="list-style-type: none"> <li>The whole has been divided into ___ equal/unequal parts.</li> <li>___ of the parts has been shaded.</li> <li>The denominator is ___ because the whole is divided into ___ equal parts.</li> </ul>	Part, Whole, Equal, Fraction, Half, Third, Quarter, Notation, Numerator, Denominator, Equivalent, Unit Non-unit, Fifths, Sixths, Sevenths, Eighths, Ninths, Tenths, Common fraction, Simple	Unit Non-unit Hundredths Thousandths Decimal Fractions Mixed Number fractions Proper Improper Equivalent	<p><b>**See Year 3 Fraction Sentence Stems to support Fraction teaching**</b></p> <p><b>Dividing by 10</b></p> <ul style="list-style-type: none"> <li>___ divided by ten is equal to ___.</li> <li>To find the inverse of ten times as many, divide by 10.</li> <li>___ multiplied by 10 is equal to ___, so ___ divided by 10 is equal to ___.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
		fraction/ Vulgar fraction	<ul style="list-style-type: none"> <li>The numerator is one because one part is shaded.</li> </ul> <p><b>Fraction Notation.</b></p> <ul style="list-style-type: none"> <li>The ___ has been divided ___(write division bar)</li> <li>into ___ equal parts (write denominator)</li> <li>and ___of the parts is shaded (write numerator).</li> <li>The whole has been divided into ___ equal parts. Each equal part is one-___ of the whole. E.g. The whole has been divided into 3 equal parts. Each equal part is one-third of the whole.</li> </ul> <p><u>Comparing Unit Fractions.</u></p> <ul style="list-style-type: none"> <li>Equal-sized parts do not have to look the same.</li> <li>When the whole is the same, the <i>greater</i> the number of equal parts, the <i>smaller</i> each part is.</li> <li>When the whole is the same, the <i>smaller</i> the number of equal parts, the <i>bigger</i> each equal part is.</li> </ul> <p>Leading to:</p> <ul style="list-style-type: none"> <li>When comparing unit fractions, the <i>greater</i> the denominator, the <i>smaller</i> the fraction.</li> <li>When comparing unit fractions, the <i>smaller</i> the denominator, the <i>greater</i> (or bigger) the fraction.</li> </ul>	fraction, Vulgar fraction		<ul style="list-style-type: none"> <li>To divide a number by ten, remove the zero from the ones place.</li> </ul> <p><b>Dividing by 100</b></p> <ul style="list-style-type: none"> <li>___ divided by 100 is equal to ___</li> <li>To find the inverse of 100 times as many, divide by 100.</li> <li>To divide a multiple of 100 by 100, remove two zeros (from the tens and ones places).</li> <li>Dividing by 00 is equivalent to dividing by 10, then dividing by 10 again.</li> </ul> <p><b>Decimals (Tenths)</b></p> <ul style="list-style-type: none"> <li>The whole is divided into ten equal parts and one of them is shaded; this is one tenth of the whole.</li> <li>The whole is divided into ten equal parts and ___ of them is shaded; this is ___tenth(s) of the whole.</li> <li>If a digit is moved one column to the right, the number represented becomes ten times smaller; we can also say it becomes one tenth of the size.</li> <li>If a digit is moved one column to the left, the number represented becomes ten times bigger/ten times the size.</li> <li>The ___ in the hundreds column represents ___ hundreds.</li> <li>The ___ in the tenths column represents ___ tenths.</li> <li>One tenth can be written as 0.1, so ___ tenths can be written as 0.____.</li> <li>There is a 3 in the ___column, so this represents ____.</li> <li>One tenth can be written as 0.1, so ___ tenths can be written as 0.____.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<ul style="list-style-type: none"> <li>When we compare fractions, the whole has to be <u>the same</u>.</li> </ul> <p>If one-____ is a part, then the whole is ____ times as much. Take ____ parts and put them together to make one whole.</p> <p><b>Non-Unit Fractions - Identifying, representing and comparing Relationship Between Unit and Non Unit Fractions</b></p> <ul style="list-style-type: none"> <li>I have ____ one-sixths; I have ____ -sixths. E.g. I have <u>three</u> one-sixths; I have <u>three</u>-sixths.</li> <li>There are ____ equal parts in the whole. There are ____ parts shaded, so ____ is shaded. <ul style="list-style-type: none"> <li>The whole has been divided into ____ equal parts. ____ of the parts are shaded; that is ____ of the whole.</li> </ul> </li> <li>We have split our whole into ____ equal parts, so our unit fraction is ____.</li> <li>When the numerator and the denominator are the same, the fraction is equivalent to one whole.</li> <li>I can partition ____ into ____ and ____.</li> </ul> <p>E.g. I can partition <u>three-sixths</u> into <u>one-sixth</u> and <u>two-sixths</u>.</p> <p><b>Fractions as Numbers</b></p> <ul style="list-style-type: none"> <li>There are ____ equal parts between zero and one.</li> <li>Each interval represents ____, so this means we</li> </ul>			<p><b>Comparing Decimals</b></p> <ul style="list-style-type: none"> <li>To compare 2 numbers, we compare digits with the same place value, starting with the largest place value digit.</li> <li>E.g. 4.3 is greater than 3.7 because _____.</li> <li>3 point 6 is equal to 3 ones and 6 tenths.</li> <li>3.6 is between ____ and ____ because it is __ and some tenths.</li> </ul>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<p>are counting in units of _____.</p> <ul style="list-style-type: none"> <li>When counting along the number line, use the following language examples: One-fifth, two-fifths, three-fifths, four-fifths, five-fifths.</li> </ul> <p>AND</p> <ul style="list-style-type: none"> <li>One one-fifth, two one-fifths, three one-fifths, four one-fifths, five one-fifths.</li> <li>When the numerator and the denominator are the same, the fraction is equivalent to <u>one whole</u>.</li> </ul> <p>E.g. <math>1 = \frac{5}{5} = \frac{9}{9} = \frac{100}{100}</math></p> <p><b>Comparing Fractions</b></p> <ul style="list-style-type: none"> <li>When we compare fractions with the same denominator, the <u>greater</u> the numerator, the <u>greater</u> the fraction.</li> <li>When we compare fractions with the same numerator, the <u>greater</u> the denominator, the <u>smaller</u> the fraction.</li> <li>When we compare fractions with the same numerator, the <u>smaller</u> the denominator, the <u>greater</u> the fraction.</li> </ul> <p><b>Adding and Subtracting Fractions with the Same Denominator</b></p> <p>Bring attention to unitising:</p> <p>E.g. <math>\frac{3}{5} + \frac{7}{5}</math></p> <ul style="list-style-type: none"> <li>Our unit is <u>fifths</u>. We know 3 plus 7 is equal to 10, so we know</li> </ul>			

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<p>that <u>3 fifths</u> plus <u>7 fifths</u> = <u>10 fifths</u>.</p> <p>E.g. <math>\frac{8}{7} - \frac{3}{7}</math></p> <ul style="list-style-type: none"> <li>Our unit is sevenths. We know <u>8</u> minus <u>3</u> is equal to <u>5</u>, so we know that <u>8 sevenths</u> minus <u>3 sevenths</u> is equal to <u>5 sevenths</u>.</li> </ul> <p>Leading to generalisations:</p> <ul style="list-style-type: none"> <li>When adding fractions with the same denominators, just <u>add the numerators</u>.</li> <li>When subtracting fractions with the same denominators, just <u>subtract the numerators</u>.</li> <li>To subtract from one whole, first <u>convert the whole to a fraction where the denominator and numerator are the same</u>.</li> </ul> <p><b>Finding a Fraction of a Quantity</b></p> <ul style="list-style-type: none"> <li>To calculate a fraction of a quantity, find the unit fraction of the quantity. Then multiply the unit fraction by <u>the numerator</u>.</li> </ul> <p><b>Relationship Between a Fraction and the Whole</b></p> <ul style="list-style-type: none"> <li>If we know the size of a unit fraction, we can</li> </ul>			

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<p>work out the size of the whole.</p> <ul style="list-style-type: none"> <li>The whole is divided into ____ parts. This is ____ of those parts. One part must be ____, so ____ parts (or the whole) must be ____.</li> </ul>			
Geometry	2d Shape	<p>Squares, Circles, Triangles, 2 dimensional, Polygon, Quadrilateral, Squares, Circles Triangles, Rectangle (Oblong), Kite, Hexagon, Heptagon, Octagon, Sides, Corners, Line of symmetry, Regular, Irregular, Nonagon, Decagon</p>	<p>Perimeter Units of length Regular polygon Irregular polygon Rhombus Trapezium Orientation Dodecagon Octahedron</p>	<p>Squares, Circles, Triangles, 2 dimensional, Polygon, Quadrilateral, Squares, Circles Triangles, Rectangle (Oblong), Kite, Hexagon, Heptagon, Octagon, Sides, Corners, Line of symmetry, Regular, Irregular, Nonagon, Decagon, Perimeter, Units of length, Regular polygon, Irregular polygon, Rhombus, Trapezium, Orientation, Dodecagon, Octahedron</p>	<p>Area Surface Square units Square centimetres Square metres Composite shape Composite rectilinear shape Line of symmetry Quadrilaterals</p>	
	3d shape	<p>Cube, Pyramid, Sphere, Cone, 3 dimensional, Cube, Pyramid, Sphere, Cone Triangular prism, Cuboid, Cylinder, Face Edges, Vertices, Vertex, Surface, Base Straight, Curved, Flat</p>	<p>Face Edges Vertices Vertex Dodecahedron Tetrahedron</p>			
	Angles		<p>Right angle Degree Half turn Full turn</p>		<p>Right angle, Degree, Half turn Full turn Turn</p>	<p>Acute Obtuse</p>

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
		Turn Parallel Perpendicular Horizontal Vertical		Parallel Perpendicular Horizontal Vertical		
	Positioning & Direction	Half turn, Quarter turn, Three quarter turn, Direction, Rotation		Half turn, Quarter turn, Three quarter turn, Direction, Rotation	Coordinates Quadrant Translation Left Right Up Down Plot	
Measure	Time	Quicker, Slower, Earlier, Later, Today, Yesterday, Tomorrow, Quicker, Slower, Earlier, Later, Hour, Minute Hand, Clock face, O'clock, Half past, 30 minutes past, Chronological, Second, Minute, Hour Day, Week, Month, Year Quarter past, Quarter to, Minutes past, Minutes to, Late, Early On time, Clockwise, Anti-clockwise	AM - ante-meridiem PM - post-meridiem Morning Afternoon Noon Midnight Minutes past Minutes to Digital Analogue Rate	Quicker, Slower, Earlier, Later, Today, Yesterday, Tomorrow, Quicker, Slower, Earlier, Later, Hour, Minute Hand, Clock face, O'clock, Half past, 30 minutes past, Chronological, Second, Minute, Hour Day, Week, Month, Year Quarter past, Quarter to, Minutes past, Minutes to, Late, Early On time, Clockwise, Anti-clockwise, AM - ante-meridiem, PM - post-meridiem, Morning, Afternoon, Noon, Midnight, Digital, Analogue, Rate	AM - ante-meridiem PM - post-meridiem Digital Analogue	
	Money	Coin, Note, Pound, Pence, Denomination, Change	Pound and Pence Change	<b>Counting and Unitising</b> <ul style="list-style-type: none"> <li>This is a one penny coin, also called a one pence, or just a penny.</li> <li>We can say it has a value of 'one p'.</li> <li>There are ____ one penny coins; the total value is ____ p.</li> </ul>	Coin, Note, Pound, Pence, Denomination, Change	

Subject area	Year Three			Year Four		
	Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
			<ul style="list-style-type: none"> <li>There are ____ one penny coins; the total value is ____ pence.</li> <li>This is a ____ pence coin. It has a value of ____ p.</li> <li>I say two pence, but I think two one pennies.</li> <li>I say five pence, but I think five one pennies.</li> <li>I say ten pence, but I think ten one pennies.</li> <li>There are ____ coins.</li> <li>Each coin has a value of ____ p.</li> <li>This is ____ p.</li> <li>The ____ costs ____ p</li> <li>Each coin has a value of ____ p, so I need ____ coins.</li> </ul>			<ul style="list-style-type: none"> <li>____ represents __ and ____ additional tenths, or __ and ____ additional hundredths.</li> <li>____ represents ____ whole pounds and ____ additional groups of ten pence, or ____ whole pounds and ____ additional pennies.</li> <li>The number to the left of the decimal point represents the number of whole pounds.</li> <li>The number to the right of the decimal point represents the number of additional pennies.</li> </ul>
Length & Height	Long, Short, Longer, Shorter, Tall, Short, Double, Half, Length, Height Breadth, Longest, Shortest, Tall, Short, Taller, Shorter, Tallest, Shortest, Double, Half Metre, Centimetre, Kilometre, Milli, Millimetre, Ruler, Metre stick, Tape measure	Convert	<b>Comparisons and Measures</b> <ul style="list-style-type: none"> <li>The ____ is heavier than the ____.</li> <li>The ____ is lighter than the ____.</li> <li>The ____ is the same length/weight as the ____.</li> </ul> N.b. Say less when uncountable (e.g. juice/water); fewer when countable (e.g. apples/bananas). <ul style="list-style-type: none"> <li>There is/are more ____ than ____.</li> <li>There is/are fewer/ less ____ than ____.</li> <li></li> </ul>	Long, Short, Longer, Shorter, Tall, Short, Double, Half, Length, Height Breadth, Longest, Shortest, Tall, Short, Taller, Shorter, Tallest, Shortest, Double, Half Metre, Centimetre, Kilometre, Milli, Millimetre, Ruler, Metre stick, Tape measure, convert		<b>Applying Decimals to Measures</b> <ul style="list-style-type: none"> <li>One cm is one hundredth of a metre, so we can write 1cm as 0.01m.</li> <li>10cm is one tenth of a metre, so we can write 10 cm as 0.1m.</li> </ul> <b>Structures Using Measures and Comparison to Understand Scaling</b> <ul style="list-style-type: none"> <li>The ____ is ____ times the length of ____.</li> <li>When one is a factor, the product is equal to the other factor.</li> <li>If 2 objects are the same length, one object is one times the length of the other.</li> <li>____ is ____ times the size of ____.</li> <li>____ multiplied by ____ is equal to ____.</li> <li>____ divided by ____ is equal to ____.</li> <li>The ____ is ____ times the mass of the ____.</li> </ul>

Subject area		Year Three			Year Four		
		Previous Vocabulary	Year 3 Vocabulary	Stem Sentences	Previous Vocabulary	Year 4 Vocabulary	Stem Sentences
	Mass & Weight	Heavy, Light, Heavier, Lighter, Weight, Mass, Scales Kilo, Kilogram, Gram	Convert		Heavy, Light, Heavier, Lighter, Weight, Mass, Scales Kilo, Kilogram, Gram, convert		
	Capacity & Volume/Temperature	Full, Empty, Half full, Half empty, Volume Capacity, Litres, Centilitres, Millilitres, Measuring vessels, Temperature, Degrees, Boiling point, Freezing point	Convert		Full, Empty, Half full, Half empty, Volume Capacity, Litres, Centilitres, Millilitres, Measuring vessels, Temperature, Degrees, Boiling point, Freezing point, convert		
Statistics	Graphs and Charts	Interpret, Construct, Pictograms, Tally charts, Block diagrams, Simple tables, Category, Quantities, Categorical data, Horizontal, Vertical, Data, Frequency, Tally	Interpret Present Construct Pictograms Tally charts Block diagrams Simple tables Category Quantities Categorical data		Interpret, Construct, Pictograms, Tally charts, Block diagrams, Simple tables, Category, Quantities, Categorical data, Horizontal, Vertical, Data, Frequency, Tally, present	Discrete data Continuous data Time graphs x-axis y-axis Title Legend Sample	
Algebra	Equations, formulae, sequences		Integer scaling		Integer scaling		

Number	Measurement	Geometry	Statistics
<p>Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number NRICH: <a href="#">How Would We Count?</a> * P</p>	<p>Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml) NRICH: <a href="#">Oh! Harry!</a> ** P NRICH: <a href="#">Olympic Starters</a> * I NRICH: <a href="#">Car Journey</a> * I</p>	<p>Draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them NRICH: <a href="#">Building Blocks</a> * P NRICH: <a href="#">The Third Dimension</a> *** P I NRICH: <a href="#">Rolling That Cube</a> * P NRICH: <a href="#">Inky Cube</a> *** P NRICH: <a href="#">Triple Cubes</a> * I NRICH: <a href="#">Sponge Sections</a> ** P NRICH: <a href="#">A Puzzling Cube</a> * P NRICH: <a href="#">Arranging Cubes</a> * G NRICH: <a href="#">Board Block Challenge</a> *** G NRICH: <a href="#">Square Corners</a> ** P NRICH: <a href="#">Stick Images</a> * G P NRICH: <a href="#">Overlapping Again</a> ** P NRICH: <a href="#">Move Those Halves</a> ** I</p>	<p>Interpret and present data using bar charts, pictograms and tables NRICH: <a href="#">How Big Are Classes 5, 6 and 7?</a> * P NRICH: <a href="#">Our Sports</a> * I NRICH: <a href="#">Class 5's Names</a> * P NRICH: <a href="#">Going for Gold</a> * I NRICH: <a href="#">The Domesday Project</a> * I NRICH: <a href="#">The Car That Passes</a> * I NRICH: <a href="#">Now and Then</a> ** P NRICH: <a href="#">Real Statistics</a> *** P NRICH: <a href="#">If the World Were a Village</a> * P NRICH: <a href="#">It's a Tie</a> ** I</p>
<p>Recognise the place value of each digit in a three-digit number (hundreds, tens, ones) NRICH: <a href="#">Coded Hundred Square</a> * P NRICH: <a href="#">Which Scripts?</a> * P</p>	<p>Add and subtract amounts of money to give change, using both £ and p in practical contexts NRICH: <a href="#">How Much Did It Cost?</a> ** P</p>	<p>Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle NRICH: <a href="#">Square It</a> * G</p>	<p>Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables NRICH: <a href="#">The Olympic Flame: Are You in the 95%?</a> * P</p>
Number and Place Value			
<p>Solve number problems and practical problems involving these ideas NRICH: <a href="#">Take Three Numbers</a> * I NRICH: <a href="#">Three Neighbours</a> ** I NRICH: <a href="#">Square Subtraction</a> *** I NRICH: <a href="#">Planning a School Trip</a> * P NRICH: <a href="#">Magic Vs</a> ** P NRICH: <a href="#">Number Differences</a> * G P NRICH: <a href="#">Sitting Round the Party Tables</a> * P NRICH: <a href="#">Number Match</a> * G NRICH: <a href="#">A Mixed-up Clock</a> * P NRICH: <a href="#">That Number Square!</a> * I</p>	<p>Tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks NRICH: <a href="#">What is the Time?</a> * P NRICH: <a href="#">Two Clocks</a> ** P NRICH: <a href="#">Clocks</a> * P NRICH: <a href="#">The Time Is ...</a> ** P NRICH: <a href="#">How Many Times?</a> * I NRICH: <a href="#">5 on the Clock</a> *** I NRICH: <a href="#">Approaching Midnight</a> G</p>	<p>Identify horizontal and vertical lines and pairs of perpendicular and parallel lines NRICH: <a href="#">National Flags</a> * P</p>	

Number	Measurement	Geometry	Statistics
<b>Addition and Subtraction</b>			
<p>Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction</p> <p>NRICH: <a href="#">Buying a Balloon</a> * P</p> <p>NRICH: <a href="#">Got It</a> ** G</p> <p>NRICH: <a href="#">Make 37</a> ** P</p> <p>NRICH: <a href="#">Consecutive Numbers</a> ** P I</p> <p>NRICH: <a href="#">Super Shapes</a> * P</p> <p>NRICH: <a href="#">Strike it Out</a> * G</p> <p>NRICH: <a href="#">Dice in a Corner</a> *** P I</p> <p>NRICH: <a href="#">Domino Square</a> ** P</p> <p>NRICH: <a href="#">Dicey Addition</a> * G</p> <p>NRICH: <a href="#">4 Dom</a> *** P</p> <p>NRICH: <a href="#">Finding Fifteen</a> ** P</p> <p>NRICH: <a href="#">Half Time</a> * P</p> <p>NRICH: <a href="#">Play to 37</a> * G</p> <p>NRICH: <a href="#">Build it Up</a> * P I</p>	<p>Estimate and read time with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes and hours; use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight</p> <p>NRICH: <a href="#">Wonky Watches</a> ** P</p> <p>NRICH: <a href="#">Watch the Clock</a> *** P</p>		
<b>Multiplication and Division</b>			
<p>Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables</p> <p>NRICH: <a href="#">Ordering Cards</a> * G P</p> <p>NRICH: <a href="#">Music to My Ears</a> * P I</p>			
<p>Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects</p> <p>NRICH: <a href="#">A Square of Numbers</a> * G P</p> <p>NRICH: <a href="#">What do you Need?</a> * P</p> <p>NRICH: <a href="#">This Pied Piper of Hamelin</a> ** P</p> <p>NRICH: <a href="#">Follow the Numbers</a> * P I</p> <p>NRICH: <a href="#">What's in the Box?</a> * P</p> <p>NRICH: <a href="#">How Do You Do It?</a> * P</p> <p>NRICH: <a href="#">Ip Dip</a> * I</p> <p>NRICH: <a href="#">Journeys in Numberland</a> * I</p>			
<b>Fractions</b>			
<p>Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators</p> <p>NRICH: <a href="#">Fraction Match</a> * G</p>			
<p>Recognise and show, using diagrams, equivalent fractions with small denominators</p> <p>NRICH: <a href="#">Matching Fractions</a> * G</p>			



**Five Stones Learning Federation**  
**Year 4 - NRICH Activities**



Number	Measurement	Geometry	Statistics
<p align="center"><b>Number and Place Value</b></p> <p>Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens and ones)</p> <p>NRICH: <a href="#">Nice or Nasty</a> * G</p> <p>NRICH: <a href="#">Dicey Operations</a> * G</p> <p>NRICH: <a href="#">The Deca Tree</a> * P</p> <p>NRICH: <a href="#">Four-digit Targets</a> * P</p>	<p>Find the area of rectilinear shapes by counting squares</p> <p>NRICH: <a href="#">Torn Shapes</a> * P I</p> <p>NRICH: <a href="#">Twice as Big?</a> * P</p>	<p>Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes</p> <p>NRICH: <a href="#">Nine-pin Triangles</a> *** I</p> <p>NRICH: <a href="#">Cut it Out</a> *** P</p> <p>NRICH: <a href="#">Sorting Logic Blocks</a> * G</p> <p>NRICH: <a href="#">What Shape?</a> * G P</p> <p>NRICH: <a href="#">Shapes on the Playground</a> ** P</p>	<p>Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs</p> <p>NRICH: <a href="#">Venn Diagrams</a> * P</p> <p>NRICH: <a href="#">More Carroll Diagrams</a> * P</p> <p>NRICH: <a href="#">Plants</a> ** I</p>
<p>Round any number to the nearest 10, 100 or 1000</p> <p>NRICH: <a href="#">Reasoned Rounding</a> * G</p>	<p>Estimate, compare and calculate different measures, including money in pounds and pence</p> <p>NRICH: <a href="#">Discuss and Choose</a> * P</p>	<p>Identify lines of symmetry in 2-D shapes presented in different orientations</p> <p>NRICH: <a href="#">Let Us Reflect</a> * P</p> <p>NRICH: <a href="#">Stringy Quads</a> ** P</p> <p>NRICH: <a href="#">Counters in the Middle</a> * G P</p>	
<p align="center"><b>Addition and Subtraction</b></p> <p>Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why</p> <p>NRICH: <a href="#">Money Bags</a> ** P</p> <p>NRICH: <a href="#">Amy's Dominoes</a> ** P</p> <p>NRICH: <a href="#">Fifteen Cards</a> * P I</p> <p>NRICH: <a href="#">Sealed Solution</a> ** P</p> <p>NRICH: <a href="#">Roll These Dice</a> ** I</p>		<p>Complete a simple symmetric figure with respect to a specific line of symmetry</p> <p>NRICH: <a href="#">Symmetry Challenge</a> *** I</p> <p>NRICH: <a href="#">School Fair Necklaces</a> ** I</p>	
<p align="center"><b>Multiplication and Division</b></p>			

Number	Measurement	Geometry	Statistics
<p>Recall multiplication and division facts for multiplication tables up to 12x12</p> <p>NRICH: <a href="#">Multiplication Square Jigsaw</a> * G P</p> <p>NRICH: <a href="#">Shape Times Shape</a> * P</p> <p>NRICH: <a href="#">Table Patterns Go Wild!</a> ** I</p> <p>NRICH: <a href="#">Let Us Divide!</a> * P</p> <p>NRICH: <a href="#">Carrying Cards</a> * P</p> <p>NRICH: <a href="#">Light the Lights Again</a> * G P</p> <p>NRICH: <a href="#">Multiples Grid</a> * I</p> <p>NRICH: <a href="#">Zios and Zepts</a> * P</p> <p>NRICH: <a href="#">Times Tables Shifts</a> * G P</p>		<p>Describe positions on a 2-D grid as coordinates in the first quadrant</p> <p>NRICH: <a href="#">Coordinate Challenge</a> * P</p> <p>NRICH: <a href="#">Eight Hidden Squares</a> ** P</p>	
Fractions and Decimals			
<p>Recognise and show, using diagrams, families of common equivalent fractions</p> <p>NRICH: <a href="#">Fractional Wall</a> * P</p> <p>NRICH: <a href="#">Fractional Triangles</a> * P</p> <p>NRICH: <a href="#">Bryony's Triangle</a> * P</p>		<p>Plot specified points and draw sides to complete a given polygon.</p> <p>NRICH: <a href="#">A Cartesian Puzzle</a> * P</p>	
<p>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</p> <p>NRICH: <a href="#">Andy's Marbles</a> ** P</p> <p>NRICH: <a href="#">Fractions in a Box</a> ** P-</p> <p>NRICH: <a href="#">Chocolate</a> ** P I</p>			
<p>Round decimals with one decimal place to the nearest whole number</p> <p>NRICH: <a href="#">Round the Dice Decimals 1</a> * P I</p>			



Five Stones Learning Federation



Key Instant Recall Facts (KIRFs) Progression Map  
2020 to 2021

Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Reception	I know the number names in order to 5.	I know the numbers in order to 10.	I know the days of the week.	I can partition numbers to 5 into two groups	I can count in 10s.	I can count in 5s.
Y1	I know number bonds for each number to 6	I can count forward and backward in steps of 2,5 and 10	I know doubles and halves of numbers to 10.	I know number bonds to 10.	I know days of the week, months of the year and seasons	I know number bonds for each number to 10.
Y2	I know number bonds to 20.	I know the multiplication and division facts for the 10 times table.	I know doubles and halves of numbers to 20.	I know the multiplication and division facts for the 5 times table.	I know addition and subtraction facts for multiples of 10 to 100	I know the multiplication and division facts for the 2 times table.
Y3	I know number bonds for all numbers to 20.	I know the multiplication and division facts for the 4 times table.	I know the multiplication and division facts for the 8 times table	I know the multiplication and division facts for the 3 times table.	I can recall facts about durations of time.	I know doubles and halves of -All numbers to 20 -All multiples of 10 to 500 - All multiples of 100 to 5000.

Y4	I know number bonds to 100.	I know the multiplication and division facts for the 6 times table.	I can multiply and divide single-digit numbers by 10 and 100.	I know the multiplication and division facts for the 9 , 11 and 7 times tables.	I can recognise decimal equivalents of fractions.  I can convert between the 12 hour and 24 hour clock.	I know doubles and halves of -All numbers to 50 -All multiples of 5 to 1000 - All multiples of 50 to 5000.
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