



# The T-RF Maths Progression



## ELG Number

- Have a deep understanding of number to 10, including the composition of each number
- Subitise (recognise quantities without counting) up to 5
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts

## ELG Numerical Patterns

- Verbally count beyond 20, recognising the pattern of the counting system
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally

Focus	Place Value: Counting	Place Value: Represent	Place Value: Use & compare	Composition of numbers	Addition & Subtraction: Recall, represent, use	Addition & Subtraction: Calculations	Addition & Subtraction: Solve problems	Foundations of multiplication and division	Number patterns
F1	<ul style="list-style-type: none"> <li>• Rote count to numbers past 5</li> <li>• Points or touches (tags) each item, saying one number for each item, using the stable order of 1,2,3,4,5</li> <li>• Counts by moving and rearranging the objects.</li> <li>• Knows that the last number reached when counting a small set of objects tells you how many there are.</li> <li>• Uses some number names and number language within play, and may show fascination with large numbers</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to recognise numerals 0 to 10</li> <li>• Subitises one, two and three objects (without counting)</li> <li>• show finger numbers up to 5.</li> <li>• Links numerals with amounts up to 5 and maybe beyond</li> <li>• Experiment with their own symbols and marks as well as numerals</li> </ul>	<ul style="list-style-type: none"> <li>• Compares two small groups of up to five objects, saying when there are the same number of objects in each group, e.g. You've got two, I've got two. Same!</li> </ul>	<ul style="list-style-type: none"> <li>• Able to subitise to 3 quickly without counting numbers individually.</li> <li>• Be able to represent numbers to 4 using different combinations of numbers.</li> </ul>	<ul style="list-style-type: none"> <li>• Counts up to five items, recognising that the last number said represents the total counted so far (cardinal principle)</li> <li>• Explores using a range of their own marks and signs to which they ascribe mathematical meanings</li> </ul>	<ul style="list-style-type: none"> <li>• Through play and exploration, beginning to learn that numbers are made up (composed) of smaller numbers</li> <li>• Beginning to recognise that each counting number is one more than the one before</li> </ul>	<ul style="list-style-type: none"> <li>• Beginning to use understanding of number to solve practical problems in play and meaningful activities</li> <li>• Separates a group of three or four objects in different ways, beginning to recognise that the total is still the same</li> <li>• Solve real world problems with m=numbers up to 5.</li> </ul>	<ul style="list-style-type: none"> <li>• Groups and sorts items in to pairs or twos.</li> </ul>	<ul style="list-style-type: none"> <li>• Count in simple patterns 1,2- 1, 2-</li> <li>• sing number songs that involves counting and patterns.</li> </ul>
F2	<ul style="list-style-type: none"> <li>• Enjoys reciting numbers from 0 to 10 (and beyond) and back from 10 to 0</li> <li>• Counts objects, actions and sounds.</li> <li>• Counts out up to 10 objects from a larger group</li> <li>• verbally count beyond 20, following the pattern of the number system.</li> </ul>	<ul style="list-style-type: none"> <li>• Engages in subitising numbers to four and maybe five</li> <li>• Increasingly confident at putting numerals in order 0 to 10 (ordinality)</li> <li>• Matches the numeral with a group of items to show how many there are (up to 10)</li> </ul>	<ul style="list-style-type: none"> <li>• Uses number names and symbols when comparing numbers, showing interest in large numbers</li> <li>• Estimates of numbers of things, showing understanding of relative size</li> </ul>	<ul style="list-style-type: none"> <li>• Be able to subitise to 5.</li> <li>• Shows awareness that numbers up to 10 are made up (composed) of smaller numbers, exploring partitioning in different ways with a wide range of objects</li> </ul>	<ul style="list-style-type: none"> <li>• Begins to explore and work out mathematical problems, using signs and strategies of their own choice, including (when appropriate) standard numerals, tallies and + or -</li> <li>• To recall number bonds to 5 quickly and some number bonds to 10 – addition and subtraction</li> </ul>	<ul style="list-style-type: none"> <li>• In practical activities, adds one and subtracts one with numbers to 10</li> <li>• In practical activities be able to add and subtract small amounts totalling up to 10.</li> </ul>	<ul style="list-style-type: none"> <li>• Begins to conceptually subitise larger numbers by subitising smaller groups within the number, e.g. sees six raisins on a plate as three and three</li> </ul>	<ul style="list-style-type: none"> <li>• Can group items quickly in to sets of 2 and 3.</li> <li>• Can share amounts between 2 people fairly.</li> </ul>	<ul style="list-style-type: none"> <li>Explore and represent patterns within numbers up to 10, including evens and odds, double facts.</li> </ul>



# The T-RF Maths Progression



ELG None for Shape space and measures				
Focus	Spatial Awareness	Shape	Pattern	Measures
F2	<ul style="list-style-type: none"><li>• Responds to and uses language of position and direction</li><li>• Predicts, moves and rotates objects to fit the space or create the shape they would like</li></ul>	<ul style="list-style-type: none"><li>• Chooses items based on their shape which are appropriate for the child's purpose</li><li>• Responds to both informal language and common shape names</li><li>• Shows awareness of shape similarities and differences between objects</li><li>• Enjoys partitioning and combining shapes to make new shapes with 2D and 3D shapes</li><li>• Attempts to create arches and enclosures when building, using trial and improvement to select blocks</li></ul>	<ul style="list-style-type: none"><li>• Creates their own spatial patterns showing some organisation or regularity</li><li>• Explores and adds to simple linear patterns of two or three repeating items, e.g. stick, leaf (AB) or stick, leaf, stone (ABC)</li><li>• Joins in with simple patterns in sounds, objects, games and stories dance and movement, predicting what comes next</li></ul>	<ul style="list-style-type: none"><li>• In meaningful contexts, finds the longer or shorter, heavier or lighter and more/less full of two items</li><li>• Recalls a sequence of events in everyday life and stories</li></ul>
F2	<ul style="list-style-type: none"><li>• Uses spatial language, including following and giving directions, using relative terms and describing what they see from different viewpoints</li><li>• Investigates turning and flipping objects in order to make shapes fit and create models; predicting and visualising how they will look (spatial reasoning)</li><li>• May enjoy making simple maps of familiar and imaginative environments, with landmarks</li></ul>	<ul style="list-style-type: none"><li>• Uses informal language and analogies, (e.g. heart-shaped and hand-shaped leaves), as well as mathematical terms to describe shapes</li><li>• Enjoys composing and decomposing shapes, learning which shapes combine to make other shapes</li><li>• Uses own ideas to make models of increasing complexity, selecting blocks needed, solving problems and visualising what they will build</li><li>• Recognise &amp; name common 2D shapes</li><li>• Recognise &amp; name common 3D shapes</li></ul>	<ul style="list-style-type: none"><li>• Spots patterns in the environment, beginning to identify the pattern "rule"</li><li>• Chooses familiar objects to create and recreate repeating patterns beyond AB patterns and begins to identify the unit of repeat</li></ul>	<ul style="list-style-type: none"><li>• Enjoys tackling problems involving prediction and discussion of comparisons of length, weight or capacity, paying attention to fairness and accuracy</li><li>• Becomes familiar with measuring tools in everyday experiences and play</li><li>• Is increasingly able to order and sequence events using everyday language related to time</li><li>• Beginning to experience measuring time with timers and calendars</li></ul>



# The T-RF Maths Progression



EYFS Vocabulary			
Focus	Place Value	Addition and Subtraction	Multiplication and Division
<b>Number &amp; Numerical Patterns</b>	Number One, two, three to twenty and beyond one, Count on/up/to/from/ down Before, after More, less many, few, fewer, fewest, smaller, smallest Equal to, the same as Odd, even Digit Numeral Compare Order Size	Number line Add, more, plus, sum, total, altogether Double Half, halve Equals, is the same (including equals sign) How many more to make ...? How many more is ... than ...? How much more is ...? Subtract, take away, minus	Odd, even Double, halve Share, share equally Group in pairs Equal groups of Divide
	<b>2d and 3 d shapes Spatial awareness</b>	<b>Measures</b>	<b>Measure length , Mass and Capacity</b>
<b>Shape</b>	Sort Cube, cuboid, pyramid, sphere, cone, cylinder, circle, triangle, square Shape Flat, curved, straight, round Solid Corner Face, side Make, build, draw	Time Days of the week: Monday, Tuesday etc Seasons: Spring, Summer, Autumn, Winter Days, week, month, year, weekend Birthday, holiday Morning, afternoon, evening, night Bedtime	Mass Container, Weigh, weighs, balance Heavy, heavier, heaviest, light, lighter, lightest Scales measure size compare guess, estimate enough, not enough too much, too little too many, too few nearly, close to, about the same as just over, just under  Capacity  Full, half, empty far, near, close high, low length, height long, short, tall longer, shorter, taller, higher ... and so on thick, thin wide, narrow



# The T-RF Maths Progression



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Number and Place Value</b>	<p><u>Place Value to 20 Sort, count and represent objects</u></p> <p>Sort objects Count objects Represent objects</p> <p><u>Count, read and write forwards and backwards</u></p> <p>Count forwards to 10 Count backwards from 10 Count forwards and backwards to 20</p> <p>Count one more <u>and one less</u></p> <p>Count one more Count one less Count one more and one less</p> <p><u>Representing numbers as tens and ones</u></p> <p>Numbers from 11-20 Tens and ones</p> <p><u>Compare groups and numbers</u></p> <p>One to one correspondence Compare groups using language Compare groups of objects</p> <p>Introduce = symbols</p>	<p><u>Place value to 100 Count, read and write forwards and backwards</u></p> <p>Count forwards and backwards to 100</p> <p><u>Representing numbers as tens and ones</u></p> <p>Represent numbersto 100 Tens and ones – part- whole model Tens and ones using addition Use a place value chart</p> <p><u>Compare groups and numbers</u></p> <p>Compare objects Compare numbers</p> <p><u>Order numbers</u> Order objects and numbers</p>	<p><u>Counting</u></p> <p>Count in 100s Count in 50s</p> <p><u>Representing Numbers</u></p> <p>To 1000 in 100 s 10's 1;s</p> <p>Number line to 1000</p> <p><u>Fine More or less</u></p> <p>Find 1, 10, 100, more or less than a given number</p> <p><u>Compare and Order</u></p> <p>Compare objects to 1000</p> <p>Compare numbers to 1000</p> <p>Order Numbers</p>	<p><u>Counting</u></p> <p>Count in 1000s Count in 25s</p> <p><u>Representing Numbers</u></p> <p>1000s, 100s, 10, and 1s Number line to 10,000</p> <p><u>Fine More or less</u></p> <p>Find 100 = more or less</p> <p><u>Compare and Order</u></p> <p>Compare and Order Numbers</p> <p>Roman Numerals to 100</p> <p><u>Rounding</u></p> <p>Round numbers to the nearest 10,100, 1000, negative numbers</p>	<p><u>Roman numerals</u></p> <p>Roman numerals to 1,000</p> <p><u>Representing numbers</u></p> <p>Numbers to 10,000 Numbers to 100,000 Numbers to a million</p> <p><u>Compare and Order</u></p> <p>Compare and order numbers to 100,000 Compare and order numbers to one million</p> <p><u>Rounding</u></p> <p>Round to nearest 10, 100 and 1,000 Round numbers within 100,000 Round numbers to one million</p> <p><u>Counting</u></p> <p>Counting in 10s, 100s, 1000s, 10,000s and 100,000s</p> <p><u>Negative numbers</u></p> <p><u>Multiples</u></p> <p><u>Factors</u> Common Factors</p> <p><u>Primes, Squares and Cubes</u> Prime numbers saquare numbers nd cube numbers</p>	<p><u>Representing numbers</u> Numbers to ten million</p> <p><u>Compare and order</u> Compare and order anynumber</p> <p><u>Rounding</u> Round any numbers</p> <p><u>Negative numbers</u> Negative numbers</p> <p><u>Multiples</u> Common multiples</p> <p><u>Factors</u> Common factors</p> <p><u>Primes, Squares and Cubes</u> Primes Squares and cubes</p>
<b>VOCAB</b>	<p>&lt; less than &gt;greater than backwards decreasing equal to forwards many most, least predict sequence teens numbers, eleven, twelve ... twenty, twenty- one, twenty-two ... one</p>	<p>Calculate Continue Equivalent to Relationship Rule One thousand etc Exchange Hundreds</p>	<p>Eights, fifties , hundreds, etc Multiple of Relationship Roman Numerals Place holder One hundred less</p>	<p>Ascending order Descending order Count in 6s 7s 9s 25s Factor Pair Integer Minus Negative</p>	<p>common factor cube number divisibility factor of factors formula negative integer prime factor prime number square number powers of ten</p>	<p>factorise numbers to ten million</p>



# The T-RF Maths Progression



	<p>hundred twenty above, below digit equal to</p> <p>half-way between ones/ units</p> <p>part whole model partition</p> <p>place, place value represent twentieth</p> <p>one-, two- or three- digit number-</p>	<p>Stands for Represents</p> <p>Twenty- first , twenty second....</p>	<p>One hundred more</p>	<p>Next</p> <p>Consecutive</p> <p>Ten thousand</p> <p>Hundred thousand</p> <p>Million</p> <p>One thousand less</p> <p>One thousand more</p>		
--	---	---	-------------------------	---	--	--

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Addition and Subtraction (Whole Numbers)</b>	<p><u>Part -whole model</u></p> <p>Part whole model</p> <p>Addition symbol Addition – adding together</p> <p>Finding a part Subtraction – breaking apart</p> <p><u>Fact families and number bonds</u></p> <p>Fact families – addition facts</p> <p>Find number bonds within 10</p> <p><u>Systematic methods within 10</u></p> <p>Number bonds to 10</p> <p>Compare number bonds</p> <p>Fact families</p> <p>– the 8 facts Find and make number bonds Related facts</p> <p><u>Addition – adding more</u></p> <p>Add by counting on</p> <p>Add by making 10</p> <p><u>Subtraction</u></p> <p>How many left?</p> <p>Counting back Subtraction n – not crossing 10</p> <p>Subtraction –crossing 10</p> <p><u>Compare number sentences</u></p> <p>Compare statements Compare number sentences</p>	<p>Numbers within 100 (including money)</p> <p><u>Money</u></p> <p>Count money – notes and coins</p> <p>Select money</p> <p><u>Add and subtract</u></p> <p>Add and subtract 1s 10 more and 10 less Add and subtract 10s</p> <p><u>Fact families and number bonds</u></p> <p>Fact families</p> <p>addition and subtraction bonds to 20</p> <p><u>Check calculations</u></p> <p>Bonds to 100 (tens) Bonds to 100 (tens and ones)</p> <p>Make the same amount - money</p> <p><u>Addition adding more</u></p> <p>Add a 2d and 1d – crossing 10 Add two 2 d numbers – not crossing 10 Add two 2d numbers – crossing 10</p> <p>Add three 1d numbers</p> <p>Find the total – money</p> <p><u>Subtraction</u></p> <p>Subtract 1d from 2d</p> <p>Subtract with 2d</p> <p>Find change – money</p> <p>Compare number sentences Compare money</p>	<p><u>Add and Subtract Multiples</u></p> <p>Add and subtract multiples of 100 3 d and 1 d</p> <p>3d and 2d</p> <p>Add and subtract 100s</p> <p>Spot the pattern</p> <p><u>Addition</u></p> <p>Add 3d and 1d - crossing 10</p> <p>Add 3d and 2d crossing 100</p> <p>2d and 3d – crossing 10 or 100</p> <p>3d not crossing 10 or 100</p> <p>3d crossing 10 or 100</p> <p><u>Subtraction</u></p> <p>Subtract</p> <p>1d from 3d</p> <p>Subtract 2d from 3d- crossing 100</p> <p>2d and 3d not crossing</p> <p>2d and 3d – crossing 10 or 100</p> <p>3d and 3d -exchange</p> <p><u>Estimate and check answers</u></p>	<p><u>Add and subtract multiples</u></p> <p>Add and subtract 1s, 10s, 100s, and 1000s</p> <p>Addition</p> <p>Add two 4d numbers – no exchange</p> <p>Add two 4d numbers – one exchange</p> <p>Add two 4d numbers – more than one exchange</p> <p><u>Subtraction</u></p> <p>Subtract two 4d numbers – no exchange</p> <p>Subtract two 4d numbers – one exchange</p> <p>Subtract two 4d numbers – more than one exchange</p> <p>Efficient subtraction</p> <p><u>Estimate and check</u></p> <p>Estimate answers</p> <p>Checking strategies</p>	<p><u>Addition and subtraction</u></p> <p>Add whole numbers with more than 4 digits</p> <p>Subtract whole numbers with more than 4 digits</p> <p>Inverse operations</p> <p>Multi step addition and subtraction</p>	<p><u>Addition and subtraction</u></p> <p>Add and subtract whole numbers</p>



# The T-RF Maths Progression



		Problem solving 2 step problems - money				
VOCAB	<p>difference between equals facts</p> <p>half, halve</p> <p>is the same as missing number</p> <p>near double number bonds</p> <p>number line</p> <p>part whole model</p>	<p>column addition</p> <p>column subtraction</p> <p>commutative</p> <p>efficient</p> <p>inverse</p> <p>operation</p> <p>s one hundred less</p> <p>one hundred more operation</p> <p>tens boundary</p>	<p>compact method</p> <p>formal written methods</p> <p>hundreds boundary</p>	<p>associative law</p>	<p>ones/ unit boundary,</p> <p>tenths boundary</p>	<p>brackets</p> <p>BODMAS</p> <p>order of operations</p>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Multiplication and Division	<p><u>Counting in multiples</u></p> <p>Count in 2s Count in 5s Count in 10s Counting in coins</p> <p><u>Equal groups</u></p> <p>Make equal groups Add equal groups <u>Arrays</u> Make arrays Make doubles</p> <p><u>Sharing</u> Make equal groups – sharing</p> <p><u>Grouping</u></p> <p>Make equal groups – grouping</p>	<p><u>Counting in multiples</u></p> <p>Count in 2s, 5s and 10s Count in 3s Count money – pence Count money – pounds</p> <p><u>Equal groups</u></p> <p>Recognise equal groups Make equal groups Add equal groups The multiplication symbol Multiplication from pictures</p> <p><u>Arrays</u> Use arrays</p> <p><u>Times tables</u> 2 x table 5x table 10x table</p> <p><u>Sharing</u></p> <p>Make equal groups <u>Grouping</u> Make equal groups <u>Divide by 2</u> Divide by 2 Odd and even numbers <u>Divide by 5 and 10</u> Divide by 5 Divide by 10</p>	<p><u>Add and subtract multiples</u> Add and subtract multiples of 100</p> <p><u>Equal groups</u> – equal groups</p> <p><u>Times tables</u> 3,4,8 x table Multiply by 3 Divide by 3 Multiple by 4 Divide by 4 Multiply by 8 Divide by 8</p> <p><u>Comparing and applying</u> Comparing statements Related calculations</p> <p><u>Multiplication</u> Multiply 2d by 1d <u>Division</u> Divide 2d by 1d</p>	<p><u>Add and subtract multiples</u> Add and subtract 1s, 10s, 100s, and 1000s</p> <p><u>Times tables</u> Multiply and divide by 6 - 6x table and division facts Multiply and divide by 9 - 9x table and division facts Multiply and divide by 7 - 7x table and division facts 11 and 12 x table <u>Multiplying and dividing by 10, 100, 1 and 0</u> Multiply by 10 Multiply by 100 Divide by 10 Divide by 100 Multiply by 1 and 0 Divide by 1</p> <p><u>Comparing and applying</u> Multiply 3 numbers Efficient calculations</p> <p><u>Factors</u> Factor pairs <u>Multiplication</u> Written methods Multiply 2d by 1d Multiply 3d by 1d <u>Division</u> Divide 2d by 1d Divide 3d by 1d</p>	<p><u>Multiply and divide by multiples of 10</u></p> <p>Multiply by 10, 100 and 1000 Divide by 10, 100 and 1000</p> <p>Multiples of 10, 100 and 1000</p> <p><u>Multiplication</u> Multiply 4d by 1d Multiply 2d (area model) Multiply 2d by 2d Multiply 3d by 2d Multiply 4d by 2d</p> <p><u>Division</u> Divide 4d by 1d Divide with remainders</p> <p><u>Estimating</u> Round to estimate and approximate</p>	<p><u>Multiplication</u> Multiply 4d by 2d <u>Division</u> Short division Division using factors Long division <u>Order of operations</u></p>



# The T-RF Maths Progression



<b>VOCAB</b>	divide dividing division equal groups of facts grouping multiplication multiplied by multiply one each, two each, three each ... repeated addition repeated subtraction share, share equally share, share equally –	array commutative consecutive divided by divided into equal groups of – year 1 group in pairs, threes ... tens groups of inverse operations multiple multiplication- year 1 multiplication fact, division fact multiplication table once, twice, three times ... ten times operation row, column times	formal written method left, left over product remainder short multiplication	associative law. distributive law factor pair ,inverse derive square, squared cube, cubed dividend divisor, expression short division	common factor, common multiple, factor of factors long multiplication	BODMAS order of operations
--------------	--	---	---	--	--	-------------------------------

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Fractions</b>	<u>Halves</u> Find a half  <u>Quarters</u> Find a quarter	<u>Equal parts</u> Make equal parts  <u>Halves</u> Recognise a half Find a half  <u>Quarters</u> Recognise a quarter Find a quarter  <u>Thirds</u> Recognise a third Find a third  <u>Unit and non-unit fractions</u> Unit fractions Non-unit fractions Equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ Find three quarters Counting Count in fractions	<u>Recognising fractions</u>  Unit and non- unit fractions  Making the whole Fractions on a number line  Equivalent fractions  Compare and order Fractions of an amount Add and subtract fractions	<u>Recognising fractions</u>  What is a fraction? Fractions greater than 1 Count in fractions  Equivalent fractions  Fractions of an amount  Calculate fractions of a quantity  Problem solving  <u>calculate quantities</u> Add and subtract Add 2 or more fractions Subtract 2 fractions Subtract from whole amounts	<u>Equivalence and simplifying</u>  Equivalent fractions Improper fractions and mixed numbers Improper fractions to mixed numbers Mixed numbers to improper fractions Counting in fractions Number sequences  <u>Compare and order</u> Compare and order fractions less than 1 Compare and order fractions greater than 1  <u>Addition and subtraction</u> Add and subtract fractions Add fractions within 1 Add 3 or more fractions Add mixed numbers Subtract mixed numbers Subtract- breaking the whole Subtract 2 mixed numbers  <u>Multiplication</u> Multiply unit fractions by an integer Multiply non-unit fractions by an integer Multiply mixed numbers by an integer  <u>Fractions of an amount</u> Fraction of an amount Using fractions as operators	<u>Equivalence and simplifying</u>  Simplify fractions Fractions on a numberline  <u>Compare and order</u> Compare and order (denominator) Compare and order (numerator)  <u>Addition and subtraction</u> Add and subtract fractions Add fractions Subtract fractions Mixed addition and subtraction  <u>Multiplication</u> Multiply fractions by integers Multiply fractions by fractions  <u>Division</u> Divide fractions by integers Four operations  Four rules with fractions  <u>Fractions of an amount</u> Fraction of an amount – find the whole
<b>VOCAB</b>	half parts of a whole equal grouping equal part equal sharing fraction	equivalent numerator, denominator one of three equal parts one third, two thirds two	compare and order sixths, sevenths, eighths, tenths ... unit fraction, non- unit fraction	simplify mixed numbers	proper/ improper fraction, reduced to, cancel thousandths numerator denominator	common fraction degree of accuracy numerator denominator



# The T-RF Maths Progression



	one of four equal parts one of two equal parts quarter	halves two quarters, three quarters			divisor	divisor
--	--	---	--	--	---------	---------

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Decimals			<u>Tenths</u>  Tenths Count in tenths Tenths as a decimal	<u>Tenths</u> Tenths and hundreds Tenths as decimals Tenths on a place value grid Tenths on a number line  <u>Decimals</u> Divide 1d by 10 Divide 2d by 10 Hundredths Hundredths as decimals Hundredths on a place value grid Divide 1 or 2d by 100 Make a whole Write decimals Compare decimals Order decimals Round decimals Halves and quarters	<u>Decimals up to 3 dp</u>  Decimals up to 2 dp. Decimals as fractions Understand thousandths Thousandths as decimals  Round, Order and Compare Rounding decimals Order and compare decimals  Multiply and divide by powers of 10 Multiplying decimals by 10, 100 and 1000 Dividing decimals by 10, 100 and 1000  <u>Decimals (next unit)</u> Adding decimals within 1 Subtracting decimals within 1 Complements to 1 Adding decimals – crossing the whole Adding decimals (same d.p) Subtracting decimals (same d.p) Adding decimals (different d.p) Subtracting decimals (different d.p) Adding and subtracting wholes and decimals	<u>Decimals up to 3 dp</u>  Three decimal places Decimals as fractions  <u>Multiply and divide</u>  Multiply and divide by powers of 10 Multiply by 10, 100 and 1000 Divide by 10, 100 and 1000 Multiply decimals by integers Divide decimals by integers Division to solve problems Fractions to decimals Fractions to decimals
VOCAB				hundredths decimal, decimal fraction, decimal point, decimal place, decimal decimal fraction proportion simplify	thousandths	<b>Consolidation of vocabulary            taught in previous years</b>





# The T-RF Maths Progression



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Percentage					<u>Percentages</u>  Understand percentages Percentages as fractions and decimals Equivalent F.D.P	<u>Percentages</u>  Fractions to percentages Equivalent F.D.P Order F.D.P  Percentage of an amount  Percentage of an amount Percentage – missing values
VOCAB					percentage, percent %	percentage, percent %

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Algebra	Note – Although algebraic notation is not introduced until Year 6, algebraic thinking starts much earlier as exemplified by the 'missing number'	Note – Although algebraic notation is not introduced until Year 6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Reception, Year 1/2/3	Note – Although algebraic notation is not introduced until Year 6, algebraic thinking starts much earlier as exemplified by the 'missing number'	Note – Although algebraic notation is not introduced until Year 6, algebraic thinking starts much earlier as exemplified by the 'missing number'	Note – Although algebraic notation is not introduced until Year 6, algebraic thinking starts much earlier as exemplified by the 'missing number'	<u>Algebra</u>  Find a rule – one step Find a rule – two steps Forming expressions Substitution Formulae Forming equation Solve one-step equation
VOCAB						equation expression formula, formulae known values linear number substitute symbol variables



# The T-RF Maths Progression



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Statistics</b>		<u>Statistics</u> Make tally charts Draw pictograms (1-) Interpret pictograms (1-) Draw pictograms (2, 5 and 10) Interpret pictograms (2, 5 and 10) Block diagrams	Pictograms Bar charts Tables	<u>Bar charts</u> Interpreting charts Comparison, sum and difference <u>Line graphs</u> Introducing line graphs Line graphs	<u>Line Graphs</u> Read and interpret line graphs Draw line graphs Use line graphs to solve problems Tables Read and interpret tables  Two-way tables Times tables	<u>Line Graphs</u> Read and interpret line graphs Draw line graphs Use line graphs to solve problems Circles Pie Chart Read and interpret pie charts Pie charts with percentages Draw pie charts Averages The mean
<b>VOCAB</b>		pictogram vote count, sort group chart data graph, block graph, label least popular, least common represent table tally title vote list	axis, axes bar chart bar graph Carroll diagram frequency table Venn diagram	continuous data interval line graph line graph plot survey questionnaire	average (mean) maximum/minimum value outcome	construct intersect mean, mode, median, range origin pie chart quadrant

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Geometry: Position and Direction</b>	<u>Turns</u> Describe turns Movement Describe position	<u>Turns</u> Describe turns Movement  Describing movement Describing movement and turns	<b>Consolidation of vocabulary taught in previous years</b>	<b>Consolidation of vocabulary taught in previous years</b>	<u>Describe position</u> Position in the first quadrant  <u>Reflection</u> Reflection with co-ordinates Translation Translation with co-ordinates	<u>Describe position</u> The first quadrant Four quadrants Reflection Translation
<b>VOCAB</b>	Position, over, under above, below top, bottom, side on, in outside, inside  around in front, behind front, back beside, next to opposite apart between middle edge corner direction, up down, forwards, sideways, across, next to, close, near, far, along, through, to, from, towards, away from, movement slide, toll, stretch, bend centre, journey	Angle, clockwise, anticlockwise, ninety-degree turn, quarter turn, right angle rotation, route, straight line, three quarter turn	acute angle, angle ... is a, greater/ smaller than angle, compass point, horizontal, vertical, diagonal, north, south, east, west, N, S,E,W, obtuse angle	north-east, north-west, south-east, south-west, NE, NW, SE, SW translate, translation rotate, rotation, degree, Reflection, angle measurer, coordinate	Angle at a point angle of a line, Protractor, reflex angle	vertically opposite angles



# The T-RF Maths Progression



	left, right, underneath, whole turn , half turn					
--	---	--	--	--	--	--

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Geometry: Shape</b>	<p><u>Recognise and name shapes</u></p> <p>Recognise and name 3D shapes Recognise and name 2D shapes</p> <p><u>Sorting</u> Sort 3D shapes Sort 2D shapes</p> <p><u>Patterns</u> Patterns with 3D and 2D shapes</p>	<p><u>Recognise and name shapes</u></p> <p>Recognise and name 2D and 3D shapes</p> <p><u>2D shapes</u> Count sides on 2D shapes Count vertices on 2D shapes Draw 2D shapes Lines of symmetry 3D Count faces on</p> <p><u>3D shapes</u> Count edges Count vertices</p> <p><u>Sorting</u> Sort 3D shapes Sort 2D shapes</p> <p><u>Patterns</u> Make patterns with 2D shapes Make patterns with 3D shapes</p>	<p><u>Angles</u></p> <p>Turns and angles Right angles in shapes Compare angles</p> <p><u>Lines</u> Draw accurately Horizontal and vertical Parallel and perpendicular</p> <p><u>2D shapes</u> Recognise and describe 2D shapes</p> <p><u>3D shapes</u> Recognise and describe 3D shapes Make 3D shapes</p>	<p><u>Angles</u></p> <p>Identify angles Compare and order angles</p> <p><u>2D shapes</u> Triangles Quadrilaterals</p> <p><u>Symmetry</u> Line of symmetry Complete a symmetrical figure</p>	<p><u>Measure angles</u> Measuring angles in degrees Measuring with a <u>protractor</u></p> <p><u>Angles</u> Angles on a straight-line Angles around a point Angles in shapes</p> <p>Lengths and angles in <u>shapes</u> Polygons Regular and irregular polygons</p> <p><u>Draw shapes</u> Draw lines and angles <u>accurately</u> 3D Shapes Reasoning about 3D shapes</p>	<p><u>Measure angles</u></p> <p>Measuring with a protractor Angles Introduce angles Calculate angles Vertically opposite angles</p> <p><u>Angles in shapes</u> Angles in a triangle Angles in quadrilaterals</p> <p><u>Polygon</u> Angles in polygons Draw shapes Drawing shapes <u>accurately</u></p> <p><u>3D Shapes</u> Net of 3D shapes</p>
<b>VOCAB</b>	<p>oblong point, pointed cube sphere cuboid edge face vertex (vertices) cone continuous surface cylinder pyramid</p>	<p>Circular Heptagon Hexagon octagon pentagon quadrilateral rectangular triangular prism</p>	<p>Hexagonal Octagonal Parallel pentagonal perpendicular right-angled hemisphere triangle-based pyramid triangle-based pyramid</p>	<p>2D, two-dimensional Equilateral equilateral triangle isosceles triangle kite parallelogram polygon rectilinear rhombus scalene triangle trapezium 3D, three-dimensional spherical</p>	<p>a-axis, y-axis, quadrant decagon dodecagon nonagon cylindrical tetrahedron polyhedron octahedron</p>	<p><b>Consolidation of vocabulary taught in previous years</b></p>



# The T-RF Maths Progression



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Measurement of time</b>	<p><u>Ordering events</u> Before and after</p> <p><u>Telling the time</u> Time to the hour Time to the half hour</p> <p><u>Write and compare times</u> Writing time Comparing time</p>	<p><u>Telling the time</u> O'clock and half past Quarter past and quarter to Telling the time to 5 mins</p> <p><u>Hours and days</u></p> <p><u>Write and compare times</u> Find durations of time Compare durations of times</p>	<p><u>Converting time</u> Months and years Hours in a day</p> <p><u>Analogue time</u> Telling time to 5 mins Telling time to the nearest min</p> <p><u>Digital time</u> Using am and pm 24-hour clock</p> <p><u>Finding and comparing durations</u> Finding the duration Comparing the duration</p> <p><u>Start and end Times</u> Measuring time in secs</p>	<p><u>Converting time</u> Hours, minutes and seconds Years, months, weeks and days</p> <p><u>Digital time</u> Analogue to digital 12 hours Analogue to digital – 24-hour</p>	<p><u>Time</u> Converting units of time</p>	<p><b>Consolidation of content taught in previous years</b></p>
<b>VOCAB</b>	<p>Time</p> <p>Days of the week: Monday, Tuesday etc</p> <p>Seasons: Spring, Summer, Autumn, Winter</p> <p>Days, week, month, year, weekend</p> <p>Birthday, holiday</p> <p>Morning, afternoon, evening, night</p> <p>Bedtime</p>	<p>always, never, often sometimes</p> <p>clock face , hour hand, minute hand</p> <p>hours minutes</p> <p>date</p> <p>earlier, later first</p> <p>how long ago?</p> <p>how long will it be to ...?</p> <p>how long will it take to ...?</p> <p>how often?</p> <p>months of the year (January, February ...)</p> <p>o' clock, half past, midnight</p> <p>year</p> <p>seasons: spring, summer, autumn, winter</p> <p>Usually weekend, month, year</p> <p>once, twice</p>	<p>5, 10, 15 ... minutes past</p> <p>chronological</p> <p>digital/ analogue clock/watch,</p> <p>timer</p> <p>fortnight</p> <p>quarter past,</p> <p>quarter to</p> <p>seconds</p>	<p>12-hour clock time,</p> <p>24-hour clock time a.m., p.m.</p> <p>calendar</p> <p>century earliest latest</p> <p>Roman numerals</p>	<p>arrive, depart</p> <p>date of birth</p> <p>leap year,</p> <p>millennium</p> <p>noon</p> <p>timetable</p>	<p><b>Consolidation of vocabulary taught in previous years</b></p>



# The T-RF Maths Progression



	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Measurement Money</b>	Money  Recognising coins Recognising notes	Money  Count money notes and coins  Select money  Make the same amount - money	Money Count money notes and coins  Select money Make the same amount  Find the total Find change Compare money  Problem solving with money  2 step problems - money	Writing and comparing money  Pounds and pence Convert pounds and pence  Calculating with money  Add money Subtract money Give change	Estimating money  Calculating with money Four operations	<b>Consolidation of content taught in previous years</b>
<b>VOCAB</b>	buy, sell coin money pay penny pence price cost spend spent change cheap costs less cheaper costs the same as dear costs more how many ...? how much ...? pound total	brought sold	<b>Consolidation of vocabulary taught in previous years</b>	currency discount	profit, loss	<b>Consolidation of vocabulary taught in previous years</b>

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Measurement: Perimeter, Area, Mass, Capacity and Volume</b>	<u>Capacity and volume</u>  Introduce capacity and volume  <u>Measure and compare capacity</u>  Measure capacity Compare capacity	<u>Capacity and volume</u> Compare capacity  <u>Measure and compare capacity</u>  Millilitres/ Litres	<u>Mass and capacity</u>  Measure mass Compare mass Add and subtract mass  Measure capacity  Compare capacity  Add and subtract capacity  <u>Perimeter</u> Measure	<u>Length, Mass, Volume recap</u>  Measure mass Convert units of mass  Measure volume Convert units of volume  Measure height Convert units of length  Measure perimeter in cms and ml  Solve problems in measurements (readingscales)  <u>Perimeter</u>	<u>Volume</u> What is volume? Compare volume Estimate volume  <u>Capacity</u>  Estimate capacity  <u>Perimeter</u> Measure perimeter Calculate perimeter  <u>Area</u> Area of rectangles	<u>Volume</u> Volume – counting cubes Volume of a cuboid  <u>Perimeter</u>  Area and perimeter (focus on perimeter questions)  <u>Area</u>  Shapes – same area Area and perimeter (focus on area questions)



# The T-RF Maths Progression



			Calculate	Perimeter on a grid Perimeter of a rectangles Perimeter of rectilinear shape  <u>Area</u> What is area? Counting squares Making shapes Comparing area	Area of compound shapes Area of irregular shapes	<u>Triangles</u> Area of a triangle  <u>Parallelograms</u> Area of a parallelogram
VOCAB	Measurement roughly balanced scales capacity contains	measuring scale kilogram, half kilogram gram contains less than litre half litre millilitre quarter full volume	Approximately division	convert metric unit unit standard unit mass: big, bigger, small, smaller weight: heavy/light, heavier/ lighter, heaviest/ lightest measuring cylinder	imperial unit pint, gallon	Ounce Pound tonne stone centilitre cubic centimetres (cm <sup>3</sup> ) cubic metres (m <sup>3</sup> ) cubic millimetres (mm <sup>3</sup> ) cubic kilometres (km <sup>3</sup> )

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Measurement: Length and Temperature	<u>Measure length</u> Measure length <u>Compare and order lengths</u>  Compare length and height  Weight and Mass Introduce weight and mass  <u>Measure and compare mass</u> Measure mass Compare mass	<u>Measure length</u>  <u>Compare and order lengths</u>  Compare length and height  <u>Temperature</u>  Temperature - reading temperature in celsius Estimate temperature and to read thermometer to confirm estimate	<u>Measure length</u>  Measure length (cm) Measure length (m)  <u>Compare and order lengths</u>  Compare lengths Order lengths  <u>Four operations</u>  Four operations with lengths	<u>Measure length</u> Measure length <u>Equivalent lengths</u> Equivalent lengths m and cm Equivalent lengths mm and cm Compare lengths  <u>Add and subtract lengths</u> Add lengths Subtract lengths  <u>Perimeter</u> Measure Calculate	<u>Equivalent lengths</u> Kilometres  <u>Metric measures</u>  Kilograms and kilometers Milligrams and milliliters Metric units  <u>Imperial measures</u> Imperials units	<u>Metric measures</u>  Metric measures Convert metric measures Calculate with metric measures  <u>Miles and kilometres</u> Miles and kilometres  <u>Imperial measures</u> Imperials units
VOCAB	centimetre ruler	depth further furthest metre metre stick tape measure width	distance apart ... between ... to ... from millimetre, kilometre, mile perimeter	area, covers breadth edge square centimetre (cm <sup>2</sup> )	square metre (m <sup>2</sup> ), square millimetre (mm <sup>2</sup> )	circumference foot feet inches yard



# The T-RF Maths Progression

