Rainbow Forge Primary Academy
A L.E.A.D. Academy

Maths Progression Map

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Number: Place Value	I can count within 100, forwards and backwards, starting with any number.		I know that 10 tens are equivalent to 1 hundred and that 100 is the 10 times the size of 10. I can apply 10 tens = 100 to identify and work out how many 10s are in other 3-digit multiples of 10.	I know that 10 hundreds are equivalent to 1 thousand and that 1000 is 10 times the size of 100. I can apply 10 hundreds = 1000 to identify and work out how many 100s there are in other 4-digit multiples of 100.	I know that 10 tenths are equivalent to 1 one and that 1 is 10 times the size of 0.1 I know that 100 hundredths are equivalent to 1 one, and 1 is 100 times the size of 0.01. I know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	I understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make any number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 or 1000).
		I can recognise the place value of each digit in 2-digit numbers. I can compose and decompose 2-digit numbers using standard and non-standard partitioning	I can recognise the place value of each digit in 3-digit numbers. I can compose and decompose 3-digit numbers using standard and non-standard partitioning	I can recognise the place value of each digit in 4-digit numbers. I can compose and decompose 4-digit number using standard and non-standard partitioning.	I can recognise the place value of each digit in numbers with up to 2 decimal places. I can compose and decompose numbers with up to 2 decimal places using standard and non-standard portioning.	I can recognise the place value of each digit in numbers up to 10 million, including decimal fractions. I can compose and decompose numbers up to 10 million using standard and non-standard partitioning.
	I can reason about the location of numbers up to 20 on the number line, including comparing with <, > and =.	I can reason about the location of 2-digit numbers on the number line, including identifying the previous and next multiple of 10.	I can reason about the location of any 3-digit number on the number line, including identifying the previous or next multiple of 100 or 1000. I can round to the nearest multiple of 10, 100 or 1000.	I can reason about the location of any 4-digit number on the number line, including identifying the previous or next multiple of 100 or 1000. I can round to the nearest multiple of 10, 100 or 1000.	I can reason about the location of any number with up to 2 decimal places on the number line, including identifying the previous or next multiple of 1 or 0.1. I can round to the nearest multiple of 1 or 01.	I can reason about the location of any number up to 10 million on the number line, including decimal fractions. I can round numbers appropriately, including in context.
					I can convert between units of measure, including using common decimals and fractions.	
Number: Fluency	I can develop fluency in addition subtraction facts (number bonds) within 10.	I can fluently recall addition and subtraction facts within 10 (number bonds).	I can fluently recall addition and subtraction facts that bridge 10.			
	I can count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple. I can count forwards and backwards through the odd numbers.		I can recall multiplication and division facts in the 10, 5, 2, 4 and 8 times tables. I can recognise the commutativity between multiplication and division facts (e.g 5 x 4 = 20, 4 x 5 = 20, 20 ÷ 5 = 4)	I can recall multiplication and division facts up to 12 x 12. I can recognise the commutativity between multiplication and division facts (e.g 7 x 9 = 63, 9 x 7 = 63, 63 ÷ 7 = 9)	I can fluently recall multiplication facts and corresponding division facts through continued practice.	

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				I can solve division problems, with 2-digit dividends and 1-digit divisors that involve remainders. I can interpret remainders appropriately according to the context.		
			I can apply my knowledge of place value to additive and multiplicative numbers facts (scaling facts by 10).	I can apply place value knowledge to know additive and multiplicative number facts (scaling by 100).	I can apply place value knowledge to know additive and multiplicative number facts (scaling by 1 tenth or 1 hundredth).	
Addition and Subtraction	I can compose number to 10 from 2 parts. I can partition numbers to 10 into parts, including recognising odd and even numbers.	I can add and subtract across 10.	I can calculate complements to 100 (eg 36 + 64 = 100).			I understand that 2 numbers can be related additively or multiplicatively, and quantify additive and multiplicative relationships. e.g John drives 20km. Matt drives 60km. John drives 40km further than Matt (additive) Matt drives 3 times further than John (multiplicative)
	I can read, write and interpret equations containing addition (+), subtraction (-) and equals (=) symbols. I can relate additive expression and equations to real-life contexts.	I can recognise the subtraction structure of 'difference'. I can answer questions in the form 'How many more….?'.	I can add and subtract up to 3-digit numbers using columnar methods.			I can use a given additive or multiplicative calculation to derive or complete a related calculation, using arithmetic properties, inverse relationships, and place value understanding. 327 + 515 = 842 Use this calculation to complete the following equations. _____ + 61.5 = 84.2 8,420 – _____ = 3,270
		I can add and subtract within 100 by applying related 1-digit addition and subtraction facts: add or subtract only ones or tens to/from a 2-digit number.	I understand the inverse relationship between addition and subtraction and how they both relate to the part-part-whole structure. I understand and use the commutative property of addition and understand the related property for subtraction.			I can solve problems involving ratio relationships.
		I can add and subtract within 100 by applying related 1-digit addition and subtraction facts: add and subtract any 2 2-digit numbers.				I can solve problems with 2 unknowns.

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Multiplication and Division		I can recognise repeated addition contexts, representing them with multiplication equations and calculating the product, within the 2, 5 and 10 multiplication tables.	I can apply known multiplication and division facts to solve contextual problems with quotitive and partitive division.	I can multiply and divide whole numbers by 10 and 100 and understand this as equivalent to making a number 10 or 100 times the size.	I can multiply and divide numbers by 10 and 100 and understand this as equivalent to making a number 10 or 100 times the size, or 1 tenth or 1 hundredth times the size.	
		I can relate grouping problems where the number of groups is unknown to multiplication equations with a missing factor, and to division equations. 20 ÷ ____ = 5		I can manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.	I can find factors and multiples of positive whole numbers, including common factors and common multiples. I can express a given number as a product of 2 or 3 factors.	
				I understand and apply the distributive property of multiplication.	I can multiply any whole number with up to 4-digits by any 1-digit number using a formal written method.	
					I can divide a number with up to 4-digits by a 1-digit number using a formal written method. I can interpret remainders appropriately for the context.	
Fractions			I can interpret and write proper fractions to represent 1 or several parts of a whole that is divided into equal parts.			I can recognise when fraction can be simplified. I can use common factors to simplify fractions.
			I can find unit fraction of quantities using division facts.		I can find non-unit fractions of quantities.	I can express fractions in a common denomination and use this to compare fractions that are similar in value.
			I can reason about the location of any fraction within 1 on the number line.	I can reason about the location of mixed numbers on the number line.		I can compare fractions with different denominators, including fractions greater than 1, using reasoning and choose between reasoning and common denomination as a comparison strategy.
				I can convert mixed numbers to improper fractions and vice versa.	I can find equivalent fractions and understand that they have the same value and the same position on the number line.	
			I can add and subtract fractions with the same denominator, within 1.	I can add and subtract improper and mixed fractions with the same denominator, including bridging whole numbers.	I can recall the decimal fraction equivalents for ½, ¼, 1/5, and 1/10 and multiples of these proper fractions.	

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Geometry	I can recognise common 2D and 3D shapes presented in different orientations. I know that rectangles, triangles, cuboids and pyramids are not always similar to one another.	I can use precise language to describe the properties of 2D and 3D shapes. I can compare shapes by reasoning about similarities and differences in properties.	I can recognise right angles as a property of a shape or a description of a turn. I can identify right angles in 2D shapes presented in different orientations.		I can compare angles, estimate and measure angles in degrees. I can draw angles of a given size.	
					I can compare areas and calculate the area of rectangles (including squares) using standard units.	
	I can make 2D and 3D shapes from smaller shapes to match and example, including manipulating shapes to place them in particular orientations.		I can draw polygons by joining marked points and identify parallel and perpendicular sides.	I can draw polygons specified by coordinates in the first quadrant, and translate within the first quadrant.		I can draw, compose and decompose shapes according to given properties, including dimensions, angles and area and solve related problems.
				I can identify regular polygons, including equilateral triangles and squares, as those in which the side-lengths are equal and the angles are equal. I can find the perimeter of regular and irregular polygons.		
				I can identify lines of symmetry in 2D shapes presented in different orientations. I can reflect shapes in a line of symmetry and complete a symmetric figure or pattern with respect to a specified line of symmetry.		