Falcon Maths progression grid

Number – number and place value	Number – addition and subtraction	Number – multiplication and division	Number – fractions	Measurement	Geometry – properties of shapes	Statistics
4	**5**	**5**	**8**	**4**	**3**	**3**
Number size: up to 1000 multiples of 4,8,50,100 10 or 100 more less than **representations:**100+20+4 =; 124 = 100 + _+ 4; Part whole models; bar model; numberline; Base Ten; place value counters	**Number size:** Use up to 3 digit numbers Mentally: use numbers with 2 digits **Formal methods:** column addition, column subtraction,. **Other methods:** numberline subtraction, bar model for probem solving (Base Ten as concrete/pictorial)	**Number size:** 2 digits by 1 digit Mentally: use doubling for x 2 x 4 x 8 **Formal methods:** **Other methods:** Division: bar model and numberline Multiplication : empty array (grid) Bar model for problem solving (Base Ten as concrete/ pictorial)	**Fractions size:** use denominatiors up to 10 emphasise link to division (1/2 = 1 ÷ 2) **Representations:** bar model , Part-whole mode, numberline, set of objects, division.	**conversions:** length: m-cm -mm; mass: kg-g capacity: l-ml money: p-£ (seperately) time: seconds-hours-days- weeks-years; Roman numeral to 12 **representations:** numberline, scales (horizontal/vertical and circular) **Perimeter** - measure simple shape (cm) **Time:** tell and write in 12 or 24 hour	**2d:** polygons: triangles, square, rectangle, oblong, pentagon, hexagon, heptagon,octagon, **3d:** polyhedra: cube, cubiod, tetrahedron, square based pyramid, prisms, sphere, semi-sphere, cylinder,cone **Accuracy to draw:** to nearest cm	**representations:** bar chart, tally chart, table, pictogram, venn, carroll use 2,5,10 units per picture/ square for bar charts
even, odd, greater/less than, Numbers to one thousand, partition, place value, recombine, more/less, equa, digits, compare, numeral, figure	partition, value, add, more, plus, make, sum, total, altogether, subtract, minus, take away, difference, fewer, less, double, half, Column addition and subtraction, exchange	product, times, multiple , multiply, repreated addition, lots, groups of, share, divide, repeated subtraction, equal, left over, double half	Numerator, denominator, Unit fraction, non-unit fraction, Compare, order, whole, half, quarters, eighths , equivalent, Tenths, third	capacity, am pm morning afternoon, midnight, noon, perimter, length, £/p, half past, quarter past, seconds,o'clock seasons, minutes, hours, day, months, estimate, scale, weight, heavier lighter, /to, m/km, g/ kg, ml/l Leap year 12 hour/24hour, Roman numerals I to XII	angle, edge, corner, side, face, vertex, vertices, flat, curved, straight, round, , clockwise, anit-clockwise, straight line, full turn, degrees, right angle, acute, obtuse,90°, 180°, 360° , horizontal, vertical, perpendicular, parallel, Greater/less than, , orientation, rotate, group, sort	tally, vote, graph, title, label, common, popular, pictogram, represent, sort, chart, bar chart, frequency table, Carroll diagram, Venn diagram, Axis, Diagram
count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	☐ add and subtract numbers mentally, including: a 3-digit number using ones, tens, hundreds	recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables	recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators	measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)	recognise angles as a property of shape or a description of a turn	interpret and present data using bar charts, pictograms and tables
recognise the place value of each digit in a three-digit number (hundreds, tens, ones)	add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators	tell and write the time from an analogue clock, including using Roman numerals from I to XII, and 12-hour and 24-hour clocks	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	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.
identify, represent and estimate numbers using different representations	estimate the answer to a calculation and use inverse operations to check answers	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.	add and subtract fractions with the same denominator within one whole	add and subtract amounts of money to give change, using both £ and p in practical contexts	identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	
read and write numbers up to 1000 in numerals and in words	solve problems, including missing number problems,		recognise and show, using diagrams, equivalent fractions with small denominators	measure the perimeter of simple 2-D shapes	draw 2-D shapes and make 3-D shapes using modelling materials; recognise 3-D shapes in different orientations and describe them	
compare and order numbers up to 1000			compare and order unit fractions, and fractions with the same denominators	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		
solve number problems and practical problems involving these ideas.			count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10	Know the number of seconds in a minute and the number of days in each month, year and leap year		
			solve problems that involve all of the above.	compare durations of event [for eg to calculate the time taken by particular events or tasks]		

Links to NRICH maths problems

Number – number and place value	Number – addition and subtraction	Number – multiplication and division	Number – fractions	Measurement	Geometry – properties of shapes	Statistics
Number Differences *	Consecutive Numbers *	Music to My Ears *	Fraction Match *	Watch the Clock ***	Square Corners *	Real Statistics ***
Magic Vs *	Domino Square **	Ordering Cards *	Matching Fractions *	Wonky Watches **	The Third Dimension ***	It's a Tie **
Number Match *	4 Dom ***	Which Symbol? (I) *		Oh! Harry! **	Building Blocks *	The Car That Passes *
Sitting Round the Party Tables *	Buying a Balloon *	A Square of Numbers (I) *		Olympic Starters *	Board Block Challenge (I) ***	Class 5's Names *
Take Three Numbers *	Super Shapes *	What's in the Box? *		Car Journey *	Overlapping Again (I) **	The Domesday Project *
That Number Square! *	Got It (I) **	What Do You Need? *		How Much Did it Cost? **	Arranging Cubes **	If the World Were a Village *
	Make 37 **	How Do You Do It? *		How Many Times? *	Stick Images *	Our Sports *
	A Mixed-up Clock *	Follow the Numbers *		Clocks *	Triple Cubes *	Going for Gold *
	Finding Fifteen **	Ip Dip *		5 on the Clock ***	Inky Cube **	Now and Then **
	Strike it Out (G) *	Journeys in Numberland *		Two Clocks **	Rolling That Cube *	
	Half Time *	This Pied Piper of Hamelin **		What Is the Time? *	Move Those Halves **	
	Three Neighbours **			The Time Is ... **	Seeing Squares (I) *	
	Dice in a Corner ***			Approaching Midnight	National Flags *	
	Play to 37 (G) *					
	Build it Up *					
	Dicey Addition (G) *					