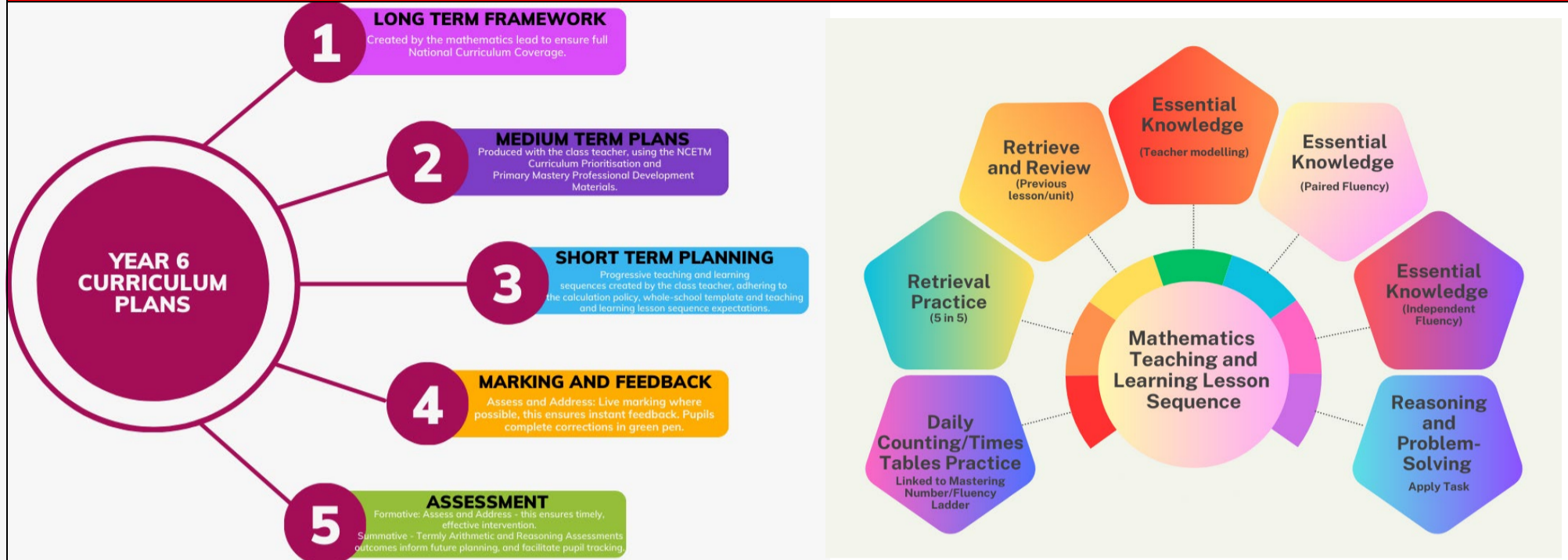


INTENT

The principal focus of mathematics teaching in upper key stage 2 is to ensure that pupils extend their understanding of the number system and place value to include larger integers. This should develop the connections that pupils make between multiplication and division with fractions, decimals, percentages and ratio. At this stage, pupils should develop their ability to solve a wider range of problems, including increasingly complex properties of numbers and arithmetic, and problems demanding efficient written and mental methods of calculation. With this foundation in arithmetic, pupils are introduced to the language of algebra as a means for solving a variety of problems. Teaching in geometry and measures should consolidate and extend knowledge developed in number. Teaching should also ensure that pupils classify shapes with increasingly complex geometric properties and that they learn the vocabulary they need to describe them. By the end of year 6, pupils should be fluent in written methods for all four operations, including long multiplication and division, and in working with fractions, decimals and percentages. Pupils should read, spell and pronounce mathematical vocabulary correctly (National Curriculum 2014).

IMPLEMENTATION



YEAR 6 ESSENTIAL KNOWLEDGE

YEAR 6 NATIONAL CURRICULUM COVERAGE LONG TERM FRAMEWORK

Brougham Primary School		Year 6		Long Term Framework	
14 Week Term (11 weeks of planning before data collection)					
Autumn	Time (2 weeks)	NCETM Calculating using knowledge of structures (2 weeks)	NCETM Multiples of 1,000; converting units of measurement (2 weeks)	NCETM Numbers up to 10,000,000 (3 weeks)	NCETM Position and Direction; co-ordinates/translation (2 weeks)
				NCETM Statistics (1 week)	Assessment week
					Christmas Maths (1 week)
11 Week Term (9 weeks planning before data collection)					
Spring	NCETM Multiplication and Division (3 weeks)		NCETM Area, Perimeter, volume (1 week)	NCETM Fractions, Decimals and Percentages (4 weeks)	
				Assessment week	NCETM Ratio and Proportion (2 weeks)
13 Week Term (10 weeks planning before data collection)					
Summer	NCETM Draw, compose and decompose shapes; Angles (3 weeks)	NCETM Calculating using knowledge of structures (1 week)	SATS Week	NCETM Solving problems with two unknowns (2 weeks)	NCETM Order of operations (1 week)
					NCETM Mean average (1 week)
					Year 6/7 Transition Unit (4 weeks)

YEAR 6 FLUENCY LADDER

Week	Fluency Facts to learn
39	Daily Arithmetic & Reasoning
38	Daily Arithmetic & Reasoning
37	Daily Arithmetic & Reasoning
36	Daily Arithmetic & Reasoning
35	Daily Arithmetic & Reasoning
34	Daily Arithmetic & Reasoning
33	Daily Arithmetic & Reasoning
32	Daily Arithmetic & Reasoning
31	Daily Arithmetic & Reasoning
30	Daily Arithmetic & Reasoning
29	Daily Arithmetic & Reasoning
28	Daily Arithmetic & Reasoning
27	Daily Arithmetic & Reasoning
26	Daily Arithmetic & Reasoning
25	Daily Arithmetic & Reasoning
24	Convert units of time
23	Square numbers to 12 x 12; Cube numbers for 2, 3, 4 and 5
22	Divide fractions
21	Multiply fractions
20	Convert mixed number to improper fractions
19	Equivalent fractions
18	Fractions of an amount
17	Factors of all multiplication facts
16	Count in multiples of all numbers to 12
15	Fractions, decimal, percentage equivalents
14	Divide whole numbers and those involving decimals by 10, 100 and 1000; convert metric units of measurement
13	Multiply whole numbers and those involving decimals by 10, 100 and 1000; convert metric units of measurement
12	Divide 4 digits by 2 digits
11	Divide 4 digits by 1 digit
10	Multiply 4 digits by 2 digits
9	Multiply 4 digits by 1 digit
8	Column subtraction up to 4 digits; Subtract decimals including numbers with decimals to different number of decimal places
7	Column addition up to 4 digits; Add decimals including numbers with decimals to different number of decimal places
6	Subtract and calculate with missing numbers in steps of powers of 10
5	Add and calculate with missing numbers in steps of powers of 10
4	Count backwards in steps of powers of 10, 100,1000,10 000, 100 000 from any given number
3	Count forwards in steps of powers of 10, 100,1000,10 000, 100 000 from any given number
2	Related facts all tables
1	MTC all tables (data to inform spring term intervention)

YEAR 6 FLUENCY TRAINING

- A weekly Fluency Training lesson is delivered for 30 minutes at the beginning of each week. This lesson allows children to learn/practise a specific fluency skill based upon the year 3 Fluency Ladder.
- For the remainder of the week, children independently complete a daily Fluency Training activity; this ensures that children are provided with the opportunity to practise the fluency skill focus from their fluency training lesson, and to develop and improve their fluency, recall, accuracy, efficiency and stamina with the fundamentals of maths.

YEAR 6 KEY INSTANT RECALL FACTS

Fraction	Decimal	Percentage	KM	M	KG	G	L	ML	Volume	Area
1	1.00	100%	1	1000	1	1000	1	1000	L x W x H	L x W
1/2	0.5	50%		M	CM					
1/4	0.25	25%		1	100			Obtuse	Acute	Right
3/4	0.75	75%			CM	MM		More than 90°	Less than 90°	90°
1/10	0.10	10%				1	10			180°
1/100	0.01	1%								
			Year	Months	Weeks	Days				
			1	12	52	365				
					Week	Days				
					1	7				
						Days	Hours			
						1	24			
							Hours	Minutes		
							1	60		
								Minutes	Seconds	
								1	60	

KIRF Benchmarks for Automaticity are used as part of the termly assessment process for mathematics. The aim is that by the end of the year, the pupil is able to fluently and accurately recall the facts for their year group benchmark – this will aid their mental maths fluency, agility and application when faced with a range of mathematical concepts.

