



Subject Theme Overview

Year 5

Charlton Kings Junior School

Subject	Maths	Term	Autumn
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Area	What I should already be able to do	What I will be able to do by the end of term
Counting and Comparing	- Read, write, order and compare numbers up to 9,999 and determine the place value of each digit - Know what hundredths are. - Compare numbers with the same number of decimal places up to 2 decimal places - Count backwards through zero into negative numbers - Read Roman numerals from 1 to 100 (I to C)	- Read, write, order and compare numbers to at least 1,000,000 and determine the value of each digit - Recognise and use thousandths and relate them to tenths and hundredths. - Read, write, order and compare numbers with up to 3 decimal places - Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero - Read Roman numerals to 1000 (M) and also years written in Roman numerals
Calculating: Addition and Subtraction	- Add and subtract numbers with up to 4 digits mentally when appropriate. - Add and subtract numbers with up to 4 digits and decimals to 2 dp using written column methods.	- Add and subtract numbers up to 1,000,000 mentally when appropriate - Add and subtract whole numbers with more than 4 digits and decimals up to 3 decimal places using written column methods
Numbers and the Number System	Recognise and use factor pairs (two numbers that multiply to give a particular number) and commutativity (3 x 4 is the same as 4 x 3) in mental calculations	- Identify multiples and factors, and common factors of two numbers - Know what prime numbers and prime factors are - Establish whether a number up to 100 is prime and recall prime numbers up to 19 - Recognise and use square numbers and cube numbers
Calculating: Multiplication and Division	- Know multiplication and division facts for multiplication tables up to 12 x 12 - Use known facts and place value to multiply and divide mentally e.g. 300 x 4 = 1200 - Multiply and divide numbers by 10 and 100 - Multiply two-digit and three-digit numbers by a one-digit number using expanded vertical multiplication - Divide mentally, including calculations with remainders	- Multiply and divide numbers mentally, using known facts (e.g. 3 x 4 = 12; 300 x 4 = 1200; 30 x 40 = 1200; 1200 ÷ 4 = 300; 1200 ÷ 30 = 40) - Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000 - Multiply numbers up to 4 digits by a one digit number using short multiplication - Divide numbers up to 4 digits by a one-digit number using short division
Visualising & Constructing	- Compare and classify 2D shapes. - Recognise and describe 3-D shapes	- Distinguish between regular and irregular polygons. - Identify 3-D shapes, including cubes and other cuboids, from 2-D representations

Number facts I must know
Addition facts Within 10 and 20 e.g. 7 + 8 = 15
Subtraction facts Within 10 and 20 e.g. 15 - 7 = 8
Multiplication facts All times tables up to 12 x 12
Division facts All times tables e.g. 132 ÷ 11 = 12
Key New Vocabulary
Multiple: 4 x 12 = 48 so 48 is a <i>multiple</i> of 12
Factor: 4 x 8 = 32 so 8 is a <i>factor</i> of 32. 4 and 8 are a <i>factor pair</i> .
Common factor: 4 is a <i>common factor</i> of 32 and 48
Square number: 8 ² = 8 x 8 = 64
Cube number: 4 ³ = 4 x 4 x 4 = 64
Prime number: a number that has no factors except 1 and itself e.g. 7

Key calculation methods I will use																					
Written																					
Column addition					Column Subtraction					Short Multiplication					Short Division						
		3	2	0																	
	+	1	8	6			3	⁴ ~~5~~	¹ 0				7	4				0	8	2	r 1
		5	0	6		-	1	4	6				x	3							
													2	2	2			4	~~3~~	³ 2	9
		1					2	0	4					1							
Vocabulary: exchange, exchange digit, place holder, groups, remainder. For example: In column subtraction, we exchange one tenth to make 10 hundredths. In short division, we can make two groups of 4 from 9, with a remainder of 1.																					

Models and images that will be used to support my understanding

Number lines

$$2997 + 8$$

A number line starting at 2997 and ending at 3005. There are two red arcs above the line. The first arc starts at 2997 and ends at 3000, labeled '+3'. The second arc starts at 3000 and ends at 3005, labeled '+5'.

$$17 \div 3 = 5 \text{ r } 2$$

A number line starting at 15 and ending at 17. There are two red arcs above the line. The first arc starts at 15 and ends at 18, labeled '5x3'. The second arc starts at 18 and ends at 17, labeled '+2'.

Place Value Counters

$$900 \div 4$$

Place value counters representing 900. There are three rows of two blue circular counters each, representing 9 hundreds. The bottom row has one additional blue circular counter, representing 100.

Place Value Charts

$$1.234 \times 100$$

Thousands	Hundreds	Tens	Ones	Tenths	Hundredths	Thousandths
			1	2	3	4
	1	2	3	4		