Crosby Primary School

Mathematics Medium Term Plan

Year 6 Autumn Term Unit 2 Four Operations

	0	4	8	9
15	7	3	3	5
−	6	0	0	0	(×400)
	1	3	3	5
−	1	2	0	0	(×80)
	1	3	5
−	1	3	5	(×9)
	0

Focus: Four Operations
Time: 6 weeks

Times Tables 5NF-1
Consolidate and practice all multiplication and division facts to 12x12 – any order, missing numbers, fractions. Use multiplication and division facts to derive associated facts.
Develop multiplicative reasoning - links between multiplication, division and fractions.

R2P: 6AS/MD-1, 6AS/MD-2
NC:
Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.
Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
Perform mental calculation, including with mixed operations and large numbers.
Solve problems involving addition, subtraction, multiplication and division.
Use estimation to check answers to calculations and determine the context of a problem to an appropriate degree of accuracy
Identify common factors, common multiples and prime numbers
Use their knowledge of the order of operations to carry out calculations involving the 4 operations

Concept Sequence

Recap Y5 Add whole numbers with more than 4 digits/Subtract whole numbers with more than 4 digits/Inverse Operations (addition and subtraction)

Add and subtract integers – reinforce language of exchange. Consider whether column methods are always appropriate. This may need to be more than 1 session. *Solve multi-step problems in a range of contexts – determine operation and methods.*

Recap Y5 Factors and Multiples

Common Factors – show results in Venn diagrams and tables.

Common Multiples – use visual and move to abstract.

Rules of divisibility.

Primes to 100 – numbers to 100. Use terms composite number, prime factors.

Squares and Cubes – solve problems.

Recap Multiply 4d by 1d- Short Multiplication
Multiply 2d (Area Model), Multiply 2d/3d by 2d (long multiplication),

Multiply up to a 4d by 2d – Long Multiplication.

Solve problems with multiplication. Include alternative strategies to written methods.

Recap Divide 4d by 1d (short division)/Recap divide with remainders

Short Division – look at remainders in context for problem solving.

Division using factors

Long Division 1 – no remainders. Chunking method.
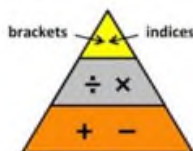
Long Division 2 – remainders

Solve problems with division – rounding remainders

Solve multi-step problems involving measures.

Order of operations – BODMAS.

Mental Calculations and estimation – efficient methods and sensible estimates. Consider questions that need mental or written methods.

Reason from known facts – apply commutativity and inverse operations.

Vocabulary
Addition, Add, more, and, make, sum, total, Altogether, double, near double, Half, halve
One more, two more…ten more.. One hundred more..
How many more to make..? How many more is….than…?
How much more is…?
Subtract, takeaway, How many are left/left over?
How many have gone? One less, two less, ten less….
One hundred/thousand/ten thousand/hundred thousand/million less/more
How many fewer is…than…? How much less is…?
Difference between, Equals, is the same as
Number bonds/pairs/facts, Missing number
Tens boundary, hundreds boundary, thousands boundary, ten thousands boundary, hundred thousand boundary, millions boundary
Place Value/holder, Ones, Tens…..Hundred Thousands
Multiplication, multiply, multiplied by, Multiple, factor, multiplicand, product, Groups of, times, product
Once, twice…ten times, Repeated addition, Short Division
Division, dividing, divide, divided by, divided into, dividend, divisor, Left, left over, remainder, Grouping, sharing, share, share equally, Group in….., equal groups of, halving
Array, row, column, Number patterns, Multiplication table
Multiplication fact, division fact, Inverse
Short/Long Multiplication/Division
Prime numbers, prime factors, composite numbers
New Vocabulary
Brackets, Order of Operations, Orders, Indices/Index

Planning Links
White Rose, Power Maths, Maths No Problem/Aspire
White Rose Scheme of Work: https://assets.whiterosemaths.com/new-schemes/Y6%20Autumn%20Block%202%20SOL%20Addition%20subtraction%20multiplication%20and%20division.pdf
NCETM Teacher Guide and Representations:
https://www.ncetm.org.uk/teaching-for-mastery/mastery-materials/primary-mastery-professional-development/multiplication-and-division/
https://www.ncetm.org.uk/teaching-for-mastery/mastery-materials/primary-mastery-professional-development/number-addition-and-subtraction/

Resources
Counting Stick, Place Value Counters/Grid
Gordons Maths Games, Mathletics, TTRockstars
BBC Super Movers
https://www.bbc.co.uk/teach/supermovers/ks2-collection/zr4ky9q

5	2	2	4	7	?
+	3	?	5	9	0	4
9	0	?	3	?	2