Calculation policy: Division

Key language: share, group, divide, divided by, half.

Year Grou p	Skill	Concrete	Pictorial	Abstract
F2	Grouping in 2s, 5s and 10s	Everyday objects, counters, objects into containers	drawing pictures/dots in groups.	
1/2	Solve one step problems using division (sharing). (e.g. There are 20 apples altogether. They are shared equally between 5 bags. How	Everyday objects, counters.	Drawing arrays. Drawing pictures/dots in groups.	

	many apples are in each bag?)			
1/2	Solve one step problems using division (grouping). (e.g. There are 20 apples altogether. They are put in bags of five. How many bags are there?)	Everyday objects, counters, number shapes, bead strings, number lines.	Drawing pictures/dots in groups. Drawing number lines.	
1/2	Divide 2- digit by 1- digit numbers (sharing with no exchange). (e.g. 48 ÷ 2 = 24)	Place value counters in a place value chart. Using base 10 and placing in equal groups.	Drawing place value charts and dots to represent counters. Partitioning, dividing and recombining.	

		Tens Ones 1 1 1 1 1 1	$ \begin{array}{c} 48\\ 40\\ \div 2\\ \hline \\ \end{array} $	
3/4	Divide 2- digits by 1- digit (sharing with exchange). (e.g. 52 ÷ 4)	Place value counters in a place value chart. Base 10 in a place value chart. Children should start with the equipment outside of the place value grid first, making the necessary exchanges, before equally distributing in the place value chart.	Drawing place value charts and dots to represent counters. Partitioning, dividing and recombining. 52 40 12 $\div 4$ 10 3 10 + 3 = 13	n/a.

		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
3/4	Divide 2- digits by 1- digit (sharing with remainders) (e.g. 53 ÷ 4)	Place value counter Base 10 in a place of Children should state outside of the place the necessary exch distributing in the place Tens	ers in a place value of value chart. rt with the equipmen e value grid first, mak anges, before equal ace value chart.	chart. it king Ily	Drawing a partitioning model. 53 40 13 +4 12 10 +4 3	n/a.

		Image: Construction of the second		
4/5	Divide 2- digits by 1- digit (grouping). (e.g. 52 ÷ 4)	Counters in a place value grid, starting with the largest place value (e.g. the '50' in 52). Language to use: 'How many groups of 4 tens can we make? How many groups of 4 ones can we make'	Drawing dots in place value grids to represent counters.	Short division – bus stop method.

		Tens Ones Image: Construction of the second secon		
4	Divide 3- diaits by 1-	Place value counters in place value grids. Children should start with the equipment	Drawing out partitioning, dividing and recombining.	n/a.
	digit	outside of the place value grid first, making		
	(sharing).	distributing in the place value chart.	856	
	(e.g. 844 ÷ 4)	Image: Contract of the contract	$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $	

		H T O 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100 100		
5	Divide 3- digits by 1- digit (grouping). (e.g. 856 ÷ 4)	Counters in a place value grid, grouping them together. Language to use: 'How many groups of 4 hundreds can we make? How many groups of 4 tens can we make? How many groups of 4 ones can we make? Hundreds Tens Ones 101111 1010100 100 100 00 0 10 10 10 10 101010 1010100 100	Drawing and grouping dots in a place value chart.	Short division – bus stop method. 4 8 5 16
5	Divide 4- digits by 1-	Place value counters in a place value chart. Grouping as above (see 3-digits divide by 1-	Drawing and grouping dots in a place value chart.	Short division – bus stop method.

	diait	digit). Children should be working in the	Partitioning and recombining with					
	(grouping).	abstract as much as possible at this stage.	simpler divisors.		4	2	6	6
	(e.g. 8,532 ÷ 2)			2	8	5	1 ₃	1 ₂
5/6	Divide multi-digits by 2-digits (short division). (e.g. 7,335 ÷ 15)	Children should be working in the abstract as much as possible at this stage as concrete representations are less effective.	Children may write out their multiples to support them.	Short division – bus stop method. $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				
5/6	Divide multi-digits by 2-digits (short division) with remainders.	Children should be working in the abstract as much as possible at this stage as concrete representations are less effective.	Children may write out their multiples to support them.	Short division – bus stop method. Remainders may be left as they are, converted into fractions, then into decimals, or dealt with fully by turning into a decimal, depending o the context of the question. Left as a remainder:				

	(e.g. 382 ÷ 6 = 63r4)			Remainder as a fraction:
				<u>Fraction converted to a</u> <u>decimal:</u>
				Fully divided leaving a decimal answer:
5/6	Divide multi-digits by 2-digits (long division).	Children should be working in the abstract as much as possible at this stage as concrete representations are less effective.	Children may write out their multiples to support them.	Long division.
	(e.g. 7,335 ÷ 15)			

			$1 \times 15 = 15$ $2 \times 15 = 30$ $3 \times 15 = 45$ $4 \times 15 = 60$ $5 \times 15 = 75$ $10 \times 15 = 150$	15 -	0 7 6 1	4 3 0 3 2 1 1	8 3 0 3 0 3 3	9 5 0 5 5 5 0		(×40C (×80) (×9)
6	Divide multi-digits by 2-digits (long division). With remainders. (e.g. 372 ÷ 15)	Children should be working in the abstract as much as possible at this stage as concrete representations are less effective.	Children may write out their multiples to support them. $1 \times 15 = 15$ $2 \times 15 = 30$ $3 \times 15 = 45$ $4 \times 15 = 60$ $5 \times 15 = 75$ $10 \times 15 = 150$	ng c in b itter ould ecim onte	divis e le n as be hal (xt o 3 3	fr as a fraction the free free free free free free free fr	The a reaction verteend end 2 0 2 0 2	rer ed ling esti	naii aina wh intc (on on)	nder der or ich a the

