



	MULTIPLICATION & DIVISION FACTS								
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6			
	count in multiples of	count in steps of 2,	count from 0 in	count in multiples of	count forwards or				
	twos, fives and tens	3, and 5 from 0, and	multiples of 4, 8, 50	6, 7, 9, 25 and 1000	backwards in steps				
	(copied from	in tens from any	and 100	(copied from	of powers of 10 for				
	Number and Place	number, forward or	(copied from	Number and Place	any given number				
	Value)	backward	Number and Place	Value)	up to				
		(copied from	Value)		1 000 000				
		Number and Place			(copied from				
		Value)			Number and Place				
		recall and use	recall and use	recall and use	Value)				
		multiplication and	multiplication facts	multiplication and					
		division facts for the	for the <b>3</b>	division facts for the					
		2, 5 and 10	multiplication tables	6 multiplication					
		multiplication	Cubes	tables					
		tables, including	Number line	Objects					
		recognising odd and	Counters	Arrays					
		even numbers		Number lines					
		Counters		Cubes					
		Tens frame	recall and use	recall and use					
			division facts for the	multiplication and					
			3 multiplication	division facts for the					
			tables	7 multiplication					
			Counters	tables					
				Objects					
				Arrays					





recall and use	recall and use	Γ
multiplication facts	multiplication and	ĺ
for the <b>4</b>	division facts for the	
multiplication tables	9 multiplication	
Dotted card	tables	
Objects	Objects	
	Arrays	
recall and use	recall and use	
division facts for the	multiplication and	
4 multiplication	division facts for the	
tables	11 multiplication	
Counters	tables	
	Objects	
	Arrays	
	Cubes	
	Place value counters	
recall and use	recall and use	
multiplication facts	multiplication and	
for the <b>8</b>	division facts for the	
multiplication tables	12 multiplication	
Dotted card	tables	
Objects	Cubes	
Counters	Bar models	
Number line		
recall and use		
division facts for the		

Black – The objective

Blue – The manipulatives that need to be used Orange – Taught discretely or taught during mental maths/rapid recall

Purple – Covered in within other lessons/objectives.





			8 multiplication tables Objects			
			MENTAL CALCULATION	J		
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ELG - They solve problems, including doubling, halving and sharing.				use place value, known and derived facts to <b>multiply</b> <b>mentally</b> , including: multiplying by 0 and 1; use place value, known and derived facts to <b>divide</b> <b>mentally</b> , including: dividing by 1; use place value, known and derived facts to multiply mentally, including: <b>multiplying together</b> <b>three numbers</b> Dots	multiply and divide numbers mentally drawing upon known facts	perform mental calculations, including with mixed operations and large numbers





		show that		recognise and use	multiply whole	associate a fraction
		multiplication of two		factor pairs and	numbers and those	with division and
		numbers can be		commutativity in	involving decimals	calculate decimal
		done in any order		mental calculations	by 10, 100 and 1000	fraction equivalents
		(commutative) and		(appears also in	Number discs (YPB)	(e.g. 0.375) for a
		division of one		Properties of	divide whole	simple fraction (e.g.
		number by another		Numbers)	numbers and those	<sup>3</sup> / <sub>8</sub> )
		cannot			involving decimals	(copied from
					by 10, 100 and 1000	Fractions)
					Partitioning	
					Number discs (YPB)	
		1	WRITTEN CALCULATIO	N		
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Making and adding	calculate	write and calculate	multiply two-digit	multiply numbers	multiply multi-digit
	Making and adding equal groups	calculate mathematical				
			write and calculate	multiply two-digit	multiply numbers	multiply multi-digit
	equal groups	mathematical	write and calculate mathematical	multiply two-digit numbers by a one-	multiply numbers up to 4 digits by a	<b>multiply</b> multi-digit numbers up to <b>4</b>
	equal groups Cubes	mathematical statements for	write and calculate mathematical statements for	multiply two-digit numbers by a one- digit number using	multiply numbers up to 4 digits by a one- digit number	multiply multi-digit numbers up to 4 digits by a two-digit
	equal groups Cubes	mathematical statements for multiplication and	write and calculate mathematical statements for multiplication using	multiply two-digit numbers by a one- digit number using formal written	<b>multiply</b> numbers up to <b>4 digits by a</b> <b>one- digit number</b> using a formal	<b>multiply</b> multi-digit numbers up to <b>4</b> <b>digits by a two-digit</b> whole number using
	equal groups Cubes	mathematical statements for multiplication and division within the	write and calculate mathematical statements for multiplication using the multiplication	multiply two-digit numbers by a one- digit number using formal written layout	multiply numbers up to 4 digits by a one- digit number using a formal written method,	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written
	equal groups Cubes	mathematical statements for multiplication and division within the multiplication tables	write and calculate mathematical statements for multiplication using the multiplication tables that they	multiply two-digit numbers by a one- digit number using formal written layout Number discs (PY)	multiply numbers up to 4 digits by a one- digit number using a formal written method, including long	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long
	equal groups Cubes	mathematical statements for multiplication and division within the multiplication tables and write them	write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for	multiply two-digit numbers by a one- digit number using formal written layout Number discs (PY) Part wholes	multiply numbers up to 4 digits by a one- digit number using a formal written method, including long multiplication for	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
	equal groups Cubes	mathematical statements for multiplication and division within the multiplication tables and write them using the	write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for <b>two-digit numbers</b>	multiply two-digit numbers by a one- digit number using formal written layout Number discs (PY) Part wholes Column	multiply numbers up to 4 digits by a one- digit number using a formal written method, including long multiplication for two-digit numbers	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Number discs (PYPB)
	equal groups Cubes	mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×),	write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit	multiply two-digit numbers by a one- digit number using formal written layout Number discs (PY) Part wholes Column Base 10	multiply numbers up to 4 digits by a one- digit number using a formal written method, including long multiplication for two-digit numbers Number discs (PYPB)	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Number discs (PYPB) Column
	equal groups Cubes	mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and	write and calculate mathematical statements for multiplication using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using	multiply two-digit numbers by a one- digit number using formal written layout Number discs (PY) Part wholes Column Base 10	multiply numbers up to 4 digits by a one- digit number using a formal written method, including long multiplication for two-digit numbers Number discs (PYPB) Column	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication Number discs (PYPB) Column Part wholes

Black – The objective

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		methods	(Partitioning)	
		Base 10		
		Column		
		Arrow cards (PY)		
		Part wholes		
		(Partitioning)		
Grouping equally	multiplication of	write and calculate		
Counters	equal groups	mathematical		
	Counters	statements for		
	Cubes	multiplication with		
		regrouping using the		
		multiplication tables		
		that they know,		
		including for <b>two-</b>		
		digit numbers times		
		one-digit numbers,		
		using mental and		
		progressing to		
		formal written		
		methods		
		Base 10		
		Column		
		Part wholes		
		(Partitioning)		





	ing using write and calculate ping and mathematical	<b>multiply</b> three-digit numbers by a one-	multiply numbers up to 4 digits by a	
	_			
sharii	-	digit number using	two-digit number	
Coun	5	formal written	using a formal	
Cube	•		written method,	
	that they know,	Number discs (PYP)	including long	
	including for two-	Bar models	multiplication for	
	digit numbers times	Column	two-digit numbers	
	one-digit numbers,	Part wholes	Number discs (PYPB)	
	using mental and		Column	
	progressing to		Bar models	
	formal written		Place value charts	
	methods		Part wholes	
	Base 10		(Partitioning)	
	Part wholes		Grid method	
	(Partitioning)			
Multi	iplication and write and calculate			
divisi				
Coun	ters statements for			
Cube	s division with		divide numbers up	divide numbers up
	regrouping using the		to 4 digits by a one-	to 4-digits by a two-
	multiplication tables		digit number using	digit whole number
	that they know,		the <b>formal written</b>	using the <b>formal</b>
	including for <b>two</b> -		method of short	written method of
	digit numbers times		division and	short division where
	one-digit numbers,		interpret remainders	appropriate for the





			using mental and		appropriately for the	context and
			progressing to		context	interpret remainders
			formal written		Number discs (PYPB)	as whole number
			methods		Bus stop method	remainders,
			Base 10		Part wholes	fractions, or by
			Part wholes		(Partitioning)	rounding, as
			(Partitioning)		Bar models	appropriate for the
						context
						Number discs (PYP)
						Bus stop method
						Bar models
						Part wholes
						(Partitioning)
						use written division
						methods in cases
						where the answer
						has up to two
						decimal places
						(copied from
						Fractions (including
						decimals))
	PROPERTI	ES OF NUMBERS: MULT	IPLES, FACTORS, PRIM	ES, SQUARE AND CUBE	NUMBERS	
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				recognise and use	identify <b>multiples</b>	identify <b>common</b>
				factor pairs and		factors
				commutativity in		Part wholes





		mental calculations (repeated)		(Partitioning) Bus stop method
		(repeated)	identify factors, including finding all factor pairs of a number, and <b>common factors</b> of two numbers.	identify common multiples
			know and use the vocabulary of <b>prime</b> <b>numbers</b> , prime factors and composite (non- prime) numbers Counters One hundred squares establish whether a number up to 100 is	identify <b>prime</b> <b>numbers</b> Counters
			prime and recall prime numbers up to 19 Counters One hundred squares	

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		recognise and use	calculate, estimate
		square numbers and	and compare
		cube numbers, and	volume of cubes and
		the notation for	cuboids using
		squared ( <sup>2</sup> ) and	standard units,
		cubed ( <sup>3</sup> )	including centimetre
		Cubes	cubed (cm <sup>3</sup> ) and
		Cubes	cubic metres (m <sup>3</sup> ),
			and extending to
			other units such as
			mm <sup>3</sup> and km <sup>3</sup>
			(copied from
			Measures)





	ORDER OF OPERATIONS							
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
						use their knowledge of the <b>order of</b> <b>operations</b> to carry out calculations involving the four operations Number cards		
		INVERSE OPERATIO	NS, ESTIMATING AND	CHECKING ANSWERS				
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
			estimate the answer	estimate and use		use estimation to		
			to a calculation and	inverse operations		check answers to		
			use inverse	to check answers to		calculations and		
			operations to check	a calculation		determine, in the		
			answers (copied	(copied from		context of a		
			from Addition and	Addition and		problem, levels of		
			Subtraction)	Subtraction)		accuracy		





			PROBLEM SOLVING			
EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	solve one-step	solve problems	solve problems,	solve problems	solve problems	solve problems
	problems involving	involving	including missing	involving multiplying	involving	involving addition,
	multiplication and	multiplication and	number problems,	and adding,	multiplication and	subtraction,
	division, by	division, using	involving	including using the	division including	multiplication and
	calculating the	materials, arrays,	multiplication and	distributive law to	using their	division
	answer using	repeated addition,	division, including	multiply two digit	knowledge of factors	Bar models
	concrete objects,	mental methods,	positive integer	numbers by one	and multiples,	Bus stop method
	pictorial	and multiplication	scaling problems	digit, integer scaling	squares and cubes	Part wholes
	representations and	and division facts,	and correspondence	problems and	Bus stop method	(Partitioning)
	arrays with the	including problems	problems in which n	harder	Bar models	
	support of the	in contexts	objects are	correspondence	solve problems	
	teacher		connected to m	problems such as n	involving addition,	
			objects	objects are	subtraction,	
			Bar models	connected to m	multiplication and	
				objects	division and a	
				Bar models	combination of	
				Column	these, including	
					understanding the	
					meaning of the	
					equals sign	
					Bus stop method	
l					Bar models	





			solve problems	solve problems
		i	involving	involving similar
			multiplication and	shapes where the
			division, including	scale factor is known
			scaling by simple	or can be found
			fractions and	(copied from Ratio
			problems involving	and Proportion)
			simple rates	
			Bus stop method	
			Bar models	