



	Mount Charles School								
	Multiplication and Division								
Objective. K-Knowledge. S-Skills									
	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6		
	Odd, even	equal groups row	Multiplication	multiple	Commutative	Factor, factor pairs	Long division		
	Double, halve	array column	Times	approx. approximately	Multiplication facts	prime number	Recurring decimal		
	Share, share	double	divide (÷)	multiplication	(up to 12x12)	composite number	Order of operations		
	equally	once, twice, three	even	sentence	Division facts	square number cube	Common factors, common		
	Group in pairs	times, five times	odd	repeated addition	Inverse	number inverse	multiples		
	Divide	share		division	derive	operation			
		count in tens		statement		formal written			
		(forwards		times-table		method			
		from/backwards		remainder					
		from)		division fact					
		How many times?		product					
		Lots of, groups f		multiples of four,					
>		Multiple of, times,		eight, fifty and one					
<mark>ar</mark>		multiply by		hundred					
ng		Repeated addition		scale up					
ca		Group in twos,							
Š		threes etc							
2		Divided by, left, left							
Nev		over.							
0 7		count in multiples of		count from 0 in	count in multiples of	count forwards or			
li S		twos, fives and tens		multiples of 4, 8, 50 and	6, 7, 9, 25 and 1 000	backwards in steps of			
isi		(copied from Number		100	(copied from Number	powers of 10 for any			
on pli		and Place Value)		(copied from Number	and Place Value)	given number up to			
fa				and Place Value)		1 000 000			
ct:		K – multiples of 2,5			K – multiples of 6,	(copied from Number			
ň ň		and 10		K - order of multiples	7, 9, 25, 1000	and Place Value)			
an		K – vocab –		of 4,8,50 and 100	K – order of	K – multiply by			
٩		multiple, lots of		K – counting in 4 is	multiples of 6, 7, 9,				
		S – add 2,5 and 10		double counting in 2	25 and 1000				
		to a number				000, 100 000			





Mental	Begins to conceptually subitise larger numbers by subitising smaller	show multi two r be do order	w that tiplication of numbers can one in any	write and calculate mathematical statements for multiplication and division using the	use place value, known and derived facts to multiply and divide mentally.	multiply and divide numbers mentally drawing upon known facts	perform mental calculations, including with mixed operations and large numbers
	S – co multi	count in tiples of 2,5,10		K – counting in 8 is double counting in 4 S – count in multiples of 4,8,50 and 100 S – double multiples of 4 and 8 recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables K – multiplication facts for the 3,4, and 8 multiplication tables K - division facts for the 3,4, and 8 multiplication tables S – recalling the multiplication and division facts for the 3,4 and 8 times tables. S – use appropriate facts to problem solve	K – counting in 6s in double counting in 3s K – pattern of 25,50,75,100 S – counting in multiples of 6,7, 9, 25, 1000 S – double multiples of 3 recall multiplication and division facts for multiplication tables up to 12 × 12 K – multiplication facts up to 12 x 12 K – division facts up to 12 x 12 S – recalling the multiplication and division facts up to 12 x 12. S – use appropriate facts to problem solve	K - order of numbers to 1 000 000 S - counting forwards and backwards to 1 000 000 S - multiplying any number by 10, 100, 1000, 10 000, 100 000	





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groups within the	(commutative)	multiplication tables	including:	K – multiplication	K – reading large numbers
number, e.g. sees	and division of	that they know,	multiplying by 0	and division facts up	K – value of digits in large
six raisins on a	one number by	including for two-digit	and 1; dividing by	to 12 x 12	numbers
plate as three	another cannot	numbers times one-	1; multiplying	K – place value	K – range of mental
and three	K – why	digit numbers, using	together three	S – apply place value	methods for calculations
	multiplication is	mental and	numbers	knowledge and	S – apply place value
	commutative and	progressing to formal		known facts to	knowledge of large
	division is not	written methods	K - multiplication	multiply and divide	numbers to perform
	K – explain why	(appears also in Written	and division facts	numbers mentally	mental calculations
	multiplication is	Methods)	up to 12 x 12		
	commutative		K – how to multiply		associate a fraction with
	using concrete,	K – multiplication and	by 0 and 1		division and calculate
	pictorial and	division facts for the	K – divide by 1		decimal fraction equivalents
	abstract	2,3,4,5,8 and 10 times	S – to derive from		(e.g. 0.375) for a simple
	representation.	table	know facts to	multiply and divide	fraction (e.g. 7/8)
	S – to show	K – mental methods	multiply and divide	whole numbers and	(conied from Fractions)
	multiplication is	for multiplying and	mentally	those involving	
	commutative	dividing 2 digit	S – multiply 3	decimals by 10, 100	
	using concrete,	numbers by 1 digit	numbers	and 1000	
	pictorial and	numbers	S – multiplication		
	abstract	K – written method	of 3 numbers can	K – place value of	
	representation	for multiplying and	be done in any	whole numbers and	
		dividing	order	decimal numbers	
		S – apply mental and		K – how to multiply	
		written methods for	recognise and use	and divide by 10, 100	
		multiplication and	factor pairs and	and 1000	
		division.	commutativity in	S – multiplying and	
			mental	dividing by 10, 100	
			calculations	and 1000	
			(appears also in		
			Properties of		
			Numbers)		
			K – what factor		
			pairs are		





				K – multiplication		
				and division facts		
				$unto 12 \times 12$		
				S recognise and		
				J – recognise and		
				commutatively in		
				mental		
				calculations.		
٤		calculate	write and calculate	multiply two-digit	multiply numbers up	divide numbers up to 4-
/rii		mathematical	mathematical	and three-digit	to 4 digits by a one-	digits by a two-digit whole
Ite		statements for	statements for	numbers by a one-	or two-digit number	number using the formal
ň		multiplication	multiplication and	digit number using	using a formal	written method of short
Ξ		and division	division using the	formal written	written method,	division where appropriate
etl		within the	multiplication tables	layout	including long	for the context
ho		multiplication	that they know,		multiplication for	divide numbers up to 4
sb		tables and write	including for two-digit	K – multiplication	two-digit numbers	digits by a two-digit whole
		them using the	numbers times one-	facts up to 12 x 12		number using the formal
		multiplication	digit numbers, using	K – formal written	K -formal written	written method of long
		(×), division (÷)	mental and	layout for	methods for long	division, and interpret
		and equals (=)	progressing to formal	, multiplving	multiplication	remainders as whole
		signs	written methods	K- place value	K – place value	number remainders.
			(appears also in Mental	knowledge	knowledge of	fractions, or by rounding.
		K – x equals	Methods)	numbers to 100	numbers to 1000	as appropriate for the
		multiplication \div	K – multiplication and	S = annly	S = apply knowledge	context
		oquals and - is	division facts for the	knowledge of	of long multiplication	K – formal written method
		the same is	2.3.4.5.8 and 10 times	formal written		of short division up to A
		oquals	table	mothed accurately	accurately	digits by a two digit whole
		Equals K multiplication	K – mental methods		divide numbers un	
		K – multiplication	for multiplying and	S – apply	aivide numbers up	number.
		and division facts	dividing 2 digit	knowledge of	to 4 digits by a one-	K – formal written method
		for 2,5 and 10	numbers by 1 digit	multiplication facts	digit number using	
		times tables	numbers by I digit	up to 12 x 12	the formal written	κ - now to interpret
		S – calculate	K written method for	accurately	method of short	remainders as whole
		mathematical	K – written metriod for		division and	numbers, fractions or by
		statements for	multiplying and		interpret	rounding
		multiplication and	aividing		remainders	





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			aivision within	S – apply mental and		appropriately for	K – which method for
			the multiplication	written methods for		the context	interpreting remainders is
			tables	multiplication and			appropriate
			S – write	division.		K – formal written	S -apply knowledge of
			statements using			method of short	short and long division
			X, = and ÷ signs			division up to 4 digits	accurately.
						by a one-digit	S – interpreting remainders
						number	as whole numbers,
						K – concept of	fractions or by rounding as
						remainders	appropriate based on the
						K – contexts where	context.
						remainders would be	S – choose appropriate
						appropriate	method for the problem
						K – division facts	use written division methods
						S – apply knowledge	in cases where the answer has
						of short division	up to two decimal places
						accurately	(copied from Fractions
						S – interpret	(including decimals))
						remainders based on	
						the context	
η P	Begins to				recognise and use	identify multiples	identify common factors,
ro	conceptually				factor pairs and	and factors,	common multiples and
pe	subitise larger				commutativity in	including finding all	prime numbers
rti	numbers by				mental	factor pairs of a	K – definition of common
es s,	subitising smaller				calculations	number, and	multiples
of	groups within the				(repeated)	common factors of	S – identify common
to .	number, e.g. sees				K- how to use the	two numbers.	factors, common multiples
un	six raisins on a				law of	K- what a common	and prime numbers.
, p	plate as three				commutativity	factor is	
ers	and three				K – a factor pair is	K – how to identify	use common factors to
ne					two numbers that	multiples and factors	simplify fractions; use
, S					multiply to get a	K – how to work	common multiples to
					product	logically	express fractions in the
							same denomination
							(copied from Fractions)





		S- recognize factor	S – identify multiples	
		pairs	and factors	
		S – use factor pairs	S- work logically to	
		and commutativity	find all factor pairs	
		in mental	S- find common	
		calculations	factors of two	
		calculations	numbers	
			numbers	
			vocabulary of prime	
			numbers, prime	
			factors and	
			composite (non-	
			prime) numbers	
			K- definition of a	
			prime number,	
			prime factor and	
			composite	
			S- know the	
			vocabulary of prime,	
			prime factor and	
			composite.	
			S- use the vocabulary	
			of prime, prime	
			factor and composite	
			number accurately.	
			establish whether a	
			number up to 100 is	
			prime and recall	
			prime numbers up	
			to 19	
			K - See above	
			ohiective	
			objective.	calculate, estimate and
				compare volume of cubes





				S – use knowledge to decide whether a number is prime S – recall prime numbers up to 19 recognise and use square numbers and cube numbers, and the notation for squared (²) and cubed (³) K – what square and cube numbers are K - ² represents squared K - ³ represent cubed S – recognise square and cube numbers S – use the correct	and cuboids using standard units, including centimetre cubed (cm ³) and cubic metres (m ³), and extending to other units such as mm ³ and km ³ (copied from Measures)
Order of operations					use their knowledge of the order of operations to carry out calculations involving the four operations K – order of operations (BIDMAS) S – apply knowledge of order of operations to carry out calculations
In ve		estimate the answer to a calculation and use	estimate and use inverse operations to		use estimation to check answers to calculations





			<pre>inverse operations to check answers (copied from Addition and Subtraction) K - mental calculation methods for addition, subtraction, multiplication and division K - inverse relationship between multiplication and division K - value of numbers S - use appropriate inverse operation for the calculation S - estimate the answer to a calculation</pre>	check answers to a calculation (copied from Addition and Subtraction) Same as Year 3		and determine, in the context of a problem, levels of accuracy K – multiplication and division facts up to 12 x 12 K – how to multiply and divide by 10,100, 1000 and 10,000 S – to use known facts to use estimation to check answers to calculations.
Problem solving	solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence	solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer	solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes	solve problems involving addition, subtraction, multiplication and division See Year 5





					ARCEDA
and arrays with	and division	problems in which n	scaling problems		
the support of the	facts, including	objects are connected	and harder	K – factors,	
teacher	problems in	to m objects	correspondence	multiples, square	
	contexts		problems such as n	and cubes (See	
K- to count		K – how to use a bar	objects are	above)	
concrete objects	K – how to read	model to show	connected to m	K – variety of mental	
and pictorial	arrays	positive integer scaling	objects	methods for	solve problems involving
representations	K – count in	and correspondence		multiplicand and	similar shapes where the scale
accurately.	multiples of 2, 5	problems	K – how to multiply	division	factor is known or can be
K – an array is used	and 10.	K - multiplication and	two-digit numbers	K – formal written	found
to help	K- multiplication	division facts of the	by one-digit	methods for	(copied from Ratio and Proportion)
understanding	facts for 2, 5 and	2,3,4,5,8 and 10 times	numbers using the	multiplication and	
when counting in	10.	tables.	distributive law.	division	
groups	K – vocabulary for	S – apply knowledge	K – multiplication	S- apply knowledge	
S – one to one	multiplication and	of multiplication and	and division facts	of factors, multiples,	
correspondence	division	division to solve	to 12x12	squares and cubes to	
S- to subitise	K – range of	problems	S – solve problems	solve multiplication	
accurately	appropriate	S- use mental and	that involve	and division	
S - solve one-step	contexts for	written methods	multiplying and	problems.	
problems involving	multiplication and	accurately.	adding	S – use formal	
multiplication and	division.	S- use bar model	S – apply the	written methods	
division	K – how to use a	accurately to	distributive law to	accurately.	
S – calculate an	bar model to	represent integer	multiply two-digit		
answer using	represent	scaling problems and	numbers by one-	solve problems	
concrete objects,	multiplication and	correspondence	digit numbers.	involving addition,	
pictorial	division	problems		subtraction,	
representations	S – use materials,			multiplication and	
and arrays with the	arrays, repeated			division and a	
support of the	addition, mental			combination of	
teacher.	methods and			these, including	
	multiplication and			understanding the	
	division facts to			meaning of the	
	solve problems.			equals sign	
				K – equals sign	
				means the same as	





	S – solve		K – variety of written	
	problems in		and mental methods	
	context.		for the four	
			operations	
			S – apply knowledge	
			of equals sign to	
			solve problems.	
			S – calculation using	
			the four operations	
			accurately.	
			solve problems	
			involving	
			multiplication and	
			division, including	
			scaling by simple	
			fractions and	
			problems involving	
			simple rates	
			K – how scale by	
			simple fractions	
			K – how to solve	
			problems involving	
			simple rates	
			K – variety of mental	
			and written methods	
			for multiplication	
			and division.	
			K – simple fractions	
			S - solve problems	
			by scaling by simple	
			fractions and	
			involving simple	
			rates.	



