Scotton Lingerfield Primary School Mathematics Progression

Purpose of study

Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

Aims

The national curriculum for mathematics aims to ensure that all pupils:

- become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately
- reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions

Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.

The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on.

Key:	NC and DM	Objectives covered	Objectives that will	SLS Additions	NCETM Spines	(Ready to Progress)
	Objectives	by teaching points	need extra input to			
		above it	ensure it is covered			

(λ	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Dail	Cardinality and Counting	I know how to count to and across 100, from any	I know how to count in multiples of 2, 3 and 5, and	I know how to count in multiples of 4, 8 and 50,	I know how to count in multiples of 6, 7, 9, 11, 12	I know how to count in known multiples of 10,000	I know how to count in known multiples and
) gr	I know how to count objects, actions, and	number, forwards and backwards.	in 10 from any number forwards and backwards.	and 100 from any number forwards and backwards.	and 25, and 1000 from any number forwards and	from any number forwards and backwards.	100,000 from any number forwards and backwards.
Countin	sounds. I know how to count beyond 10.	(INPV-I)		I know how to count forwards and backwards through zero in 1s.	I know how to count forwards and backwards through zero in a range of multiples.	I know how to count forwards and backwards through zero in powers of 10.	I know how to count forwards and backwards through zero in powers of 10.
	l know how to count beyond 20.						
	I know how to count forwards and backwards up to 20.						
s d	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Vocabulary:	Vocabulary:	Vocabulary:	Vocabulary:	Vocabulary:	Vocabulary:	Vocabulary:
before	backwards	calculate	approximate	consecutive	ascending order	brackets
between	equal to	column	formal written method	expression	descending order	degrees of accuracy
compare	equivalent to	consecutive	numbers 101-1000	integer	greater than or equal to	equivalent expression
count	forwards	continue	place holder	negative numbers	less than or equal to	order of operations
digit	greater than	efficient	relationship	nositive numbers		
estimate	half-way between	bundreds	round	thousand		
fower	known fact	and two or three digit	columnar addition/	top thousand		
first	loost	number	culturation	bundred thousand		
linst	least	number	Subtraction			
second	less than	operation		million		
third	many	place value		associative law		
how many?	most	predict				
is the same as	numeral	rule				
largest	numbers 20-100	sequence				
greatest	representation	difference				
last	tens	facts				
less	ones	inverse operations				
next number	addend difference	near double				
numbers 1 – 20	equals	renaming				
ones	half					
tens	minuend					
order	missing number					
pair	near					
pattern	number bonds					
subitise	pairs					
zero	repeated addition					
add	repeated subtraction					
addition	subtract					
altogether	subtraction					
commutativo	subtrabond					
double	subtraileriu					
loss						
less						
more						
sum						
take away						
total						
Cardinality and Counting	1.1 Comparison of	1.11 Addition and	1.17 Composition and	1.22 Composition and	1.26 Composition and	1.30 Composition and
	quantities and	Subtraction: Bridging 10	Calculation: 100 and	calculation: 1000 and	calculation: multiples of	calculation: numbers up
Counting: saying number	measures (Progression	(Progression from 1.5	bridging 100	four-digit numbers	1,000 up to 1,000,000	to 10.000.000
words in sequence	from EVES comparison	and 1.6)	(Drogrossion from 1.12	(Progression from 1.17	(Progression from 1.22)	(Drogrossion from 1.26)
	ITOIL ETFS Comparison		(Progression from 1.15	and 1 19)		(Progression from 1.26)
Counting: tagging each	and measures)	I know how to round	and 1.14)	<u>anu 1.10]</u>	I know how to read and	I know how to read and
object with one number		numbers to the pearest 10		I have a second second	write numbers in numerals	I know now to read and
word	<u>TP1:</u>	(2ND)(2)	I know how to compare	I know now to read and	and words	write numbers in numerals
	I know how to compare	(2108 V-2)	numbers using <, > and =.	write numbers in numerals	and worus.	and words.
Counting: knowing the last	items according to	TD1.		and words.	I know how to road as d	
number counted gives the	attributes.	<u>TPTI</u> Ulus suudises establitute aur f	I know how to order		r know now to read and	TP1:
total so far	I know how to measure and	I KNOW THAT ADDITION OF	numbers.	I know how to read and	write Roman Numerals to	I know that patterns seen in
	begin to record lengths and	three addends can be		write Roman Numerals to	1000 and recognise years	other powers of ten can be
Subitising: recognising	heights.	described by an	<u>TP1:</u>	100	written in Roman	extended to the unit
small quantities without		aggregation story with	I know that there are 10		Numerals.	1,000,000.
needing to count them all	I know how to ask and	three parts.	tens in 100; there are 100	<u>TP1:</u>		
0	answer simple questions by		ones in 100. 100 can also		<u>TP1:</u>	<u>TP2:</u>
	4					

Numeral meanings	counting the number of	<u>TP2:</u>	be composed	I know that ten hundreds	I know that understanding	I know that seven-digit
	objects in each category	I know that addition of	multiplicatively from 50, 25	make 1,000, which can also	of numbers composed of	numbers can be written,
Conservation: knowing that	and sorting the categories	three addends can be	or 20, units that are	be decomposed into 100	hundred thousands, ten	read and ordered by
the number does not	by quantity.	described by and	commonly used in graphing	tens and 1,000 ones.	thousands and one	identifying the number of
change if things are		augmentation story with a	and measures.		thousands can be	millions, the number of
rearranged	<u>TP2:</u>	first, then, then, now		<u>TP2:</u>	supported by making links	thousands and the number
	I know that when	structure.	<u>TP2:</u>	I know that when multiples	to numbers composed of	of hundreds, tens and ones.
I know how to subitise.	comparing two sets of		I know that known addition	of 100 are added or	hundreds, tens and ones.	I know how to apply my
	objects, one set can contain	<u>TP3:</u>	facts can be used to	subtracted, the sum or		knowledge of comparing
I know how to link the	more, fewer or the same	I know that the order in	calculate complements to	difference is always a	<u>TP2:</u>	numbers to compare the
number symbol with its	amount as the other.	which addends (parts) are	100.	multiple of 100.	I know that multiples of	volume of cubes and
cardinal number value.		added or grouped does not	I know how to apply my		1,000 up to 1,000,000 can	cuboids, recording the
	<u>TP3:</u>	change the sum	knowledge to add and	<u>TP3:</u>	be placed in the linear	results using >, < and =.
Comparison	I know how to use the	(associative and	subtract lengths and	I know that numbers over	number system by drawing	
	symbols <, > and = to	commutative laws).	heights (m/cm/mm).	1,000 have a structure that	on knowledge of the place	<u>TP3:</u>
More than/less than	express the relative sizes of			relates to their size. This	of numbers up to 1,000 in	I know that the digits in a
	two numbers	<u>TP4:</u>	I know how to measure the	means they can be ordered,	the linear number system.	number indicate its
Identifying groups with the	I know how to ask and	I know that when we are	perimeter of simple 2-D	composed, and		structure so it can be
same number of things	answer questions about	adding three numbers, we	shapes.	decomposed.	<u>TP3:</u>	composed and
Comparing numbers and	totalling and comparing	choose the most efficient			I know that numbers can be	decomposed.
reasoning	categorical data.	order in which to add them,	<u>TP3:</u>	<u>TP4:</u>	ordered and compared	
		including identifying two	I know that known	I know that numbers can be	using knowledge of their	<u>TP4:</u>
Knowing one more	I know how to interpret	addends that make ten	strategies for addition and	rounded to simplify	composition and of their	I know that knowledge of
than/one less than	simple pictograms, tally	(combining).	subtraction across the ten's	calculations or to indicate	place in the linear number	crossing thousands
relationship between	charts, block diagrams and		boundary can be combined	approximate sizes.	system.	boundaries can be used to
counting numbers	simple tables.	TP5 (progression also from	with unitising to count and			work to and across millions
		<u>1.2, 1.3 and 1.4):</u>	calculate across the	<u>TP5:</u>	<u>TP4:</u>	boundaries.
I know how to understand	I know how to compare	I know that we can add two	hundred's boundary in	I know that calculation	I know that calculation	
the 'one more than/one	lengths and heights.	numbers which bridge the	multiples of ten.	approaches learnt for	approaches for numbers up	<u>TP5:</u>
less than' relationship		tens boundary by using a		three-digit numbers can be	to 1,000 can be applied to	I know that sometimes
between numbers.	I know how to describe	'make ten' strategy.	<u>1P4:</u>	applied to four-digit	multiples of 1,000 up to	numbers are rounded as
	lengths and heights (e.g.,	I know how to compare	I know that knowledge of	numbers.	1,000,000.	approximations to
I know the 'one more	long/snort, longer/snorter,	numbers and expressions	two-digit numbers can be	TRC		eliminate an unnecessary
than/one less than'	tail/short, double/halfj	using <, > and =.	extended to count and	<u>IP6:</u>	1 24)	level of detail; rounded
relationships between	Live and have the earlier		calculate across the	I know that 1,000 can also	<u>1.24):</u>	numbers are also used to
consecutive numbers.	I know how to solve	I know now to compare	hundred's boundary	be composed	I know that numbers can be	give an estimate or
	practical problems	lengths using <, > and =.	from/to any two-digit	multiplicatively from 500s,	rounded to simplify	average. At other times,
I know how to compare	hoights	I know how to order	Inditibel in ones of tens.	2505 01 2005, utilits tilat ale		precise readings are userui.
numbers	neights.	longths	number to the pearest 10	commonly used in graphing	approximate sizes.	desimple to a required
numbers.	Lknow how to describe	lengtris.	number to the hearest 10	and measures	desimals with 2dp to the	degrad of accuracy
Composition	mass/woight [o g	TR6.	I know how to identify and	Lknow how to identify and	nearest whole number and	(6NDV-2)
	hoow/light hoovier than	<u>IFO.</u>	represent numbers that are	represent numbers that are	to 1dp	(010FV-2)
Part-whole: identifying	lighter than capacity and	across the tops boundary	procented using different	presented using different	(5ND)(_2)	I know how to apply my
smaller numbers within a	volume [e.g. full/empty	by subtracting through top	representations	representations	(514FV-2)	knowledge of estimating
number	more than less than half	or subtracting from ten	I know how to read and	representations.	TP6.	numbers to estimate the
	half full quarter]	or subtracting nom tell.	write numbers up to 1000	I know how to compare	I know that known patterns	volume of cubes and
Inverse operations	nun fun, quarterj.	I know how to identify and	in numerals and words	numbers using $< >$ and $=$	can be used to divide	cuboids
size cherronomo	I know how to compare	represent numbers that are	(3NPV-2)	hambers using <, > and =.	10 000 and 100 000 into	
A number can be	numbers using equal to	presented using objects	(5111 + 2)	I know how to order	two, four and five equal	TP6:
partitioned into different	more than and less than	nictures and number lines		numbers in ascending and	narts. These units are	I know that fluent
pairs of numbers		protores, and number mes.		descending order	parts. mese units are	calculation requires the
•						the state of the state of the

A number can be	1.2 Introducing 'whole'	I know how to read and	I know how to interpret		commonly used in graphing	flexibility to move between
partitioned into more than	and 'parts': part-part-	write numbers in numerals	data using bar charts,	I know how to round any	and measures.	mental and written
two numbers	whole (Progression	and words	pictograms and tables.	number to nearest 10, 100		methods according to the
	from EVES composition)	(2NPV-1)		and 1000.	I know how to compare	specific numbers in a
Number bonds: knowing	<u>Inom En a compositiony</u>		I know how to solve one-		numbers using <, > and =.	calculation.
which pairs make a given	TP1.	I know how to recall and	step and two-step	I know how to use rounding		I know how to interpret
number	I know that a 'whole can be	use addition and	questions [e.g., 'How many	to check answers to	I know how to order	data presented in pie charts
	represented by one object:	subtraction facts.	more?' and 'How many	calculations.	numbers.	and line graphs.
I know how to explore the	if some of the whole object	(2AS-1)	fewer?'] using information			
composition of numbers to	is missing, it is not the		presented in scaled bar	I know how to estimate the	I know how to round any	I know how to use data in
10.	whole.	I know how to add and	charts and pictograms and	answer to a calculation.	number to nearest 10,000	pie charts and line graphs
		subtract numbers, including	tables.		and 100,000.	to solve problems.
I know how to explore the	TP2:	adding ones or tens to a		I know how to interpret		
composition of numbers to	I know that a whole object	two-digit number, two two-	1.18 Composition and	discrete and continuous	I know how to use rounding	I know how to compare
20.	can be split into two or	digit numbers, three one-	Calculation: three-digit	data using appropriate	to check answers to	numbers using <, > and =.
	more parts.	(206 2 and 206 4)	numbers (Progression	graphical methods,	calculations.	Live and because and an
I know how to		(2A3-3 and 2A3-4)	<u>from 1.9)</u>	time graphs	I know how to road and	numbers
automatically recall number	<u>TP3:</u>	I know how to apply my		ume graphs.	interpret information in	numbers.
bonds for 0-5 and some of	I know 'whole' can be	knowledge of addition and	<u>TP1:</u>	I know how to solve	tables including timetables	I know how to round any
10.	represented by a group of	subtraction to solve	I know that three-digit	comparison sum and	I know how to solve	number to a required
	discrete objects.	problems involving lengths	numbers can be composed	difference problems using	comparison sum and	degree of accuracy
I know how to explore the		and heights	additively from hundreds,	information presented in	difference problems using	degree of decuracy.
composition of numbers to	<u>TP4:</u>	und heights.	tens and ones. This	bar charts, pictograms,	information presented in a	I know how to add and
10.	I know a whole group of	1.12 Subtraction as	structure can be used to	tables and other graphs.	line graph.	subtract any number using
	objects can be composed of	difference (Progression	support additive			choosing the most efficient
I know how to	two or more parts.	from 1.7)	calculation.	1.23 Composition and	I know how to complete	method for any given
automatically recall number		<u>110111.77</u>	702	calculation: tenths	information in tables,	situation.
bonds for 0-5 and some of	1.3 Composition of	TD1.	<u>IPZ:</u>		including timetables.	
10.	number: 0-5	I know that the difference	an the 0 to 1000 number	TP1:		I know how to use
	(Progression from EYFS	compares the number of	line has a unique position	I know that when one is	1.27 Negative numbers:	estimation to check
Dettern	<u>composition)</u>	objects in one set with the	inte has a unique position.	divided into ten equal	counting, comparing,	answers to calculations.
Pattern		number of objects in	TP3:	parts, each part is one	and calculating	
	TP1:	another set or the	I know that the smallest	tenth of the whole.		I know how to add and
Continuing an AB pattern	I know that numbers can be	difference between two	three-digit number is 100,		<u>TP1:</u>	subtract numbers mentally
	represented by how many	measures.	and the largest three-digit	<u>TP2:</u>	I know that positive and	including with mixed
Copying an AB pattern	objects are in a set.		number is 999; the relative	I know that tenths can be	negative numbers can be	operations and large
	TD2.	<u>TP2:</u>	size of two three-digit	expressed as decimal	used to represent change.	numbers.
Make own AB pattern	Lknow that ordinal	I know that the difference	numbers can be	fractions; the number		I know how to use rounding
Spotting an error in an AB	numbers indicate a single	is one of the structures of	determined by examining	written '0.1' is one tenth;	<u>TP2:</u>	to check answers to
pattern	item or event rather than a	subtraction.	the hundreds digit, then	one is ten times the size of	I know that our number	calculations
Identifying the unit of	quantity.		the tens digits, and then	0.1.	system includes numbers	calculations.
ropost	quantity.	<u>TP3:</u>	the ones digits, as	TD2.	that are less than zero;	I know how to apply my
repeat	TP3:	I know that consecutive	necessary.	<u>IFS:</u> I know that we can count in	these are negative	knowledge of addition.
Continuing an ABC nattern	I know that each of the	whole numbers have a		tooths up to and boyond	numbers. Numbers greater	subtraction, and inverse
continuing on Abe pattern	numbers one to five can be	anterence of one;	TP4:	one	than zero are positive	relationships to solve
Continuing a pattern which	partitioned in different	numbers have a difference	I KNOW that three-digit	one.	numbers.	missing number problems.
ends mid-unit	ways.	of two	multiples of ten can be	TP4:	TP3.	And solve multi-step
		or two.	and additively in terms of	I know that numbers with	I know that the	problems in context,
Making own ABB, ABBC	<u>TP4:</u>	TP4:	tens or hundreds	tenths can be composed	negative/minus symbol (-)	deciding which operations
patterns	I know that each of the		tens of nunureus.		is placed before a numeral	and methods to use and
	numbers one to five can be				ie placea before a nameral	why.

	Spotting an error in an ABB	partitioned in a systematic	I know that we can apply	<u>TP5:</u>	additively and	to indicate that the value is	
	pattern	way.	the structure of difference	I know that known facts	multiplicatively.	a negative number.	1.31 Problems with two
			to compare data.	and strategies for addition			unknowns (Progression
	Symbolising the unit	<u>TP5:</u>		and subtraction within and	<u>TP5:</u>	<u>TP4:</u>	from 1.28)
	structure	I know that each of the	I know how to apply my	across ten, and within and	I know that known facts	I know that negative	
		number one to five can be	knowledge of addition and	across 100, can be used to	and strategies, including	numbers can be shown on	TP1:
	Generalising structures to	partitioned into two parts;	subtraction to solve	support additive calculation	column algorithms, can be	horizontal scales; numbers	I know that problems with
	another context or mode	if we know one part, we	problems involving lengths	within 1,000.	applied to calculations for	to the left of zero are	two unknowns can have
		can find the other.	and heights.		numbers with tenths.	negative (less than zero)	one solution or more than
	Making a pattern which			<u>TP6:</u>		and numbers to the right of	one solution (or no
	repeats around a circle	<u>TP6:</u>	1.13 Addition and	I know that familiar	<u>TP6:</u>	zero are positive (greater	solution) A relationship
		I know that the number	subtraction: two-digit	counting sequences can be	I know that numbers with	than zero). The larger the	between the two unknowns
	Making a pattern around a	given before is one less; the	and single digit	extended up to 1000	tenths can be rounded to	value of the numeral after	can be described in
	border with a fixed number	number given after is one	and single digit	I know how to round any	the nearest whole number	the negative/minus symbol,	different ways including
	of spaces	more.	Inditibers (Progression	number to the nearest 100.	by examining the value of	the further the number is	additively and
			from 1.8, 1.9 and 1.10)		the tenths digit.	from zero.	multiplicatively
	Pattern spotting around us	<u>TP7:</u>		I know how to identify and			maniplicatively.
		I know that partitioning can	<u>TP1:</u>	represent numbers that are	I know how to round	<u>TP5:</u>	TD2.
		be represented using a bar	I know that knowledge of	presented using different	decimals with 1dp to the	I know that knowledge of	Lknow that model drawing
		model.	the number line, and	representations.	nearest whole number.	the positions of positive	can be used to expose the
			quantity values of numbers,		(4NPV-2)	and negative numbers in	call be used to expose the
		I know how to identify and	can be applied to	I know how to read and	. ,	the number system can be	structure of problems with
		represent numbers that are	add/subtract one to/from a	write numbers up to 1000	I know how to add and	used to calculate intervals	two unknowns.
		presented using objects,	given two-digit number.	in numerals and words.	subtract numbers with up	across zero.	TD2.
		pictures, and number lines.			to 4-digits, using compact		<u>IPS:</u>
		I know how to represent	<u>TP2:</u>	1.19 Securing mental	column method.	TP6:	I know that a problem with
		and use number bonds	I know that known facts for	strategies: Calculation		I know that negative	two unknowns has only one
		within 20.	the numbers within ten can	strategies. Calculation	I know how to apply my	numbers are used in	solution if the sum of the
		(1AS-1)	be applied to	up to 999 (Progression	knowledge of addition.	coordinate and graphing	two unknowns and the
		(1) (2)	addition/subtraction of a	from 1.15)	subtraction and inverse	contexts	difference between them is
		I know how to identify if a	single-digit number to/from		relationships to solve		given ('sum-and-difference
		number between one and	a two-digit number.	<u>TP1:</u>	missing number problems.	I know how to read and	problems') or if the sum of
		ten is closer to one or ten.		I know that known		interpret information in	the two unknowns and a
		(1NPV-2)	<u>TP3:</u>	partitioning strategies for	1.24 Composition and	tables including timetables	multiplicative relationship
ŀ			I know that knowledge of	adding two-digit numbers	<u>1.24 composition and</u>	tables, melading timetables	between them is given
		1.4 Composition of	numbers which sum to ten	within 100 can be extended	calculation: nundreatins	I know how to solve	('sum-and-multiple
			can be applied to the	to the mental addition of	and thousandths	comparison sum and	problems').
		numbers 6-10	addition of a single-digit	two-digit numbers that		difference problems using	
		(Progression from EYFS	number and a two-digit	bridge 100, and addition of	<u>IP1:</u>	information presented in a	<u>1P4:</u>
		composition)	number that sum to a	three-digit numbers.	I know that when one is	line granh	I know that other problems
			multiple of ten, or		divided into 100 equal		with two unknowns have
		<u>TP1:</u>	subtraction of a single-digit	<u>TP2:</u>	parts, each part is one	I know how to complete	only one solution.
		I know that number six to	number from a multiple of	I know that transforming	hundredth of the whole.	information in tables	
		nine are composed of 'five	ten.	addition calculations into	When one tenth of a whole	including timetables	TP5:
		and a bit'. Ten is composed		equivalent calculations can	is divided into ten equal	metading timetables.	I know that some problems
		of five and five.	<u>TP4:</u>	support efficient mental	parts, each part is one	1.28 Common	with two unknowns can't
			I know that known	strategies.	hundredth of the whole.		easily be solved using
		<u>TP2:</u>	strategies for addition or			structures and the part-	model drawing but can be
		I know that six, seven, eight	subtraction bridging ten	<u>TP3:</u>	<u>TP2:</u>	part-whole relationship	solved by a 'trial-and-
		and nine lie between five	can be applied to addition	I know that subtraction	I know that hundredths can	(Progression from 1.25)	improvement' approach;
		and ten on a number line.	or subtraction bridging a	calculations can be solved	be expressed as decimal		these problems may have
			multiple of ten.	using a 'finding the	fractions; the number	<u>TP1:</u>	one solution, several
		<u>TP3:</u>	-	difference' strategy; this	written '0.01' is one		solutions or an infinite
					hundredth; one is one		number of solutions.

	I know numbers that can be	I know how to apply my	can be thought of as	hundred times the size of	I know that mathematical	
	made of groups of two are	knowledge of addition and	'adding on' to find a missing	0.01; 0.1 is ten times the	relationships encountered	I know how to add and
	even; numbers that can't	subtraction to solve	part.	size of 0.01.	at primary level are either	subtract any number using
	be made of two groups are	problems involving lengths			additive or multiplicative;	choosing the most efficient
	odd.	and heights.	<u>TP4:</u>	<u>TP3:</u>	both of these can be	method for any given
			I know that the order of	I know that we can count in	observed within the	situation.
	<u>TP4:</u>	1.14 Addition and	addition and subtraction	hundredths up to and	structure of part-part-	
	I know that the numbers six	subtraction: two-digit	steps in a multi-step	beyond one.	whole relationships.	I know how to find pairs of
	to ten can be partitioned in	numbers and multiples	calculation can be chosen			numbers that satisfy an
	different ways.	of ten (Progression from	or manipulated such as to	<u>TP4:</u>	<u>TP2:</u>	equation with 2 unknowns.
		15 16 and 17)	simplify the arithmetic.	I know that numbers with	I know that problems in	(6AS/MD-4)
	<u>TP5:</u>	<u>1.5, 1.6 and 1.77</u>		hundredths can be	many different contexts can	
	I know that the numbers six	TD1.	I know how to identify and	composed additively and	be solved by adding	I know how to enumerate
	to ten can be partitioned	I know that when finding	represent numbers that are	multiplicatively.	together the parts to find	possibilities of
	into two parts; if we know	ten more or ten less than	presented using different		the whole. Different	combinations of two
	one part, we can find the	any two-digit number the	representations.	<u>1P5:</u>	strategies can be used to	variables.
	other.	ones digit does not change		I know that numbers with	calculate the whole, but the	
		enes agreaces not change.	I know how to add and	tenths and hundredths are	structure of the problem	I know how to express
	I know how to identify and	TP2:	subtract numbers mentally	commonly used in	remains the same.	missing number problems
	represent numbers that are	I know that when ten is	including adding ones, tens	measurement, scales and	I know how to measure	algebraically.
	presented using objects,	added or subtracted	and hundreds to a 3-digit	graphing contexts.	perimeter of composite	I know how to use simple
	pictures, and number lines.	to/from a two-digit	number.	700	rectilinear shapes (cm/m).	formulae.
	I know how to represent	number, the tens digit	the second second second	<u>IP6:</u>		
	and use number bonds	changes and the ones digit	I know now to read and	I know that known facts	I know now to apply my	I know now to generate
	within 20. $(1 \wedge S = 1)$	stay the same.	write numbers up to 1000	and strategies, including	knowledge of addition to	and describe linear number
	(1A5-1)		(2) (2)	column algorithms, can be	calculate the perimeter of	sequences.
		TP3:	(310PV-2)	applied to calculations for	composite rectilinear	I know how to apply my
	1.5 Additive structures:	I know that knowledge of	I know how to apply my	the same approaches can	snapes (cm/m).	knowledge of addition
	introduction to	number facts within ten can	knowledge of addition	the same approaches can	TD2	subtraction, and inverse
	aggregation and	be applied to adding or	subtraction and inverse	bundredths as are used for	<u>IFS.</u> I know that if the value of	rolationships to solvo
	partitioning	subtracting multiples of ten	relationships to solvo	numbers with tenths	the whole is known along	missing number problems
	(Progression from EYFS	to/from a two-digit	missing number problems	numbers with tenths.	with the values of all but	And solve multi-step
	composition)	number.	$(3\Delta S = 3)$	тр7.	one of the parts, the value	problems in context
			(0,0,0)	I know that numbers with	of the missing part can be	deciding which operations
	<u>TP1:</u>	<u>TP4:</u>	1 20 Algorithmer	hundredths can be rounded	calculated. Different	and methods to use and
	I know that combining two	I know that two-digit		to the nearest tenth by	strategies can be used to	why.
	or more parts to make a	numbers can be partitioned	column addition	examining the value of the	calculate the missing part.	
	whole is called aggregation;	in different ways.	(Progression from 1.15)	hundredths digit or to the	but the structure of the	
	the addition symbol can be	I know how to find different		nearest whole number by	problem remains the same	
	used for aggregation.	combinations of coins that	TP1:	examining the value of the		
		equal the same amounts of	I know that any numbers	tenths digit.	TP4:	
	<u>TP2:</u>	money.	can be added together		I know that problems in	
	I know that the equals		using an algorithm	TP8:	many different contexts	
	symbol can be used to	I know how to apply my	called 'column addition'.	I know that when one is	have the 'missing-part'	
	show equivalence between	knowledge of addition and	TD2.	divided into 1,000 equal	structure.	
	the whole and the sum of	subtraction to solve	<u>IPZ:</u>	parts, each part is one	I know how to identify,	
	the parts.	problems involving lengths	i know that the digits of the	thousandth of the whole.	compare and estimate	
		and heights.	autenus must be aligned	Knowledge and strategies	acute, obtuse and reflex	
	<u>TP3:</u>		correctly before the	for numbers with tenths	angles.	
	I know that each addend	1.15 Addition: two-digit	aigorithm is applied.	and hundredths can be	(5G–1)	
	represents a part, and	and two-digit numbers	TD2.	applied to numbers with		
			<u>1P3:</u>	thousandths		

those are combined to form	(Decomposition from 1 F	I know that in column		I know how to identify	
the whole (sum	(Progression from 1.5,	addition the digits of the	I know how to interpret	angles where they meet at	
the whole/sum.	<u>1.6 and 1.7)</u>	addition, the digits of the	discusts and continuous	angles where they meet at	
754		addends are added working	discrete and continuous	a point, are on a straight	
<u>1P4:</u>	<u>TP1:</u>	from the least significant	data using appropriate	line, half a turn and other	
I know that breaking a	I know that known	digit (on the right) to the	graphical methods,	multiples of 90 degrees.	
whole down into two or	strategies can be combined	most significant digit (on	including bar charts and		
more parts is called	to add two multiples of ten	the left).	time graphs.	I know how to use the	
partitioning.	to two single-digit			properties of rectangles to	
	numbers.	<u>TP4:</u>	I know how to solve	deduce related facts and	
I know how to read, write,		I know that if any column	comparison, sum and	find missing lengths and	
and interpret mathematical	TP2:	sums to ten or greater, we	difference problems using	angles.	
statements involving +, -	I know that 2 two-digit	must <i>'regroup'</i> .	information presented in		
and =.	numbers can be added by		bar charts, pictograms,	I know how to add and	
(1AS-2)	partitioning one or both	<u>TP5:</u>	tables and other graphs.	subtract numbers with	
	into tens and ones.	I know that the numbers		more than 5-digits, using	
I know how to add and	To be included in both TP's	within each column should	I know how to recognise	compact column method.	
subtract one-digit and two-	above.	be added in the most	that hundredths arise when		
digit numbers to 20,		efficient order	dividing an object into 100	I know how to apply my	
including zero.	I know how to use rounding		equal parts.	knowledge of addition,	
-	to check answers to	I know how to add and		subtraction and inverse	
1.6 Additive structures:	calculations	subtract numbers with up	1.25 Addition and	relationships to solve	
introduction to	calculations.	to 3-digits, using expanded	subtraction: money	missing number problems.	
augmentation and	I know how to ostimate the	column method.	(Drogression from 1.20	5	
augmentation and	answer to a calculation	(3AS-2)	(Progression from 1.20	I know how to read and	
reduction (Progression			and 1.21)	interpret information in	
from EYFS composition)	I know how to add and	I know how to apply my		tables, including timetables	
	subtract numbers montally	knowledge of addition.	<u>TP1:</u>		
<u>TP1:</u>	subtract numbers mentally	subtraction and inverse	I know that one penny is	I know how to solve	
I know that an addition	Including adding ones or	relationships to solve two-	one hundredth of a pound;	comparison sum and	
context described by a	tens to a two-digit number,	sten problems in context	conventions for expressing	difference problems using	
'first, then, now,' story	2 two-digit numbers and 3	deciding which operations	quantities of money are	information presented in a	
is an example of	one-digit numbers.	and methods to use and	based on expressing	line granh	
augmentation.		why	numbers with tenths and	inc gruph.	
	1.16 Subtraction: two-	wity.	hundredths.	I know how to complete	
<u>TP2:</u>	<u>digit and two-digit</u>			information in tables	
I know that a subtraction	numbers (Progression	I know now to apply my	<u>TP2:</u>	including timetables	
context described by a	from 1.5. 1.6 and 1.7)	knowledge of addition and	I know that equivalent	including timetables.	
'first, then, now,' story		subtraction to add and	calculation strategies for	I know how to apply my	
is an example of reduction.	TP1:	subtract amounts of money	addition can be used to	knowledge of addition	
-	I know that known		efficiently add commonly	subtraction and angles to	
<u>TP3:</u>	strategies can be used to	1.21 Algorithms:	used prices.	solvo missing angle	
I know that given any two	subtract a multiple of ten	column subtraction		problems	
parts of the story I can work	and a single-digit number	(Progression from 1.16)	<u>TP3:</u>	problems.	
out the third part.	from a two-digit number.		I know that the 'working	1.20 Using any inclusion	
-		<u>TP1:</u>	forwards'/'finding the	1.29 Using equivalences	
TP4:	TP2:	I know that one number	difference' strategy for	and the compensation	
I know that addition and	I know that a two-digit	can be subtracted from	subtraction is an efficient	property to calculate	
subtraction are and inverse	number can be subtracted	another using an algorithm	way to calculate the change	(Progression from 1.12,	
operation.	from a two-digit number by	called 'column subtraction';	due when paying in whole	1.13 and 1.19)	
	partitioning the subtrahend	the digits of the minuend	pounds or notes.		
I know how to read, write,	into tens and ones.	and subtrahend must be		TP1:	
and interpret mathematical	To be included in both TPs'	aligned correctly; the	<u>TP4:</u>	I know that if one addend is	
	above:	algorithm is applied		increased and the other is	
		9 11			

statements involving +, -		working from the least	I know that column	decreased by the same	
and =.	I know how to use rounding	significant digit (on the	methods can be used to	amount, the sum stays the	
(1AS-2)	to check answers to	right) to the most	add and subtract quantities	same.	
	calculations.	significant digit (on the	of money.		
I know how to add and		left).	-	TP2:	
subtract one-digit and two-	I know how to estimate the	,	TP5:	I know that if one addend is	
digit numbers to 20	answer to a calculation	TP2.	I know that finding change	increased (or decreased)	
including zero		I know that if there is an	when nurchasing several	and the other is kent the	
menduning zero.	I know how to add and	insufficient number of any	itoms uses the part-part-	same the sum increases (or	
I know how to apply my	subtract numbers montally	unit to subtract from in a	(part)whole structure	decreases) by the same	
I know now to apply my	subtract numbers mentally		(part–)whole structure.	decreases) by the same	
knowledge of addition,	including adding ones or	given column, we must		amount.	
subtraction, and inverse	tens to a 2-digit number,	exchange from the column	I know how to apply my		
relationships to solve	two 2-digit numbers and	to the left.	knowledge of addition,	<u>TP3:</u>	
missing number problems	three 1-digit numbers.		subtraction and inverse	I know that if the minuend	
and solve one-step		I know how to add and	relationships to solve two-	and subtrahend are	
problems in context,	I know how to apply my	subtract numbers with up	step problems in context,	changed by the same	
deciding which operations	knowledge to solve simple	to 3-digits, using expanded	deciding which operations	amount, the difference	
and methods to use and	problems that involve	column method.	and methods to use and	stays the same. (same	
why.	giving change in a practical	(3AS-2)	why.	difference)	
	context.				
1.7 Addition and		I know how to apply my	I know how to apply my	75.4	
subtraction: strategies	I know how to recognise	knowledge of addition,	knowledge of addition,	<u>1P4:</u>	
within 10 (Prograssion	and use symbols for pounds	subtraction and inverse	subtraction and inverse	I know that if the minuend	
within 10 (Progression	(£) and pence (p): combine	relationships to solve two-	relationships to solve	is increased (or decreased)	
from EYFS composition)	amounts to make a	step problems in context.	missing number problems.	and the subtrahend is kept	
	particular value	deciding which operations	0 1 1 1	the same, the difference	
<u>TP1:</u>		and methods to use and	I know how to solve simple	increases (or decreases) by	
I know that addition is	I know how to find different	why	measure and money	the same amount.	
commutative.	combinations of coins that		problems involving		
	equal the same amounts of		fractions and decimals to	<u>TP5:</u>	
<u>TP2:</u>	money		1dn	I know that if the minuend	
I know that ten can be	money	I know how to apply my	100.	is kept the same and the	
partitioned into pairs of	I know how to colve simple	knowledge of subtraction		subtrahend is increased (or	
numbers that sum to ten.	necklows in a practical	to subtract amounts of		decreased), the difference	
	problems in a practical	money.		decreases (or increases) by	
<u>TP3:</u>	and subtraction of marrow			the same amount.	
I know that adding one	and subtraction of money	I know the number of			
gives one more and	of the same unit, including	seconds in a minute and		TP6:	
subtracting one gives one	giving change	the number of days in each		I know that the value of the	
less.		month, year and leap year.		expressions on each side of	
	I know how to tell the time			an equals symbol must be	
TP4:	to five minutes, including	I know how to tell the time		the same; addition and	
I know that consecutive	quarter past/to the hour	from an analogue clock,		subtraction are inverse	
numbers have a difference	and draw the hands on a	including using Roman		operations. We can use this	
of one	clock face to show these	numerals from I to XII, and		knowledge to balance	
or one.	times.	12-hour and 24-hour clocks		equations and solve	
тр5.				nrohlems	
Lknow that	I know how to write the	I know how to write the		problems.	
adding/subtracting two to	time to five minutes,	time from an analogue		I know how to add and	
an odd number give the	including quarter past/to	clock, including using		subtract numbers with	
novt/provious add pumber	the hour and draw the	Roman numerals from L to		more than 5-digite using	
adding (subtracting two to	hands on a clock face to	XII. and 12-hour and 24-		compact column method	
auding/subtracting two to	show these times.	hour clocks.		compact column method.	

an even number gives the I know the number of I know how to apply my next/previous even number minutes in an hour and the knowledge of comparing number of hours in a day. numbers to compare TP6: durations of events, for I know that consecutive I know how to apply my example to calculate the odd/even numbers have a knowledge of comparing time taken by events or difference of two. numbers compare and tasks.

I know how to apply my knowledge of addition and subtraction to solve problems involving time.

difference of zero. TP9:

TP7:

TP8:

I know that doubling a whole number always gives an even number.

I know that when zero is

a number, the number

I know that subtracting a

number form itself gives a

remains unchanged.

added/subtracted to/from

TP10: I know that addition and subtraction facts for the pairs five and three , and six and three, can be related to known facts and strategies.

I know how to add and subtract one-digit and twodigit numbers to 20, including zero.

1.8 Composition of numbers: multiples of 10 up to 100 (Progression from EYFS composition)

TP1: I know that one ten is equivalent to ten ones.

TP2:

I know that multiples of ten can be represented using their names and numerals.

sequence intervals of time. I know how to apply my knowledge of estimating numbers to estimate time

with increasing accuracy to the nearest minute; record and compare time in terms of seconds, minutes, hours and o'clock; use vocabulary such as a.m./p.m., morning, afternoon, noon and midnight.

I know how to add and subtract numbers mentally with increasingly large numbers.

I know how to apply my knowledge of addition, subtraction and inverse relationships to solve multistep problems in context, deciding which operations and methods to use and why.

I know how to read and interpret information in tables, including timetables

I know how to solve comparison, sum and difference problems using information presented in a line graph.

I know how to complete information in tables, including timetables.

TP3:

	I know that 0-10 number			
	line can be used to			
	actimate the positions of			
	estimate the positions of			
	multiples of 10 on a 0-100			
	number line.			
	три			
	<u>114.</u>			
	I know that			
	adding/subtracting ten to a			
	multiple of ten gives the			
	next/previous multiple of			
	top			
	ten.			
	<u>TP5:</u>			
	I know that known facts for			
	the numbers within ten can			
	housed to add and subtract			
	be used to add and subtract			
	in multiples of ten by			
	unitising.			
	I know how to add and			
	subtract one digit and two			
	Subtract one-digit and two-			
	digit numbers to 20,			
	including zero.			
	I know how to identify ten			
	more or loss than a given			
	indre of less than a given			
	number.			
	1.9 Composition of			
	numbors: 20,100			
	Indiffber3. 20-100			
	(Progression from EYFS			
	composition)			
	TD1.			
	TPT.			
	I know that there is a set			
	counting sequence for			
	counting to 100 and			
	beyond.			
	T D2			
	<u>1P2:</u>			
	I know that objects can be			
	counted efficiently by			
	making groups of ten.			
	TD2			
	<u>1P3:</u>			
	I know that each number			
	on the 0-100 number line			
	has a unique position			
	the stridge besiden			
	TD4:			
	124:	1		

	I know that the relative size			
	of two two-digit numbers			
	can be determined by first			
	examining the tens digits			
	and then the ones digits.			
	C C			
	TP5:			
	I know that each two-digit			
	number can be partitioned			
	into a tens part and a ones			
	part.			
	TP6:			
	I know that the tens and			
	ones structure of two-digit			
	numbers can be used to			
	support additive			
	calculation			
	I know how to read and			
	write numbers to 100			
	write numbers to 100.			
	I know how to add and			
	subtract one-digit and two-			
	digit numbers to 20			
	including zero			
	mendung zero.			
	1.10 Composition of			
	1.10 Composition of			
	<u>number: 11-19</u>			
	(Progression from EYFS			
	<u>composition)</u>			
	<u>TP1:</u>			
	I know that the digits in the			
	numbers 11-19 tell us			
	about their value.			
	<u>TP2:</u>			
	I know that the number 11-			
	19 can be formed by			
	combining a ten and ones			
	and can be partitioned into			
	tens and ones.			
	<u>TP3:</u>			
	I know that a number is			
	even/odd if the ones digit is			
	even/odd; it can/can't be			
	made from groups of two.			
	<u>TP4:</u>			

I know that doubling the
numbers 6-9 gives and even
teen number.
TD5.
Line that addition and
i know that addition and
subtraction facts within 10
can be applied to addition
and subtraction within 20.
I know how to read and
write numbers to 20 in
numerals and words
I know how to add and
subtract one digit and two
digit numbers to 20
ugit numbers to 20,
including zero.
I know how to recognise
and know the value of
different denominations of
coins and notes
I know how to recognise
I KNOW HOW LO IECOgnise
and use symbols for pounds
(£) and pence (p).
I know how to describe
time [e.g., quicker, slower,
earlier, later]
· ·
I know how to sequence
avonts in chronological
order using language [e.g.,
before and after, next, first,
today, yesterday,
tomorrow, morning,
afternoon and evening].
0.
I know how to recognise
and use language relating
and use language relating
to dates, including days of
the week, weeks, months
and years.
I am beginning to write the
time (hours, minutes,
seconds)
seconusj.
I know how to tell the time
to the hour and half past
the hour and draw the

	hands on a clock face to			
	show these times.			

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
ision	Vocabulary: Doubling Halving Number patterns sharing	Vocabulary: Grouping Sharing	Vocabulary: Array Divide Dividend Division Division fact Divisor Equal groups of Factor Left over Multiplication Multiplication fact Multiple Multiply Product Quotient Times	Vocabulary: Factor Product	Vocabulary: Distributive law Short division Short multiplication	Vocabulary: Common factor Common multiple Cube number Divisible Factor pair Long division Long multiplication Prime factor Prime number Square number	Vocabulary: Factorise Prime factor
ie 2: Multiplication and Div		2.1 Counting, unitising and coins (Progression from EYFS Cardinality and Counting) TP1: We can count efficiently by counting in groups of two. TP2: We can count efficiently by counting in groups of ten. TP3: We can count efficiently by counting in groups of five.	2.2 Structures: <u>multiplication</u> <u>representing equal</u> groups (Progression from 1.1 and 1.3) <u>TP1:</u> Objects can be grouped into equal or unequal groups. <u>TP2:</u> When describing equally grouped objects, the number of groups and the size of the groups must both be defined	2.7 Times tables: 2,4 and 8, and the relationship between them (Progression from) TP1: Counting in multiples of four can be represented by the four times table. Adjacent multiples of four have a difference of four. Facts from the four times table can be used to solve multiplication and division problems with different structures.	2.10 Connecting multiplication and division, and the distributive law (Progression from) I know how to find factor pairs. <u>TP1:</u> Multiplication is commutative; division is not commutative. <u>TP2:</u> Multiplication is distributive: multiplication	2.18 Using equivalence to calculate <u>TP1:</u> For multiplication, if there is a multiplicative <i>increase</i> to one factor and a corresponding <i>decrease</i> to the other factor, the product stays the same. <u>TP2:</u> For division, if there is a multiplicative change to the dividend and a corresponding change to the divisor, the quotient	2.23 Multiplication strategies for larger numbers and long multiplication (Progression from 2.19) I know how to identify common multiples, including LCM. I know how to identify common factors of a group of numbers, including HCF. I know how to identify any prime number.
Spir		<u>TP4:</u>	sour se denned.	<u>TP2:</u>	facts can be derived from related known facts by	stays the same.	I know how to multiply any number by a 1-digit number using compact

A coin has a value which is	TP3 (Progression from	Products in the four times	partitioning one of the	I know how to multiply and	short multiplication,
independent of its size,	1.11):	table are double the	factors, and this can be	divide numbers mentally	including numbers up to
shape, colour or mass.	Equal groups can be	products in the two times	interpreted as partitioning	drawing upon known facts.	3dp.
	represented with a	table; products in the two	the number of groups; two-	(5NF-1)	
<u>TP5:</u>	repeated addition	times table are half of the	part problems that involve		TP1:
The number of coins in a	expression.	products in the four times	addition/subtraction of	2.19 calculation: x/÷	When multiplying two
set is different from		table.	products with a common	decimal fractions by	numbers that are multiples
the value of the coins in a	TD4.		factor can be efficiently	whole numbers	of 10, 100 or 1,000,
set; knowledge of counting	<u>TF4.</u> Equal groups can be	TP3:	solved by applying the	whole humbers	multiply the number of
in groups of two, five or ten	Equal groups call be	Counting in multiples of	distributive law.	TD1.	tens, hundreds or
can be used to work out the	multiplication expression	eight can be represented by		Decimal fractions (with a	thousands and then adjust
value of a set of identical	multiplication expression.	the eight times table.	TP 3:	whole number of tenths or	the product using place
low-denomination coins.		Adjacent multiples of eight	The distributive law can be	hundredths) can be	value.
	<u>TP5:</u>	have a difference of eight.	used to derive	multiplied by a whole	
<u>TP6:</u>	Multiplication expressions	Facts from the eight times	multiplication facts beyond	number by using known	тр2.
Knowledge of counting in	can be written for cases	table can be used to solve	known times tables.	multiplication facts and	When multiplying two
groups of two, five or ten	where the groups each	multiplication and division		unitising	numbers where one
can be used to work out	contain zero items, and for	problems with different	I know how to use place	unitishig.	number is a multiple of 10
how many identical low-	cases where the groups	structures.	value, known and derived	TDO	100 or 1.000, use short
denomination coins are	each contain one item.		facts to multiply and divide	<u>IPZ:</u>	multiplication and adjust
needed to make a given	the best of the terms	ТР4•	mentally, including	iviuitiplying by U.1 IS	the product using place
value.	I know how to recall and	Products in the eight times	multiplying by 0.	equivalent to dividing by	value
	use multiplication and	table are double the		10; multiplying by 0.01 is	
I know how to count	division facts for the 2, 5	products in the four times	I know how to apply my	equivalent to dividing by	TP3:
forwards and backwards in	and 10 multiplication	table: products in the four	knowledge of addition,	100. Understanding of	Two two-digit numbers can
multiples of 2, 5 and 10, up	tables.	times table are half of the	multiplication to solve	place value call be used to	be multiplied by
to 10 multiples, beginning	I know how to road write	products in the eight times	problems that require the	when a number is divided	partitioning one of the
with any multiple, and	and interpret methometical	table. Products that are in	use of distributive law to	by 10, the digits move one	factors, calculating partial
count forwards and	and interpret mathematical	the two, four and eight	multiply two-digit numbers	by 10, the digits move one	products and then adding
backwards through the odd	statements involving ×, ÷	times tables share the same	by one-digit numbers.	place to the right, when a	these partial products. This
numbers.	and =.	factors.	(4MD-3)	the digits move two places	method can be extended to
(1NF-2)	I know how to colculate			to the right	multiplication of three-digit
	n know now to calculate	TP5:	2.11 Times tables: 11	to the light.	numbers by two-digit
I know how to recognise	for multiplication within the	Divisibility rules can be	and 12	трз.	numbers.
and know the value of	multiplication tables	used to find out whether a		To multiply a single-digit	
different denominations of	multiplication tables	given number is divisible (to	TP1:	number by a decimal	<u>TP4:</u>
coins and notes.	2.2 Timos tables: groups	give a whole number) by	The distributive law can be	fraction with up to two	'Long multiplication' is an
	2.5 Times tables: groups	two, four or eight.	used to build up the 11	decimal places, convert the	algorithm involving
I know how to recognise	or 2 and commutativity	-	times table by partitioning	decimal fraction to an	multiplication, then
and use symbols for pounds	(part 1) (Progression	I know how to recall and	11 into 10 and 1. Adjacent	integer by multiplying by 10	addition of partial products,
(±) and pence (p).	<u>from 2.1)</u>	use multiplication and	multiples of 11 have a	or 100. perform the	which supports
Linew how to such any		division facts for the 3, 4	difference of 11.	resulting calculation using	multiplication of two
r know now to apply my	<u>TP1:</u>	and 8 multiplication tables.		an appropriate strategy.	numbers with two or more
multiplication division and	For equally grouped	(3NF-2)	<u>TP2:</u>	then adjust the product by	digits.
to solve one stop problems	objects, the number of		The distributive law can be	dividing by 10 or 100.	
to solve one-step problems.	groups is a factor, the	I know how to multiply a 2-	used to build up the 12	.	<u>TP5:</u>
	group size is a factor, and	digit numbers by a 1-digit	times table by partitioning	TP4:	Multiplication where one of
	the overall number of	number	12 into 10 and 2. Adjacent	If the multiplier is less than	the factors is a composite
	objects is the product; this		multiples of 12 have a	one, the product is less	number can be carried out
	can be represented with a	2.8 Times tables: 3,6	difference of 12.	than the multiplicand; if the	by multiplying one factor
	multiplication equation.	and 9, and the		multiplier is greater than	and then the other factor.
	counting in multiples of		<u>TP3:</u>	one, the product is greater	
	two can be used to find the				

					1	
		product when the group	relationship between	Products in the 12 times	than the multiplicand.	I know how to perform
		size is two.	them	table are double the		mental calculations,
				products in the six times	<u>TP5:</u>	including with mixed
		TP2:	TP1:	table; products in the six	To divide any decimal	operations and large
		Counting in multiples of	Counting in multiples of	times table are half of the	fraction with up to two	numbers.
		two can be represented by	three can be represented	products in the 12 times	decimal places by a single-	
		the two times table	by the three times table	table.	digit number, convert the	I know how to multiply any
		Adjacent multiples of two	Adjacent multiples of three		decimal fraction to an	number by a 2-digit
		Adjacent multiples of two	Adjacent multiples of three	TP4:	integer by multiplying by 10	number.
		have a difference of two.	have a difference of three.	Divisibility rules can be	or 100 perform the	(6AS/MD-1)
		Facts from the two times	Facts from the three times	used to find out whether a	resulting calculation using	(0, 0, 0, 0, 2)
		table can be used to solve	table can be used to solve	given number is divisible (to	an appropriate strategy	2.24 Divisions dividing
		problems about groups of	multiplication and division	give a whole number) by 11	then adjust the quotient by	2.24 Division. dividing
		two.	problems with different	give a whole number) by 11	dividing by 10 or 100	by two-digit divisors
			structures.	01 12.		
		TP3:		the second second second second	the second second second second	<u>TP1:</u>
		Factor pairs can be written	TP2:	I know how to use place	I know now to use my	Any two- or three-digit
		in either order, with the	Counting in multiples of six	value, known and derived	knowledge of place value to	dividend can be divided by
		product remaining the	can be represented by the	facts to multiply and divide	multiply and divide	a two-digit divisor by skip
		same (commutativity)	six times table. Adjacent	mentally, including	numbers by 10, 100 and	counting in multiples of the
			multiples of six have a	multiplying and dividing by	1000 where the answers	divisor (quotient < 10);
		I know how to recall and	difference of six. Facts from	1.	are up to 2dp.	these calculations can be
		use multiplication and	the six times table can be		(5NPV-1 and 5MD-1)	recorded using the short or
		division facts for the 2 5	used to solve multiplication	I know how to recall		long division algorithms.
		and 10 multiplication	and division problems with	multiplication and division	I know how to multiply a 4-	
		tables	different structures	facts for multiplication	digit number by a 1-digit	TP2:
		Lables.	different structures.	tables up to 12×12 .	number using compact	Any three- or four-digit
		and interpret mathematical	TD2	(4NF-1)	short multiplication,	dividend can be divided by
		and interpret mathematical	<u>IFS.</u> Draducts in the six times		including numbers up to	a two-digit divisor using the
		statements involving ×, ÷	Products in the six times	I know how to apply my	2dp.	short or long division
		and =.	table are double the	knowledge of addition,		algorithms (including
			products in the three times	multiplication to solve	I know how to multiply a 4-	auotient > 10)
		I know now to calculate	table; products in the three	problems that require the	digit number by a 2-digit	quotient = 10).
		mathematical statements	times table are nair of the	use of distributive law to	number using compact long	700
		for multiplication within the	products in the six times	multiply two-digit numbers	multiplication.	<u>1P3:</u>
		multiplication tables.	table.	by one-digit numbers.	(5MD-3)	When there is a remainder,
		(2MD-1)		(4MD-3)		the result can be expressed
			<u>1P4:</u>	. ,	I know how to divide	as a whole-number
		2.4 Times tables: groups	Counting in multiples of	I know how to use place	numbers up to 4-digits by a	quotient and a whole-
		of 10 and of 5, and	nine can be represented by	value, known and derived	1-digit number using short	number remainder, as a
		factors of 0 and 1	the nine times table.	facts to multiply and divide	division.	whole-number quotient
		(Progression from 2.1)	Adjacent multiples of nine	mentally, including	(5MD-4)	and a proper-fraction
		<u></u>	have a difference of nine.	multiplying together three	(0	remainder, or as a decimal-
		TP1.	Facts from the nine times	numbers	2 20 Multiplication with	fraction quotient.
		Counting in multiples of ten	table can be used to solve	nambers.	z.zo wutipication with	
		counting in multiples of ten	multiplication and division	2.12 Division with	three factors and	I know how to divide any
		ton times table. Adjacent	problems with different		volume	number by a 2-digit
		multiples of ten house	structures.	remainders		number using compact long
		difference of ter . Secto			<u>TP1:</u>	division expressing
		unrerence of ten. Facts	<u>TP5:</u>	<u>TP1:</u>	Volume is the amount of	remainders as whole
		from the ten times table	Products in the nine times	Objects can be divided into	space that something	numbers or fractions.
		can be used to solve	table are triple the	equal groups, sometimes	occupies.	
		problems about groups of	products in the three times	with a remainder; objects		
		ten.	table. Products that are in	can be shared equally,	TP2:	
				sometimes with a	<u> </u>	

	TDO	the design of sold stars	and the second sec	A fellowing to service at the	
	<u></u>	the three, six and nine	remainder; a remainder can	Volume is measured in	2.25 Using
	Counting in multiples of	times tables share the same	be represented as part of a	cubic units, such as cubic	compensation to
	five can be represented by	factors.	division equation.	centimetres (cm ³) and cubic	calculate
	the five times table.			metres (m ³).	
	Adjacent multiples of five	TP6:	TP2:	I know how to estimate	TD1.
	have a difference of five.	Divisibility rules can be	If the dividend <i>is</i> a multiple	volume (e.g., using 1 cm 3	TPL.
	Facts from the five times	used to find out whether a	of the divisor there	blocks to build cubes and	For multiplication, if there
	table can be used to solve	given number is divisible (to	is no romaindor: if the	suboids) and canacity (a g	is a multiplicative change to
	table call be used to solve	given number is divisible (to	is no remainder, it the	cubolus) and capacity (e.g.,	one factor, the product
	problems about groups of	give a whole number) by	dividend is not a multiple of	using water).	changes by the same scale
	five.	three, six or nine.	the divisor, there is a		factor.
			remainder. The remainder	<u>TP3:</u>	
	<u>TP3:</u>	I know how to multiply a 2-	is always less than the	The volume of a cuboid can	TP2.
	Skip counting and grouping	digit numbers by a 1-digit	divisor.	be calculated by multiplying	For division if there is a
	can be used to explore the	number		the length, width and	TOT UNISION, IT THEFE IS a
	relationship between the		TP3:	height.	indulplicative change to the
	five times table and the ter	2 9 Times tables: 7 and	When solving contextual	- 0 **	dividend and the divisor
	times table	and the second s	problems involving	тра	remains the same, the
	times table.	patterns within/across	romaindors the answer to	Roth the commutative law	quotient changes by the
	704	times tables	e division color lation were	both the commutative law	same scale factor.
	<u>1P4:</u>		a division calculation must	and the associative law can	
	When zero is a factor, the	TP1:	be interpreted carefully to	be applied when	<u>TP3:</u>
	product is zero. When one	Counting in multiples of	determine how to make	multiplying three or more	For division, if there is a
	is a factor, the product is	seven can be represented	sense of the remainder.	numbers.	multiplicative increase to
	equal to the other factor (i	f by the seven times table			the divisor and the dividend
	there are only two factors)	· Adjacent multiples of seven	2.13 Calculation:	<u>TP5:</u>	remains the same the
		have a difference of seven	multiplying and dividing	The choice of which order	austiont dographics by the
	I know how to recall and	have a difference of seven.	hu 10 or 100	to multiply in can be made	quotient decreases by the
	use multiplication and	Facts from the seven times	by 10 or 100	according to the simplest	same scale factor; if there is
	division facts for the 2-5	table can be used to solve		calculation	a multiplicative decrease to
	and 10 multiplication	multiplication and division	<u>TP1:</u>	calculation.	the divisor and the dividend
	tables	problems with different	Finding 10 times as many is	Linew how to use all four	remains the same, the
	lables.	structures.	the same as multiplying by	T KNOW NOW LO USE all TOUR	quotient increases by the
			10 (for positive numbers);	operations to solve	same scale factor.
	I know how to read, write	<u>TP2:</u>	to multiply a whole number	problems involving	
	and interpret mathematica	When both factors are odd	by 10. place a zero after the	capacity, volume and mass,	I know how to apply my
	statements involving ×, ÷	numbers, the product is an	final digit of that number.	with decimal notation	knowledge of
	and =.	odd number: when one		including scaling.	multiplication division and
		factor is an odd number	TP2.		inverse relationships to
	I know how to calculate	and the other is an over	To divide a multiple of 10	2.21 Factors. multiples.	solvo probloms involving
	mathematical statements	and the other is an even	by 10 remove the first serve	prime numbers and	more complex positive
	for multiplication within th	e aver averbar when both	by 10, remove the milal zero	some osito numbers	interest sealing
	multiplication tables	even number; when both	aigit (in the ones place)	composite numbers	integer scaling.
	(2MD-1)	factors are even numbers,	from that number.		(5NF-2)
		the product is an even		<u>TP1:</u>	
		number.	<u>TP3:</u>	Factors are positive	I know how to apply my
	2.5 Commutativity (par	<u> </u>	Finding 100 times as many	integers that can be	knowledge of
	2), doubling and halving	<u>S TP3:</u>	is the same as multiplying	multiplied together to	multiplication, division and
		When both factors have the	by 100 (for positive	equal a given number	inverse relationships to
	<u>TP1:</u>	same value, the product is	numbers); to multiply a	- and a Breat light ber	solve multi-step problems.
	The same multiplication	called a square number:	whole number by 100,	TP2.	
	equation can have two	square numbers can be	place two zeros after the	Systematic methods can be	2.26 Mean average and
	different grouping	represented by objects	final digit of that number	Systematic methods can be	anual charac
	interpretations. Problems	arranged in square arrays		used to find all factors of a	equal shares
	about two/five/ten equal	anangea in square arrays.	TD4.	number; factors come in	
	about two/nve/ten equal	TD4:	To divide a multiple of 100	pairs; all positive integers	<u>TP1:</u>
	groups can be solved using	<u> </u>	hu 100 mm a the first	have an even number of	
	facts from the two/five/ter	1	by 100, remove the final		

	times table.	Divisibility rules can be	two zero digits (in the tens	factors apart from square	The mean is the size of
	(commutativity)	used to find out whether a	and ones places) from that	numbers, which have an	each part when a quantity
		given number is divisible (to	number.	odd number of factors:	is shared equally.
	тр2.	give a whole number) by		numbers with more than	io onal ca cquany.
	If two is a factor	particular divisors	TD5.	two factors are called	трэ
	li two is a factor,	particular divisors.	<u>IFS.</u>		<u>TPZ.</u> The mean is defined as the
	knowledge of doubling		wuitiplying a number by	composite numbers.	The mean is defined as the
	facts can be used to find	I know how to multiply a 2-	100 is equivalent to		sum of all the numbers in a
	the product; problems	digit numbers by a 1-digit	multiplying by 10, and then	<u>TP3:</u>	set of data divided by the
	about doubling can be	number	multiplying the product by	Prime numbers are positive	number of numbers/values
	solved using facts from the		10. Dividing a multiple of	integers that have exactly	that make up the set of
	two times table.	I know how to use my	100 by 100 is equivalent to	two factors.	data. If we know the mean
		knowledge of place value to	dividing by 10, and then		of a set of data and the
	TP3:	multiply and divide 1 and 2-	dividing the quotient by 10.	TP4:	number of numbers/values
	Halving is the inverse of	digit numbers by 10 and		A common factor is a factor	in that set, we can calculate
	doubling: problems about	100 where the answers are	TP6.	that is shared by two or	the total of the set. The
	halving can be solved using	up to 1dp	If one factor is made 10	more numbers. A prime	mean of a set changes if the
	facts from the two times	(2ND)(1)	times the size, the product	factor is a factor that is also	total value of the set
	facts from the two times	(3NPV-1)	times the size, the product	factor is a factor that is also	total value of the set
	table and known doubling		will be 10 times the size. If	a prime number.	changes or if the number of
	facts.		the dividend is made 10		numbers/values in the set
			times the size, the quotient	<u>TP5:</u>	changes.
	<u>TP4:</u>		will be 10 times the size.	A multiple of a number is	
	Products in the ten times			the product of that number	<u>TP3:</u>
	table are double the		<u>TP7:</u>	and an integer; a common	The mean can be used to
	products in the five times		If one factor is made 100	multiple is a multiple that is	compare data.
	table: products in the five		times the size, the product	shared by two or more	
	times table are half of the		will be 100 times the size. If	numbers	тра.
	products in the ten times		the dividend is made 100	Humbers.	The mean is not always an
	table		times the size, the quotient	TDC	appropriate representation
	table.		will be 100 times the size	$\frac{1FO}{2}$	appropriate representation
	the second second second second		will be 100 times the size.	The factor pairs of 100 can	of a set of data.
	I know now to recall and			be used to support efficient	
	use multiplication and		I know how to use my	calculation.	I know how to interpret the
	division facts for the 2, 5		knowledge of place value to		mean as an average.
	and 10 multiplication		multiply and divide 1 and 2-	I know how to identify	
	tables.		digit numbers by 10 and	multiples.	2.27 Scale Factors, ratio
			100.		and proportional
	I know how to read, write		(4NPV-1 and 4MD-1)	I know how to identify all	reasoning
	and interpret mathematical			the factor pairs of a	reasoning
	statements involving \times ÷		2.14 Multiplication:	number.	TD1.
	and =.		partitioning loading to		<u>181:</u>
			partitioning leading to	I know how to identify	Multiplication and division
	I know how to calculate		snort multiplication	common factors of two	can be used to calculate
	T KHOW HOW to calculate			numbers	unknown values in
	mathematical statements		<u>TP1:</u>	fumbers.	correspondence (cardinal
	for multiplication within the		The distributive law can be	(5IVID-2)	comparison) problems.
	multiplication tables.		applied to multiply any		
	(2MD-1)		two-digit number by a	I know how to use the	трр.
			single-digit number. by	terms prime and	
	I know how to calculate		partitioning the two-digit	composite.	Multiplication and
	mathematical statements		number into tens and ones		understanding of
	for division within the		multiplying the parts by the	I know and can recall the	correspondence can be
	multiplication tables.		single digit number ther	prime numbers up to 19.	used to calculate the
			single-digit number, then		number of possible
	I know how to apply my		adding the partial products.	I know how to identify	combinations of items.
	knowledge of			prime numbers up to 100	
	KIIOWIEUge UI		<u>TP2:</u>	prime numbers up to 100.	

multiplication, division and inverse relationships to solve missing number problems and solve one-step problems (2MD-2)

2.6 Structures: quotative and partitive division

TP1:

Objects can be grouped equally, sometimes with a remainder.

<u>TP2:</u>

Division equations can be used to represent 'grouping' problems, where the total quantity (dividend) and the group size (divisor) are known; the number of groups (quotient) can be calculated by skip counting in the divisor. (quotative division)

<u>TP3:</u>

Division equations can be used to represent 'sharing' problems, where the total quantity (dividend) and the number we are sharing between (divisor) are known; the size of the shares (quotient) can be calculated by skip counting in the divisor. (partitive division)

<u>TP4:</u>

Strategies for finding the quotient, that are more efficient than skip counting, include using known multiplication facts and, when the divisor is two, using known halving facts.

<u>TP5:</u>

When the dividend is zero, the quotient is zero; when

Any two-digit number can be multiplied by a singledigit number using an algorithm called 'short multiplication'; the digits of the factors must be aligned correctly; the algorithm is applied working from the least significant digit (on the right) to the most significant digit (on the left); if the product in any column is ten or greater, we must 'regroup'.

<u>TP3:</u>

The distributive law can be applied to multiply any three-digit number by a single-digit number, by partitioning the three-digit number into hundreds, tens and ones, multiplying the parts by the single-digit number, then adding the partial products.

<u>TP4:</u>

Any three-digit number can be multiplied by a singledigit number using the short multiplication algorithm.

I know how to multiply a 3digit number by a 1-digit number.

I know how to apply my knowledge of multiplication, division and inverse relationships to solve missing number problems (4MD-2)

I know how to apply my knowledge of multiplication, division and inverse relationships to solve correspondence problems in which n objects are connected to m objects I know how to recognise squared and cubed numbers using the correct notation.

I know how to calculate squared and cubed numbers.

I know how to apply my knowledge of multiples, factors, prime, square and cube numbers to solve problems.

2.22 Combining multiplication with addition and subtraction

<u>TP1:</u> Multiplication can be combined with addition and subtraction; when there are no brackets, multiplication is completed before addition or subtraction; when there are brackets, the calculation within the brackets is completed first.

TP2:

When adding or subtracting multiplication expressions that have a common factor, the distributive law can be applied.

I know how to apply my knowledge of addition and multiplication to solve problems that require the use of distributive law to multiply three-digit numbers by one-digit numbers. (6AS/MD-2)

I know how to apply my knowledge of

TP3: Scaling can be used to make and interpret maps.

<u>TP4:</u>

There is a proportional relationship between the dimensions of similar shapes; if the scale factor and the dimensions of one of the shapes is known, the dimensions of the similar shape can be calculated; if the dimensions of both of the shapes are known, the scale factor can be calculated.

I know how to solve

problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts.

I know how to apply my

knowledge of multiplication, division and inverse relationships to solve problems involving simple rates.

2.28 Combining division with addition and subtraction

TP1:

Division can be combined with addition and subtraction; when there are no brackets, division is completed before addition or subtraction; when there are brackets, the calculation within the brackets is completed first.

<u>TP2:</u>

When adding or subtracting division expressions that have a common divisor, the

	the c	dividend is equal to the		multiplication, division and	distributive law can be
	divis	sor, the quotient is one;	2.15 Division:	inverse relationships to	applied.
	when	en the divisor is equal to	partitioning leading to	solve missing number	
	one,	, the quotient is equal	short division	problems.	I know how to use my
	to th	he dividend.			knowledge of the order of
			TD1.	I know how to apply my	operations to carry out
	l kno	ow how to recall and	<u>IP1:</u>	knowledge of shape and	linear calculations involving
	user	multiplication and	Any two-digit number can	multiplication to calculate	the four operations.
	divisi	sion facts for the 2 5	be divided by a single-digit	the area of squares and	the rout operations.
	and i	10 multiplication	number, by partitioning the	rectangles (cm 2 m 2)	I know how to apply my
	table		two-digit number into tens		knowledge of addition and
	table	e3.	and ones, dividing the parts		multiplication to solvo
	Lkno	ow how to road write	by the single-digit number,		problems that require the
	I KIIO	interpret methometical	then adding the partial		problems that require the
	anu i		quotients; if dividing the		use of distributive law to
	state	ements involving ×, ÷	tens gives a remainder of		multiply three-digit
	and =	=.	one or more tens, we must		numbers by one-digit
			exchange the remaining		numbers.
	l kno	ow how to calculate	tens for ones before		(6AS/MD-2)
	math	hematical statements	dividing the resulting ones		
	for m	multiplication within the	value by the single-digit		2.29 Decimal place-
	mult	tiplication tables.	number.		value knowledge,
	(2MI	ID-1)			multiplication and
			TP2.		division
	l kno	ow how to calculate	Any two-digit number can		
	math	hematical statements	he divided by a single-digit		TD1-
	for d	division within the	number using an algorithm		Terre Materia and terre
	mult	tiplication tables	called (chart division); the		To multiply a number by
			called <i>Short division</i> , the		10/100/1,000, move the
			algorithm is applied		digits one/two/three places
			working from the most		to the left; to divide a
			significant digit (on the left)		number by 10/100/1,000,
			to the least significant digit		move the digits
			(on the right); if there is a		one/two/three places to
			remainder in the tens		the right.
			column, we		
			must 'exchange'.		TP2:
					Measures can be converted
			<u>TP3:</u>		from one unit to another
			Any three-digit number can		using knowledge of
			be divided by a single-digit		multiplication and division
			number, by partitioning the		by 10/100/1 000
			two-digit number into		5, 10, 100, 1,000.
			hundreds, tens and ones,		I know how to use my
			dividing the parts by the		knowledge of place value to
			single-digit number, then		multiply and divide
			adding the partial		numbers by 10, 100 and
			quotients; if dividing the		1000 where the answer
			hundreds gives a remainder		and where the answers
			of one or more hundreds		are up to 3dp.
			we must exchange the		(6NPV-1)
			remaining hundreds for		
			tens before dividing the		I know how to solve
			resulting tens value by the		problems involving the
			resulting tens value by the		calculation and conversion

		single-digit number.		of units of measure, using
				decimal notation up to
		75.4		
		<u>1P4:</u>		three decimal places where
		Any three-digit number can		appropriate.
		he divided by a single digit		
		be divided by a single-digit		
		number using the short-		2.30 Multiplicative
		division algorithm		
		division algorithm.		contexts: area and
				nerimeter 2
		I know how to divide a 3-		permeter 2
		digit number by a 1-digit		TP1:
		number using short		<u></u>
		division expressing		The area of a parallelogram
		division, expressing		can be calculated by
		remainders as whole		multiplying the bace by the
		number		multiplying the base by the
		number.		perpendicular height; all
				narallelograms with the
		2.16 Multiplicative		paranelograms with the
		2.16 Wultiplicative		same base and
		contexts: area and		perpendicular height will
				have the same area
		perimeter 1		have the same area.
		TD1.		тр2.
		<u>IP1:</u>		<u>IFZ.</u>
		Perimeter is the distance		The area of a triangle can
		around the edge of a two		be calculated by multiplying
		around the edge of a two-		be calculated by maniplying
		dimensional (2D) shape.		the base by the
				perpendicular height and
				then dividing by two
		<u>1P2:</u>		then dividing by two.
		Perimeter is measured in		
		units of longth and can be		трз.
		units of length and can be		<u>IF3.</u>
		calculated by adding		Shapes with the same area
		together the lengths of the		can have different
		together the lengths of the		
		sides of a 2D shape.		perimeters; snapes with the
				same perimeter can have
		TD2		different areas
		<u>1P3:</u>		unierent areas.
		Multiplication can be used		
		to calculate the perimeter		трд
		to calculate the perimeter		M/hon a share has has r
		of a regular polygon; when		when a shape has been
		the perimeter is known.		transformed by a scale
		the permeter is knowny		factor the perimeter is also
		side-lengths can be		factor, the perimeter is diso
		calculated using division.		transformed by the same
		0		scale factor.
		<u>TP4:</u>		
		Area is the measurement of		I know how to apply my
		the surface of a flat h	1	knowledge of shape and
		the surface of a flat item.		knowledge of shape and
		1	1	ratio to solve problems
		TDS		involving similar shapes
		<u>IFJ.</u>	1	interving similar shapes
		Area is measured in square		where the scale factor is
		units, such as square		known or can be found.
		centimetres (cm ²) and		
		square metres (m ²).		I know how to apply my
		· · · · · · · · · · · · · · · · · · ·	1	knowledge of shape and
				intervieuge of shape and
		<u>TP6:</u>		the four operations to
		The area of a rectangle can		calculate the area of
		he area of a rectangle call		narallolograms and
		be calculated using		parallelograms and
				triangles.

Image: Section of the section of th				
Image: Second			multiplication; the area of a	
Image:			composite rectilinear shape	I know how to recognise
Image: Section of the state of the stat			can be found by splitting	that shapes with the same
Image: set in the set in			the shape into smaller	areas can have different
Image of the second billing of the			rectangles.	perimeters and vice versa.
Image: Section of the section of th				
Image: set in the set in			I know how to measure the	I know how to recognise
Shape (on/m) formule to find the ares of a 3 hape. Linow how to ciclulate the perimeter of a ciclulate the part left of a ciclulate the par			perimeter of a rectilinear	when it is possible to use
Image: Control a shape.			shape (cm/m)	formulae to find the area of
Image:			shape (entrin).	a shane
Image:			I know how to calculate the	a shape.
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I know how to calculate the area of rectilinear hapes formulae tor volume. 2.17 Structures: using measures and comparison to understand scaling 2.17 Structures: using measures and comparison to understand scaling TP3: Alonger length can be described in terms of a shorter length sincown, using multiplication. 1 P10: Alonger length can be described in terms of a shorter length is known, using multiplication. 1 TP2: Aborter length can be described in terms of a shorter length is known, using multiplication. 1 P2: Aborter length can be described in terms of a shorter length can be described in terms of a longer length using the language of functs; the longuage of times is the longuage of times in the language of times and the language of times in the language in the language of times in the language of			shape (cm/m).	when it is possible to use
Image:				formulae for volume.
Image: Second			I know how to calculate the	
by counting squares. 2.17 Structures: using measures and comparison to understand scaling This Alonger length can be described in terms of a shorter length can be calculated, if the shorter length can be described in terms of a shorter length can be described in terms of a longer dength can be described in terms of a longer dength using the language of frames; the language of frames; the language of the shorter calculated, if the shorter length can be described in terms of a longer length using the language of frames/and releast is known, using division. T2: Other measures can be compared using the language of trans' and fractions and calculated using multiplication or division.			area of rectilinear shapes	
2.17 Structures: using measures and comparison to understand scaling TP1: A longer length can be described in terms of a shorter length using the language of times'; the longer length scan be calculated. If the shorter length using the language of times'; the longer length is hown, using multiplication. TP2: A shorter length can be described in terms of a shorter length using the language of times'; the longer length is more, using multiplication. TP2: A shorter length can be described in terms of a longer length is longer. TP2: A shorter length can be described in terms of a longer length sing the language of fractions; the shorter length can be calculated. If the longer length sing the language of sings' and fractions; the shorter length can be calculated. Shorter length can be described in terms of a longer length sings the language of finace's and fractions; the shorter length can be calculated. A shorter length can be calculated. A shorter length can be described in terms of a longer length shown, using division. TP3: Other measures can be compared using the language of finace's and fractions and calculated using multiplication or division.			by counting squares.	
2.12 Structures: using measures and comparison to understand scaling. This Alonger length can be described in terms of a shorter length using the language of times'; the longer length can be calculated, if the shorter length using the language of times' and fractions; the shorter length using the language of times is the longer length can be described in terms of a shorter length using the language of times is the longer length can be described in terms of a longer length can be described in terms of a longer length can be described in terms of a longer length can be described in terms of a longer length can be described in terms of a longer length can be described in terms of a longer length using the language of times' and fractions; the shorter length can be calculated, if the longer length is known, using division. TP3: Other measures can be compared using the language of times' and fractions and calculated using multiplication or division.				
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Image: set in the set in			comparison to	
Image: Participation Image: Participation Image: Participation			understand scaling	
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Image:			A longer length can be	
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Image: Second			longer longth can be	
Image: Calculated, if the shorter length can be described in terms of a longer length using the language of fractions; the shorter length can be calculated, if the longer length is known, using division. Image: TP2: Image: TP3:			coloulated if the charter	
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Ianguage of fractions; the shorter length can be calculated, if the longer length is known, using division. TP3: Other measures can be compared using the language of 'times' and fractions and calculated using multiplication or division.			longer length using the	
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calculated, if the longer length is known, using division. TP3: Other measures can be compared using the language of 'times' and fractions and calculated using multiplication or division.			shorter length can be	
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Image: Anothing damage of division. TP3: Other measures can be compared using the language of 'times' and fractions and calculated using multiplication or division.			length is known using	
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TP3: Other measures can be compared using the language of 'times' and fractions and calculated using multiplication or division.				
IPS. Other measures can be compared using the language of 'times' and fractions and calculated using multiplication or division.			TD2.	
Compared using the language of 'times' and fractions and calculated using multiplication or division.			<u>IF3.</u> Other measures can be	
compared using the language of 'times' and fractions and calculated using multiplication or division.			Other measures can be	
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fractions and calculated using multiplication or division.			language of 'times' and	
using multiplication or division.			fractions and calculated	
division.			using multiplication or	
			division.	

		I know how to apply my knowledge of multiplication, division and inverse relationships to solve problems involving positive integer scaling. (3NF–3 and 4NF–3)	
		I know how to apply my knowledge of multiplication, division and inverse relationships to solve two-step problems. (4NF-2 and 3MD-1)	

g S S	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Countii (Dail		I know how to count forwards and backwards in halves.	I know how to count forwards and backwards in quarters and thirds.	I know how to count forwards and backwards in tenths.	I know how to count forwards and backwards in hundredths.	I know how to count forwards and backwards in fifths, sixths and eighths.	I know how to count forwards and backwards in any fraction.
ns	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Spine 3: Fractio	Vocabulary: Half Parts of a whole	Vocabulary: Equal grouping Equal part Equal sharing Fraction One of two equal parts quarter	Vocabulary: Denominator Equivalence Non-unit fraction Numerator One of three equal parts One third, two thirds Two halves Two quarters, three quarters Unit fraction Vinculum	Vocabulary: Sixths Sevenths Eighths Tenths	Vocabulary: Decimal equivalent Decimal fraction Decimal place Decimal point Hundredths Mixed number Proper fraction Proportion Simplify	Vocabulary: Percentage thousandths	Vocabulary: Ratio proportion
		3.0 Guidance on the teaching of fractions in Key Stage 1	3.0 Guidance on the teaching of fractions in Key Stage 1	3.1 Preparing for fraction: the part-whole relationship	3.5 Working across one whole: improper fractions and mixed numbers	3.7 Finding equivalent fractions and simplifying fractions	3.9 Multiplying fractions and dividing fraction by a whole number
		I know how to recognise and name $\frac{1}{2}$ and $\frac{1}{4}$ of an object, shape or quantity. I know how to find $\frac{1}{2}$ and $\frac{1}{4}$ of an object, shape or quantity.	I know how to recognise the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$. I know how to recognise, name and write fractions $\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{3}{4}$ of a length, shape, set of objects or quantity.	TP1: Any element of a whole is a part; if a whole is defined, then a part of this whole can be defined. TP2: A whole can be divided into equal parts or unequal	I know how to recognise and write decimal equivalents to $\frac{1}{2}$, $\frac{1}{4}$ and $\frac{3}{4}$ I know how to use diagrams to recognise and find equivalent fractions whose denominators are multiples	I know how to recognise and use thousandths and relate them to tenths and hundredths. I know how to recognise and write decimal numbers as fractions containing thousandths.	I can recognise and convert a mixed number to an improper fraction and vice versa, using the concept of equivalent fractions. I know how to compare fractions, including improper fractions. 6F-2 and 6F-3

	I know how to find freations	parts	of the come number cod	Lknow how to recognize	
		parts.	of the same number and	i know now to recognise	
	$\frac{1}{2}$, $\frac{1}{4}$, $\frac{2}{4}$ and $\frac{2}{4}$ of a length,		under 100.	and write decimal numbers	I know how to order
	shape set of objects or	<u>TP3:</u>		as fractions.	fractions, including
	guantity	The relative size of parts	TP1:	(5F–3)	improper fractions.
	quantity.	can be compared.	Quantities made up of both		
			wholes and parts can be	I know how to find both	I know how to add and
	I know how to compare		ovprossed as mixed	unit and non-unit fractions	subtract fractions with
	fractions with the same	<u>TP4:</u>	expressed as mixed	unit and non-unit fractions	
	denominator within one	If one of the equal parts	numbers.	with a denominator under	different denominators
	whole, using concrete and	and the number of equal		1000 of a length, shape, set	using the concept of
	nictorial objects	parts are known these can	<u>TP2:</u>	of objects or quantity.	equivalent fractions.
	pictorial objects.	be used to construct the	Mixed numbers can be	(5F-1)	
	the second se	be used to construct the	placed on a number line.		I know how to add mixed
	I know now to order	whole.		Recan - I know how to	numbers and improper
	fractions with the same		трэ	multiply proper fractions	fractions
	denominator within one	I know how to recognise	Indexete a dia a have to	multiply proper mactions	machons.
	whole, using concrete and	that tenths arise from	Understanding now to	and mixed numbers by	
	pictorial objects.	dividing a whole into 10	compare and order proper	whole numbers, supported	I know how to subtract
		equal parts.	fractions supports the	by materials and diagrams.	mixed numbers and
	I know how to add and		comparison and ordering of		improper fractions.
	subtract fractions with the	2.2 Unit frontinger	mixed numbers.	TP1:	
	subtract fractions with the	5.2 Unit fractions:		When two fractions have	TP1:
	same denominator within	identifying, representing	TD1.	different numerators and	When a fraction is
	one whole, using concrete	and comparing	Mixed numbers can be	denominators to ano	multiplied by a proper
	and pictorial objects.		Wixed numbers can be	denominators to one	multiplied by a proper
			partitioned and combined	another but share the same	fraction, it makes it smaller.
		<u>TP1:</u>	in the same way as whole	numerical value, they are	To multiply two fractions,
		A whole can be divided into	numbers.	called 'equivalent fractions.	multiply the numerators
		any number of equal parts.			and multiply the
			TP5:	TP2:	denominators.
		TP2:	Mixed numbers can be	Equivalent fractions share	
		Eraction notation can be	written as improper	the same propertional	трр.
		used to describe an equal	freetions	(multiplicative) relationship	M/han a fraction is divided
		used to describe an equal	fractions.	(multiplicative) relationship	when a fraction is divided
		part of the whole. One		between the numerator	by a whole number, it
		equal part of a whole is	<u>TP6:</u>	and denominator.	makes it smaller. To divide
		called a unit fraction. Each	Improper fractions can be	Equivalent fractions can be	a fraction by a whole
		unit fraction has a name.	added and subtracted in	generated by maintaining	number, convert it to an
			the same way as proper	that relationship through	equivalent multiplication.
		TP3:	fractions.	the process of	
		Fractional notation can be		multiplication and division	TP3.
		applied to represent one	I can recognise mixed	maniplication and division.	A more efficient method
		part of a whole in different		702.	A more encient method
		part of a whole in unreferit	numbers and improper	<u>1P3:</u>	can be used to divide a
		contexts.	fraction.	Fractions can be simplified	traction by a whole number
				by dividing both the	when the whole number is
		<u>TP4:</u>	I can recognise and convert	numerator and	a factor of the numerator.
		Equal parts do not need to	a mixed number to an	denominator by a common	
		look the same.	improper fraction and vice	factor.	I know how to multiply
		-	versa		simple pairs of proper
		TP5.	(AE-2)	I know how to recognise	fractions writing the
		Linit fractions can be	(+1-2)	and find any inclusion	actions, writing the
		onit fractions call be		and find equivalent	answer in its simplest form.
		compared and ordered by	I know how to compare	tractions of a given fraction	
		looking at the denominator.	non-unit fractions and	whose denominators are	I know how to associate a
		The greater the	fractions with the same	multiples of the same	fraction with division and
		denominator, the smaller	denominators.	number.	divide proper fractions by
		the fraction.		(5F-2)	whole numbers.

		TR6.	Lknow how to order non-	3.8 Common	2.10 Linking fractions
		IF the size of a unit fraction	whit fractions and fractions	denemination: more	5.10 LINKINg Iractions,
		in the size of a unit fraction	unit fractions and fractions	denomination: more	decimais and percentages
		is known, the size of the	with the same	adding and subtracting	754
		whole can be worked out	denominator.	TD1-	<u>IPI:</u>
		by repeated addition of	(4F-1)	<u>IPI:</u>	Some fractions are easily
		that unit fraction.	the second second second	In order to add related	converted to decimals.
		the second second second	I know how to add and	fractions, first convert one	TDD
		I know now to compare	subtract fractions with the	fraction so that both share	<u>TP2:</u>
		the the second fractions	same denominator,	the same denominator	These fraction-decimal
		with the same	including fractions >1	(a common denominator).	equivalents can be found
		denominators.	2.C.Multiphippudala	TD2	throughout the number
		the second second second second	3.6 Wultiplying whole	<u>TP2:</u> To a block scholard	system.
		I know now to order unit	numbers and fractions	To subtract related	TDD
		fractions and fractions with	754	fractions, first convert one	<u>TP3:</u>
		the same denominator.	<u>TP1:</u>	fraction so that both share	Fraction-decimal
		(37-3)	Repeated addition of	a common denominator.	equivalence can sometimes
			proper and improper	702	be used to simplify
		I know how to recognise,	tractions can be expressed	<u>The second seco</u>	calculations.
		name and write unit	as multiplication of a	ine common denominator	TD 4-
		fractions with a	fraction by a whole	method can be extended to	<u>1P4:</u>
		denominator under 10 of a	number.	adding and subtracting non	Percent means number of
		length, shape, set of objects	TD2	unit related fractions.	parts per nundred. A
		or quantity.	<u>IPZ:</u>	TD 4-	percentage can be an
		I know how to find unit	Repeated addition of a	<u>TP4:</u>	operator on a quantity,
		fractions with	mixed number can be	rolated fractions, the	indicating the proportion of
		denominators under 10 of a	expressed as multiplication	related fractions, the	a quantity being
		denominators under 10 or a	of a mixed number by a	product of the two	considered.
		or quantity	whole humber.	common donominator	TRE
		$(2E_{-1})$ and $(2E_{-2})$	TD2.	common denominator.	Dercontages have fraction
		(31-1 and 31-2)	Finding a unit fraction of a	TD2.	and decimal equivalents
		3 3 Non-unit fractions:	quantity can be expressed	Converting to common	and decimal equivalents.
		identifying representing	as a multiplication of a	denominators is one of	TP6.
		and comparing	whole number by a	several methods that can	If the value of a whole is
		and comparing	fraction	be used to compare	known a percentage of
				fractions.	that number or amount can
		Non-unit fractions	TP4:		be calculated.
		<u>TP1:</u>	A non-unit fraction of a	I know how to compare	
		All non-unit fractions are	quantity can be calculated	fractions whose	I know how to apply my
		made up of more than one	by first finding a unit	denominators are multiples	knowledge of HCF to find
		of the same unit fraction.	fraction of that quantity.	of the same number.	equivalents for the purpose
		702			of simplifying.
		<u>1PZ:</u>	<u>TP5:</u>	I know how to order	(6F-1)
		Non-unit tractions are	If the size of a non-unit	fractions whose	
		convention as unit	fraction is known, the size	denominators are multiples	I know how to calculate
		fractions. A non-unit	of the unit fraction and	of the same number.	decimal equivalents for a
		fraction has a numerator	then the size of the whole		simple fraction.
		greater than one	can be found.	I know how to add and	
		צובמנפו נוומוו טוופ.		subtract fractions with the	I know how to recall and
		TD3.	I know how to solve	same denominator or with	use equivalences between
		When the numerator and	problems involving	denominators that are	simple fractions, decimals
		the denominator in a	increasingly harder	multiples of the same	and percentages, including
			fractions to calculate	number.	in different contexts.

Incode a de bis Same, trobo subtres, and trics, incuding incode a de bis Same, trobo subtres, and trics, incuding incode a de bis Same, trob incode bis Same, trob <t< th=""><th></th><th></th><th>6</th><th></th><th></th><th></th></t<>			6			
Income the quivalent to one whole,			fraction are the same, the	quantities, and fractions to		
whole. non-unif fractions whole is a whole the ansayes is a w			fraction is equivalent to one	divide quantities, including	I know how to add and	I know how to solve
Image: series of the series			whole.	non-unit fractions where	subtract mixed numbers	problems involving the
Fractions as numbers number,				the answer is a whole	and improper fractions,	calculation of percentages
Image: Section of the section of t			Fractions as numbers	number.	whose denominators are	and the use of percentages
All unit and non-units factors are uniterest tacan be placed on a number time decomal number that can be placed on a number intractors. containing terms or inhoredthis. Involve two recognics and problems since/sing unequal throw how two recognics problems involving unequal throw how transport problems which decominator are the same, the value of the gradem with the proceeding and decominator of throw how transport throw how the procentage and decimal require throw how the procentage and decimal tractions.Involve three intervolve throw how tractions three intervolve three intervolve <td></td> <td></td> <td>TP4:</td> <td></td> <td>multiples of the same</td> <td>for comparison</td>			TP4:		multiples of the same	for comparison
Image: Second			All unit and non-unit	I know how to recognise and	number when converted.	
Image: Section of the placed on a number in the placed on a number in the placed on a number in the numerator and the denominator are the same the value of the same the same the same the same unerator and the denominator can be same the value of the th			fractions are numbers that	write decimal numbers as	(4F-3)	I know how to solve
Image production of output product			can be placed on a number	fractions containing tenths	(problems involving unequal
Image:			lino	or hundrodths	I know how to write	sharing and grouping using
Image: Production of a unit fraction of a unit fraction of a unit fraction of a unit fraction of unit fraction of unit fraction of unit fraction of unit fraction. Image: Production of unit fraction of unit fraction of unit fraction of unit fraction of unit fraction. Image: Production of unit fraction of unit fraction of unit fraction of unit fraction of unit fraction. Image: Production of unit fraction of unit fraction of unit fraction of unit fraction. Image: Production of unit fraction of unit fraction. Image: Production of unit fraction			line.	or nullareactis.	nercentages as a desired	sharing and grouping using
R2p3 match			TRE		percentages as a decimal	knowledge of fractions and
Image: Compared in the commutator and the formulator is and the commutator and the domainator are the same, the value of the fraction results in a non-unit fraction. Pre teach - 1 know how to recognise the per cent symbol (%) and understand that per cent relates to solve problems that includes stand, the value of the fraction is one. Pre teach - 1 know how to recognise the per cent values to solve problems that includes stand the domainator are the same (the value of the fractions with the same domainator are the same there are the same the grater the numerator are the same there are there			<u>TPS:</u>		fraction	multiples.
Traction and number of parts of the purchase of			Repeated addition of a unit			(6AS/MD-3)
Image: symbolic (%) and understands Precident (%) and understands Image: symbolic (%) and understands TPG: When the numerator and the gene of the gene of parts per hundred". Image: symbolic (%) and understands Image: symbolic (%) and understands TPG: Traction is one. Pre teach - I know how to write percentages with an understand. Image: symbolic (%) and understands Pre teach - I know how to write percentages with an understand. TPG: TPG: TPG: Pre teach - I know how to write percentages with an understand. Pre teach - I know how to write percentages with an understand. Pre teach - I know how to write percentage and decimal feations. TPG: TPG: TPG: Solve problems which tequire knowing percentage and decimal require knowing percentage and those with a denominator of a multiple of 10 or 25. TPB: TP			fraction results in a non-		Pre teach - I know how to	
TP6: symbol (%) and understand that per cent relats to under cent relats to solve problems which denominator are the same, then the greater the numerator, are stand denominator (2) are the same			unit fraction.		recognise the per cent	I know how to apply my
TDS: multiplication, sivision and the denominator are the same, the value or the same denominator are the same, the value or the require knowing performance with the same denominator are the same, there are reported are with a denominator or a multiplication, where the require knowing performance with the same denominator are the same, there are reported are with a denominator or a multiplication, where the require knowing performance with the same are the same, then the greater the numerator and the denominator with the same and write non-unit fractions with the same and write non-unit fractions with a denominator or a multiplication, the smaller the denominator, the smaller the fraction are the same and write non-unit fractions with a denominator or a multiplication, set the same and write non-unit fraction such as a denominator or a multiplication with a denominator or a multiplication.					symbol (%) and understand	knowledge of
When the numerator and the denominator are the same, the value of the fraction is one. frumder of parts per hundred'. finding fractions to solve problems that include scaling by simple fractions. TB2: Comparing fractions or the greater the numerator, the greater the numerator, the greater the numerator, the greater the numerator, the greater the numerator or a be some denominator and be some denominator and be some denominator denominator a be some denominator a be some denominator a be some denominator and be some den			TP6:		that per cent relates to	multiplication, division and
Image: Second			When the numerator and		"number of parts per	finding fractions to solve
same, the value of the faction is one. Pre teach - I know how to write percentages with a denominator 100 as a TD2? Same denominator can be compared. If the same denominator can be compared. If the same denominator, the greater the numerator, the greater the same, then the greater the same, then the greater the same, then the greater the same denominator can be compared. If the same denominator can be compared. If the same denominator, the greater the numerator, the greater the same denominator, the greater the same denominator can be compared. If the same unwerator, the greater the same denominator can be compared. If the same unwerator, the greater the same unwerator can be compared. If the same unwerator were the denominator under 10 of a length, shape, set of objects or or unwerator can be compared. If the same unwerator can be compared the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or or unwerator can be compared. If the same and write non-unit fractions with a den			the denominator are the		hundred".	problems that include
fraction is one. Pre teach - 1 know how to with precentages with a demoninator 100 as a multiple of 10 or 25. The second demoninator 100 as a demoninator 100 as a multiple of 10 or 25. I know how to recognise, name and write non-unit fractions with a demoninator 100 as a multiple of 00 or 25. I know how to recognise, name and write non-unit fractions with a demoninator 100 as a length, hape, set of objects or quantity. I know how to recognise, name and write non-unit fractions with a demoninator 100 as a multiple of 00 are set as a length, hape, set of objects or quantity.			same, the value of the			scaling by simple fractions.
Image: set in the set in			fraction is one.		Pre teach - I know how to	
Image: Problem in the series of the serie					write percentages with a	
Image: Problem set in the same denominator and be same denominator are the same denominator are the same, then the greater the numerator, the greater the numerator, the greater the fraction. Pre teach - I know how to solve problems which require knowing Image: Problem set in the same denominator are the same, then the greater the numerator can be compared. If the denominator are the same numerator can be compared. If the numerator, the greater the numerator is are the same numerator is are the same numerator. Pre teach - I know how to solve problems which require knowing Image: Problem set in the same numerator is a problem set in the greater the fraction. Pre teach - I know how to solve problem set in the same numerator is an end write non-unit fraction swith the same numerator is are the same, then the greater the denominator, the smaller the fraction. Pre teach - I know how to recensive, is an end write non-unit fraction swith the same and write non-unit fraction swith the same and write non-unit fraction swith a denominator of a multiple of 10 or 25. Image: Problem set in the greater the denominator is a set in the greater the denominator is a set in the greater the denominator is a set in the greater the fraction. I know how to recensive, is a set in the fraction. I know how to recensive, in the fraction with a denominator in the greater the fraction with a in the greater the fraction with a denominator of a length, shape, set of objects or quantity. Image: Prove the set of			Comparing fractions		denominator 100 as a	
Non-unit fractions with the same denominator can be compared. If the denominators are the same, then the greater the numerator, the greater the fraction. Pre teach - I know how to solve problem which require knowing percentage and decimal equivalents of 1 / 2, 1 / 4, 1 / (5, 2 / 5, 4 / 5) and those with a same numerator can be compared. If the numerator can be compared. If the numerator, the same the same the same numerator are the fraction. I know how to recognise, in the numerator same the same numerator are the fraction. I know how to recognise, in the fractions with a denominator under 10 of a length, shape, set of objects or quantity.			TP7:		decimal fraction.	
Same denominator can be compared. If the denominators are the same, then the greater the numerator, the greater the numerator, the greater the numerator, the greater the numerator, the greater the numerator can be compared. If the fraction. Pre teach - 1 know how to solve problems which require knowing percentage and decimal entry in the greater the numerator, the greater the numerator, the greater the numerator can be compared. If the numerators are the same, then the greater the same numerator can be compared. If the numerators are the same, then the greater the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity. I know how to recognise, or quantity.			Non-unit fractions with the			
Compared. If the solve problems which denominators are the same, then the greater the numerator, the greater the equivalents of 1/2, 1/4, 1 fraction. /5, 2/5, 4/5 and those With a denominator of a multiple of 10 or 25. Non-unit fractions with the multiple of 10 or 25. Non-unit fraction. multiple of 10 or 25. Non-unit fractions with the graph and write non-unit numerators are the same, the fraction. Non-unit fractions with a denominator, the smaller It hen the greater the numerators are the same, numerators are the same, the fraction. It hen the greater the denominator, the smaller the fraction. I know how to recognise, It hen the greater the denominator under 10 of a length, hape, set of objects or quantity. or quantity.			same denominator can be		Pre teach - I know how to	
Image: comparison of the comparison			compared If the		solve problems which	
same, then the greater the numerator, the greater the numerator, the greater the fraction. <u>TP8:</u> Non-unit fractions with the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			denominators are the		require knowing	
a line, the trible greater the fraction. percentagets of 1/2, 1/4, 1 TP8: Non-unit fractions with the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. multiple of 10 or 25. I know how to recognise, name and write non-unit fractions with a denominator unit fractions with a length, shape, set of objects or quantity. I know how to recognise, or quantity.			same, then the greater the		norcontage and decimal	
Image: a constraint of the state of the fraction. Image: a constraint of the state of the fraction. TPS: Non-unit fractions with the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. Image: a constraint of the state of the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity. Image: a constraint of the state of the same numerator can be compared. If the numerators are the same, the numerator can be compared. If the numerators are the same, the numerator can be compared. If the numerator is a constraint of the same numerator can be compared. If the numerator is a constraint of the numerator can be compared. If the numerator is a constraint of the numerator is a constraint of the numerator is a constraint.			numerator the greater the		percentage and decimal a_{1}	
Imachon. TP8: Non-unit fractions with the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. Imachon. Imachon. Imachon. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity. Imachon. Imachon.			fraction		$\langle E_2 \rangle \langle E_4 \rangle \langle E_2 \rangle dt + 2$	
TP8: Non-unit fractions with the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			Hacton.		y 5, 2 / 5, 4 / 5 and those	
Image: rest in the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			TRO		with a denominator of a	
Non-Unit fractions with the same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			<u>TP8:</u>		multiple of 10 or 25.	
Same numerator can be compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			Non-unit fractions with the			
Image: Compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. Image: Compared. If the numerators are the same, then the greater the denominator, the smaller the fraction. Image: Research in the second in the sec			same numerator can be			
Image: A state of the same, then the greater the denominator, the smaller the fraction. Image: A state of the same, then the greater the denominator, the smaller the fraction. Image: A state of the same, the same same same same same same same sam			compared. If the			
then the greater the denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			numerators are the same,			
denominator, the smaller the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			then the greater the			
the fraction. I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			denominator, the smaller			
I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			the fraction.			
I know how to recognise, name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quarity.						
name and write non-unit fractions with a denominator under 10 of a length, shape, set of objects or quantity.			I know how to recognise,			
fractions with a denominator under 10 of a length, shape, set of objects or quantity.			name and write non-unit			
denominator under 10 of a length, shape, set of objects or quantity.			fractions with a			
length, shape, set of objects or quantity.			denominator under 10 of a			
or quantity.			length, shape, set of objects			
			or quantity.			
I know how to find non-unit			I know how to find non-unit			
fractions with			fractions with			
denominators under 10 of a			denominators under 10 of a			
length, shape, set of objects			length, shape, set of objects			
or guantity.			or quantity.			

		(3F-1 and 3F-2)		
		3.4 Adding and subtracting		
		within one whole		
		TD1.		
		When adding fractions with		
		the same denominators		
		the same denominators,		
		just add the numerators.		
		702		
		<u>IPZ:</u>		
		When subtracting fractions		
		with the same		
		denominators, just subtract		
		the numerators.		
		<u>TP3:</u>		
		Addition and subtraction of		
		fractions are the inverse of		
		each other, just as they are		
		for whole numbers.		
		<u>TP4:</u>		
		To subtract from one		
		whole, first convert the		
		whole to a fraction where		
		the denominator and		
		numerator are the same.		
		I know how to add and		
		subtract fractions with the		
		same denominator within		
		one whole.		
		I know how to use diagrams		
		to recognise and find		
		aquivalant fractions with		
		denominators under 10		
		denominators under 10.		

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
1	Shape and Space	I know how to tell the time	I know how to use	I know how to measure and	I know how to describe	I know how to identify and	I know how to solve
		to the hour and half past	mathematical vocabulary to	record volume and capacity	positions on a 2-D grid as	describe the position of a	problems involving the
	Developing special	the hour and draw the	describe position.	(I/mI).	coordinates in the first	shape.	calculation and conversion
ć	awareness: experiencing	hands on a clock face to			quadrant.		of units of measure, using
	different viewpoints	show these times.	I know now to use	I know how to apply my	Line and have been been all at	I know now to represent	decimal notation up to
		Low boginning to write the	mathematical vocabulary to	knowledge of comparing	I know now to plot	the position of a shape.	three decimal places where
		time (hours, minutes	describe direction and	Numbers to compare	specified points and draw	I know how to actimate the	appropriate.
	locabulary	time (nours, minutes,		volume and capacity,	sides to complete a given	area of irregular chapes	I know how to colvo
	Poprocenting special	seconas).	line.		Lknow how to describe	area of irregular shapes.	nrohloms involving the
	relationshins	I know how to describe	I know how to distinguish	~, < anu =.	movements between	I know how to apply my	calculation and conversion
	elationships	nosition	between rotation as a turn	I know how to apply my	nositions as translations of	knowledge of comparing	of units of measure using
	Shane awareness:	position.	and in terms of right angles	knowledge of addition and	a given unit to the left/right	numbers to compare the	decimal notation up to
	developing shape	I know how to describe	for quarter, half and three-	subtraction to add and	a given drift to the left/right	area of squares and	three decimal places where
	awareness through	direction and movement	quarter turns (clockwise	subtract volume and		rectangles (cm 2 m 2)	appropriate
	construction	including half quarter and	and anti-clockwise)	canacity (I/ml)	I know how to convert	(56-2)	
	lonstruction	three-quarter turns			hetween kilometres and	(30 2)	I know how to describe
	dentifying similarities		I know how to choose and	I know how to recognise	metres	I know how to represent	nositions on the full
	netween shanes	I know how to measure and	use appropriate standard	that angles are a property	metres.	the position of a shape	coordinate grid (all four
	setween shapes	hegin to record mass	units to measure canacity	of shape or a description of	I know how to tell the time	following a reflection or	quadrants)
	Showing awareness of	capacity and volume	(I/ml) to the nearest	a turn identify right angles	on both analogue and	translation using the	quadrants).
	properties of shapes	capacity and volume.	appropriate unit using	and recognise that two	digital 12 and 24-hour	appropriate language and	I know how to draw and
	stoperties of shapes	I know how to recognise	measuring vessels.	right angles make a half	clocks.	know that the shape has	translate simple shapes on
	Describing properties of	and use language relating		turn, three make three		not changed.	the coordinate plane and
	shape	to dates, including days of	I know how to compare	quarters of a turn and four	I know how to write the		reflect them in the axes.
	ape	the week, weeks, months	mass, volume and capacity.	a complete turn.	time from an analogue and	I know how to convert	
	Developing an awareness	and years.	recording the results using		digital 12 and 24-hour	between kilometres.	I know how to convert
	of relationships between		>. < and =.	I know how to identify	clocks.	metres, centimetre and	between miles and
	shapes	I know how to describe	,	whether angles are greater		millimetre.	kilometres.
		time [e.g., quicker, slower,	I know how to order mass.	than or less than a right	I know how to convert from		
	know how to select, rotate	earlier, later]	volume and capacity.	angle.	hours to minutes; minutes	I know how to use	I know how to solve
i	and manipulate shapes to	I know how to sequence	. ,	(3G–1)	to seconds; years to	equivalences between	problems involving the
	develop special reasoning	events in chronological	I know how to estimate		months; weeks to days.	metric units and common	calculation and conversion
	skills	order using language [e.g.,	capacity (litres/ml) to the	I know how to identify and		imperial units such as	of units of measure, using
		before and after, next, first,	nearest appropriate unit.	describe the properties of	I know how to convert time	inches.	decimal notation up to
	know how to compose	today, yesterday,		2D shapes including	between analogue and		three decimal places where
i	and decompose shapes	tomorrow, morning,	I know how to apply my	horizontal, vertical, parallel	digital 12 and 24-hour	I know how to use all four	appropriate.
		afternoon and evening].	knowledge of addition and	and perpendicular lines.	clocks.	operations to solve	
	<u>Measures</u>		subtraction to solve			problems involving length,	I know how to apply my
			problems involving	I know how to identify and	I know how to estimate,	using decimal notation	knowledge of 3-D shapes to
	Recognising attributes	I know how to identify	capacity, volume and mass.	describe 3D shapes in	compare and calculate	including scaling.	calculate, volume of cubes
		common 2D and 3D shapes,		different orientations.	money in pounds and		and cuboids using standard
	Comparing amounts of	including: 2D shapes [e.g.,	I know how to identify and		pence.	I know how to convert	units, including centimetre
	continuous quantities	rectangles (including	describe the properties of	I know how to draw 2-D		between litres and	cubed (cm 3) and cubic
		squares), circles and	2D shapes, including the	shapes	I know how to identify right	millilitres, and grams and	metres (m 3), and
	Showing awareness of	triangles], 3D shapes [e.g.,	number of sides and line	(3G–2)	angles and recognise how	kilograms.	extending to other units
	comparison in estimating	cuboids (including cubes),	symmetry in a vertical line.		many right-angled turns		such as mm and km.
i	and predicting	pyramids and spheres].	(2G–1)	I know how to make 3-D	you need to make between	I know how to use	
		(1G–1)		shapes using modelling	1 and 2 turns.	equivalences between	I know how to identify
(Comparing indirectly			materials.		metric units and common	angles where they meet at
							a point, are on a straight

Shape Space and Measure (not covered in spines)

Recognising the	I know how to compose 2-D	I know how to identify 2 -D	I know how to identify and	imperial units such as	line and are vertically
relationship between the	and 3-D shapes from	shapes on the surface of 3-	compare acute and obtuse	pounds and pints.	opposite.
size and number of units	smaller shapes to match an	D shapes.	angles.		
	example, including		Ū.	I know how to convert	I know how to apply my
Beginning to use units to	manipulating shapes to	I know how to identify and	I know how to identify and	between units of time.	knowledge of addition,
compare things	place them in particular	describe the properties of	describe 2D shapes		subtraction and angles to
	orientations.	3D shapes, including the	presented in different	I know how to use all four	solve missing angle
Beginning to use time to	(1G–2)	number of edges, vertices	orientations and recognise	operations to solve	problems.
sequence events		and faces.	horizonal and vertical lines	problems involving money,	
			of symmetry.	using decimal notation	I know how to identify and
Beginning to experience		I know how to compare and		including scaling.	describe the properties of a
specific time durations		sort common 2-D and 3-D	I know how to compare and		circle and name parts of
		shapes and everyday	classify geometric shapes,	I know how to identify and	circles, including radius,
I know how to compare		objects.	including quadrilaterals and	describe 2D shapes	diameter and
lengths.			triangles, based on their	presented in different	circumference and know
			properties and sizes.	orientations and recognise	that the diameter is twice
I know how to compare			(4G–2)	all lines of symmetry.	the radius.
weight.					
			I know how to complete a	I know how to identify and	I know how to identify and
I know how to compare			simple symmetric figure	describe 3D shapes,	describe 3D shapes in
capacity.			with respect to a specific	including cubes and other	various representations.
			line of symmetry.	cuboids, from 2D	
			(4G–3)	representations.	I know how to compare and
					classify geometric shapes
				I know how to distinguish	based on their properties
				between regular and	and sizes and find unknown
				irregular polygons based on	angles in any triangles,
				reasoning about equal sides	quadrilaterals, and regular
				and angles.	polygons.
				the second second second	
				I know now to draw given	I know now to draw 2-D
				angles.	snapes using given
					dimensions and angles.
					(66-1)
					I know how to build simple
					2 D chapped including
					5-D shapes, including
					ווומגוווא וופנט.

in Ce	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Covered Scien			I know how to present data by constructing simple pictograms, tally charts, block diagrams and simple tables.	I know how to present data by constructing bar charts, pictograms and tables.	I know how to present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.		I know how to present data by constructing pie charts and line graphs.