

## **The Dean Trust Progression Map**

#### Maths

The aim of this document is to give an at-a-glance guide to how the Dean Trust Maths curriculum links to the EYFS early learning goals and the Key Stage 1 and 2 national curriculums, and how it progresses through topics. In each of the major topic areas (Number, Measurement, Geometry and Statistics), the curriculum has been broken down into key areas. For each of these areas, you can then see which NC objectives are covered in that year, together with the term and block in which that objective is first met. Objectives are consolidated and revisited throughout the year as necessary.

#### **Place Value Count**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Begin to subitise up to 5  Verbally count up to 10 using nursery rhymes.	Subitise up to 5  Verbally count beyond 20, recognising the pattern of the counting system.	count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number Count numbers to 100 in numerals; count in multiples of twos, fives and tens	count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward	count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number	count in multiples of 6, 7, 9, 25 and 1000 count backwards through zero to include negative numbers	count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000 count forwards and backwards with positive and negative whole numbers, including through zero	
Autumn Spring Summer	Autumn Spring Summer	Autumn 1 Spring 1 Spring 3 Summer 4	Autumn 1	Autumn 1 Autumn 3	Autumn 1 Autumn 4	Autumn 1 Summer 4	

# Place Value Represent

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Begin to have an understanding of number, including the composition of numbers up to 5.	Have a deep understanding of number 10, Including the composition of each number.	identify and represent numbers using objects and pictorial representations.  read and write numbers to 100 in numerals.  read and write numbers from 1 to 20 in numerals and words.	read and write numbers to at least 100 in numerals and in words identify, represent and estimate numbers using different representations, including the number line	identify, represent and estimate numbers using different representations.  read and write numbers up to 1000 in numerals and in words	identify, represent and estimate numbers using different representations  read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place	read, write, (order and compare) numbers to at least 1 000 000 and determine the value of each digit  read Roman numerals to 1000 (M) and recognise years written in Roman numerals	read, write, (order and compare) numbers up to 10 000 000 and determine the value of each digit
Autumn Spring Summer	Autumn Spring Summer	Autumn 1 Spring 1 Spring 3 Summer 4	Autumn 1	Autumn 1	Value Autumn 1	Autumn 1	Autumn 1

## Place Value: Use and compare

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To begin to	Compare	given a	recognise the	recognise the	find 1000 more	(read, write)	(read, write),
compare	quantities up to	number,	place value of	place value of	or less than a	order and	order and
quantities up to	ten in different	identify one	each digit in a	each digit in a	given number	compare	compare
ten in different	contexts.	more	two-digit	three-digit		numbers to at	numbers up to
contexts.		and one less	number (tens,	number	recognise the	least 1 000 000	10 000 000
To be size to	Recognise		ones)	(hundreds,	place value of	and determine	and determine
To begin to	when one			tens,	each digit in a	the value of	the value of
recognise when one	quantity is		compare and order numbers	ones)	four-digit number	each digit	each digit
quantity is	greater than, less than or the		from 0 up to	compare and	(thousands,		
greater than,	same as the		100; use<,>	order numbers	hundreds, tens,		
less than or the	other quantity.		and = signs	up	and ones)		
same as the	outor quartity.		and – oigno	to 1000			
other quantity					order and		
, ,					compare		
					numbers		
					beyond 1000		
Autumn 1&2	Autumn 1&2	Autumn 1	Autumn 1	Autumn 1	Autumn 1	Autumn 1	Autumn 1
Spring 1&2	Spring 1&2	Spring 1 Spring					
Summer 1&2	Summer 1&2	3 Summer 4					

# Place Value: Problems/Rounding

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Trunsery .	reception		use place value and number facts to solve problems	solve number problems and practical problems involving these ideas	round any number to the nearest 10, 100 or 1000 solve number and practical problems that involve all of the above and with increasingly large positive numbers	interpret negative numbers in context  round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000  solve number problems and practical problems that involve all of the above	round any whole number to a required degree of accuracy  use negative numbers in context, and calculate intervals across zero  solve number and practical problems that involve all of the above
			Autumn 1	Autumn 1	Autumn 1	Autumn 1	Autumn 1

## **Addition and Subtraction: Calculations**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Begin to	Explore the	add and subtract	add and subtract	add and subtract	add and subtract	add and subtract	perform mental
explore the	composition of	one-digit and	numbers using	numbers	numbers with up	whole numbers	calculations,
composition of	numbers to 10.	two-digit	concrete	mentally,	to 4 digits using	with more than	including with
numbers to 5		numbers to 20,	objects, pictorial	including:	the formal	4 digits,	mixed
	Recall number	including zero	representations,	➤ a three-digit	written methods	including using	operations and
	bonds to 10.		and mentally,	number and	of columnar	formal written	large numbers
			including:	ones	addition and	methods	
			➤ a two-digit	➤ a three-digit	subtraction	(columnar	use their
			number and	number and	where	addition and	knowledge of
			ones	tens	appropriate	subtraction)	the order of
			➤ a two-digit	➤ a three-digit			operations to
			number and	number and		add and subtract	carry out
			tens	hundreds		numbers	calculations
			> two two-digit			mentally with	involving the
			numbers	add and subtract		increasingly	four operations
			➤ adding three	numbers with up		large numbers	
			one-digit	to three digits,			
			numbers	using formal			
				written methods			
				of columnar			
				addition and			
				subtraction			
Autumn	Autumn	Autumn 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2
Spring	Spring	Spring 2					
Summer	Summer						

## **Addition and Subtraction: Problems**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
To begin to use first, then and now to create addition and subtraction stories.	Use first, then and now to create addition and subtraction stories.  To begin to solve missing number problems	solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 =	solve problems with addition and subtraction:  > using concrete objects and pictorial representations, including those involving numbers, quantities and measures  > applying their increasing knowledge of mental and written methods	solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction	solve addition and subtraction twostep problems in contexts, deciding which operations and methods to use and why	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why
Summer	Spring Summer	Autumn 2 Spring 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2	Autumn 2

# Multiplication & Division: Recall/Use

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Begin to recall	Recall and use	recall and use	recall and use	recall	identify multiples	identify common
	and use doubles	doubles of	multiplication	multiplication	multiplication	and factors,	factors, common
	of numbers to	numbers to 10	and division	and	and division	including finding	multiples and
	10.	and	facts for the 2, 5	division facts for	facts for	all factor pairs of	prime numbers
		corresponding	and 10	the 3, 4 and 8	multiplication	a number, and	
		halves.	multiplication	multiplication	tables up to 12 x	common factors	use estimation to
			tables, including	tables	12	of two numbers	check answers
			recognising odd				to calculations
			and even		use place value,	know and use	and determine,
			numbers		known and	the vocabulary of	in the context of
			al- a 4l- a4		derived facts to	prime numbers,	a problem, an
			show that		multiply and	prime factors	appropriate
			multiplication of two numbers can		divide mentally, including:	and composite (non-prime)	degree of
			be done in any		multiplying by 0	numbers	accuracy
			order		and 1; dividing	Hullibels	
			(commutative)		by 1; multiplying	establish	
			and division of		together three	whether a	
			one number by		numbers	number up to	
			another cannot			100 is prime and	
					recognise and	recall prime	
					use factor pairs	numbers up to	
					and	19	
					commutativity in		
					mental	recognise and	
					calculations	use square	
						numbers and	
						cube numbers,	
						and the notation	
						for squared (2)	
						and cubed (3)	
	Summer		Spring 2	Autumn 3	Autumn 4	Autumn 3	Autumn 2
				Spring 1	Spring 1		

## **Multiplication and Division: Calculations**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs	write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods	multiply two-digit and three-digit numbers by a one-digit number using formal written layout	multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two- digit numbers  multiply and divide numbers mentally drawing upon known facts  divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context  multiply and divide whole numbers and those involving decimals by 10, 100 and 1000	multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication  divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context  divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context  perform mental calculations, including with mixed operations and large numbers
			Spring 2	Autumn 3 Spring 1	Spring 1	Autumn 3 Spring 1	Autumn 2

## **Multiplication & division: Problems**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher	solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts	solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects	solve problems involving multiplying and adding, including using the distributive law to multiply two-digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects	solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes  solve problems involving multiplication and division, including scaling by simple fractions and problems involving simple rates	solve problems involving addition, subtraction, multiplication and division
		Summer 1	Spring 1	Spring 1	Spring 1	Autumn 3 Spring 1	Autumn 2

## **Multiplication and Division: Combined**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
						solve problems involving addition, subtraction, multiplication and division and a combination of these, including understanding the meaning of the equals sign	use their knowledge of the order of operations to carry out calculations involving the four operations
						Spring 1	Autumn 2

## Fractions: Recognise and write

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		recognise, find and name a half as one of two equal parts of an object, shape or quantity  recognise, find and name a quarter as one of four equal parts of an object, shape or quantity	recognise, find, name and write fractions 1/3, ¼, 2/4, and 3/4 of a length, shape, set of objects or quantity	count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators recognise and use fractions as numbers: unit fractions with small denominators	count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.	identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths  recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements > 1 as a mixed number [for example, 2/5 +4/5=6/5= 1 1/5].	
		Summer 2	Summer 1	Spring 3	Spring 4 Summer 1	Autumn 4	

#### **Fractions: Compare**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Nursery	кесериоп	Year 1	Recognise the equivalence of 2/4 # and 1/2	recognise and show, using diagrams, equivalent fractions with small denominators  compare and order unit fractions, and fractions with the same denominators	recognise and show, using diagrams, families of common equivalent fractions	compare and order fractions whose denominators are all multiples of the same number	use common factors to simplify fractions; use common multiples to express fractions in the same denomination  compare and order fractions, including fractions > 1
		Summer 2	Summer 1	Spring 3	Spring 3	Autumn 4	Autumn 3

## **Fractions: Calculations**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Nuisery	Кесерион	Tedi 1	write simple fractions for example, ½ of 6 = 3	add and subtract fractions with the same denominator within one whole [for example, 5/7 + 1/7 = 6/7	add and subtract fractions with the same denominator	add and subtract fractions with the same denominator and denominators that are multiples of the same number multiply proper fractions and mixed numbers by whole numbers, supported by materials and diagrams	add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions  multiply simple pairs of proper fractions, writing the answer in its simplest form [for example ½ x ½ = 1/8]  divide proper fractions by whole numbers [for example
			Summer 1	Summer 1	Spring 3	Autumn 4 Spring 2	Autumn 3 Autumn 4

# Fractions: Solve problems

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				solve problems that involve all of the above			
				Summer 1	Spring 3	Autumn 4 Spring 2	Autumn 3 Autumn 4

## Decimals: Recognise, write, compare

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Nursery	Reception	Year 1	Year 2	Year 3	recognise and write decimal equivalents of any number of tenths or hundredths • recognise and write decimal equivalents to ¹¼, ½, 3/4 . •round decimals with one decimal place to the nearest whole number • compare numbers with the same number of decimal places up to two decimal places	read and write decimal numbers as fractions [for example, 0.71 = 71/100 • recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents • round decimals with two decimal places to the nearest whole number and to one decimal place • read, write, order and compare numbers with up to three decimal places	identify the value of each digit in numbers given to three decimal places
					Spring 4	Spring 3 Summer 3	Spring 3
					Summer 1	Summer 5	

## Fractions, decimals and percentages

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					solve simple measure and money problems involving fractions and decimals to two decimal places	• recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal • solve problems which require knowing percentage and decimal equivalents of ½ ¼ 1/5 2/5 4/5 and those fractions with a denominator of a multiple of 10 or 25	associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, 3 8     recall and use equivalences between simple fractions, decimals and percentages, including in different contexts
					Spring 3 Spring 4 Summer1	Spring 3	Spring 3 Spring 4

## Ratio and proportion

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							• solve problems
							involving the
							relative sizes of
							two quantities
							where missing
							values can be
							found by using
							integer
							multiplication
							and division
							facts
							• solve problems
							involving the
							calculation/use
							of percentages
							for comparison
							• solve problems
							involving similar
							shapes where
							the scale factor
							is known or can
							be found
							• solve problems
							involving
							unequal sharing
							and grouping
							using knowledge
							of fractions and
							multiples
							Spring 1

# <u>Algebra</u>

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• solve one-step	<ul> <li>recognise and</li> </ul>	<ul> <li>recognise and</li> </ul>			• use simple
		problems that	use the inverse	use the inverse			formulae
		involve addition	relationship	relationship			• generate and
		and subtraction,	between	between			describe linear
		using concrete	addition and	addition and			number
		objects and	subtraction and	subtraction and			sequences
		pictorial	use this to check	use this to check			• express
		representations,	calculations and	calculations and			missing number
		and missing	solve missing	solve missing			problems
		number	number	number			algebraically
		problems such	problems	problems			<ul> <li>find pairs of</li> </ul>
		as 7 = ? – 9					numbers that
							satisfy an
							equation with
							two unknowns
							• enumerate
							possibilities of
							combinations of
							two variables
							Spring 2

#### **Using measures**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Compare length,	Compare length,	• compare,	<ul> <li>choose and</li> </ul>	• measure,	<ul><li>Convert</li></ul>	• convert	<ul> <li>solve problems</li> </ul>
weight and	weight and	describe and	use appropriate	compare, add	between	between	involving the
capacity.	capacity.	solve practical	standard units to	and subtract:	different units of	different units of	calculation and conversion of
		problems for:	estimate and	lengths	measure [for	metric measure	units of
		➤ lengths and	measure	(m/cm/mm);	example,	<ul><li>understand</li></ul>	measure,
		heights	length/height in	mass (kg/g);	kilometre to	and use	using decimal
		➤ mass/weight	any direction	volume/capacity	metre; hour to	approximate	notation up to 3
		> capacity and	(m/cm); mass	(l/ml)	minute]	equivalences	d.p. where
		volume	(kg/g);		<ul><li>estimate,</li></ul>	between metric	appropriate • use, read, write
		➤ time	temperature		compare and	units and	and convert
		measure and	(°C); capacity		calculate	common	between
		begin to record	(litres/ml) to the		different	imperial units	standard
		the following:	nearest		measures	such as inches,	units, converting
		➤ lengths and	appropriate unit,			pounds and	measurements of length, mass,
		heights	using rulers,			pints	volume and time
		➤ mass/weight	scales,			<ul><li>use all four</li></ul>	from a smaller
			thermometers			operations to	unit of measure
		> capacity and	and measuring			solve problems	to a larger unit,
		volume	vessels			involving	and vice versa,
		➤ time (hours,	<ul> <li>compare and</li> </ul>			measure [for	using decimal notation to up to
		minutes,	order lengths,			example, length,	3 d.p.
		seconds)	mass,			mass, volume,	• convert
			volume/capacity			money] using	between
			and record the			decimal	miles and
			results using >, <			notation,	kilometres
			and =			including scaling	
		Spring 4 Spring 5	Spring 3 Spring 4	Spring 2 Spring 4	Spring 2	Spring 4	Autumn 5
		Summer 6			Summer 3	Summer 5	
						Summer 6	

#### **Money**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<ul> <li>recognise and</li> </ul>	<ul> <li>recognise and</li> </ul>	<ul><li>add and</li></ul>	<ul><li>estimate,</li></ul>	<ul> <li>use all four</li> </ul>	
		know the value	use symbols for	subtract	compare and	operations to	
		of different	pounds (£) and	amounts of	calculate	solve problems	
		denominations	pence (p);	money to give	different	involving	
		of coins and	combine	change, using	measures,	measure [for	
		notes	amounts to	both £ and p in	including money	example,	
			make a	practical	in pounds and	money]	
			particular value	contexts	pence		
			<ul> <li>find different</li> </ul>				
			combinations of				
			coins that equal				
			the same				
			amounts of				
			money				
			<ul> <li>solve simple</li> </ul>				
			problems in a				
			practical context				
			involving				
			addition and				
			subtraction of				
			money of the				
			same unit,				
			including giving				
			change				
		Summer 5	Spring 1	Summer 2	Summer 2	Summer 3	

#### <u>Time</u>

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		• sequence	<ul> <li>compare and</li> </ul>	• tell and write the	• read, write and	• solve problems	• use, read,
		events in	sequence	time from an	convert time	involving	write and
		chronological	intervals of time	analogue clock, including using	between	converting	convert between
		order using	<ul> <li>tell and write</li> </ul>	Roman numerals	analogue and	between units of	standard units,
		language [for	the time to five	from I to XII, and 12-	digital 12- and	time	converting
		example, before	minutes,	hour and 24-hour	24-hour clocks		measurements
		and after, next,	including	<ul><li>clocks</li><li>estimate and read</li></ul>	• solve		of time from a
		first, today,	quarter past/to	time with increasing	problems		smaller unit of
		yesterday,	the hour and	accuracy to the	involving		measure to a
		tomorrow,	draw the hands	nearest minute;	converting from		larger unit, and
		morning,	on a clock face	record and compare time in terms of	hours to		vice versa
		afternoon and	to show these	seconds, minutes	minutes;		
		evening]	times	and hours; use	minutes to		
		<ul> <li>recognise and</li> </ul>	<ul><li>know the</li></ul>	vocabulary such as	seconds; years		
		use language	number of	o'clock, a.m./p.m.,	to months;		
		relating to dates,	minutes in an	morning, afternoon, noon and midnight	weeks to days		
		including days of	hour and the	know the number			
		the week,	number of hours	of seconds in a			
		weeks, months	in a day	minute and the			
		and years		number of days in each month, year			
		tell the time to		and leap year			
		the hour and		• compare			
		half past the		durations of events			
		hour and draw		[for example to			
		the hands on a		calculate the time taken by particular			
		clock face to		events or tasks]			
		show these					
		times					
		Summer 6	Summer 2	Summer 3	Summer 3	Summer 5	Autumn 5

## Perimeter, area, volume

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				measure the perimeter of simple 2-D shapes	• measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres • find the area of rectilinear shapes by counting squares	<ul> <li>measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres</li> <li>calculate and compare the area of rectangles (including squares) and including using standard units, square centimetres (cm2) and square metres (m2) and estimate the area of irregular shapes</li> <li>estimate volume [for example, using blocks to build cuboids] and capacity [for example, using water]</li> </ul>	• recognise that shapes with the same areas can have different perimeters and vice versa • recognise when it is possible to use formulae for area and volume of shapes • calculate the area of parallelograms and triangles • calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm3) and cubic metres (m3), and extending to other units
				Spring 2	Autumn 3 Spring 2	Spring 4 Summer 6	Spring 5

#### 2D Shapes

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Compose and	<ul> <li>recognise and</li> </ul>	<ul><li>identify and</li></ul>	• draw 2-D	<ul> <li>compare and</li> </ul>	<ul><li>distinguish</li></ul>	• draw 2-D
	decompose	name common	describe the	shapes	classify	between regular	shapes using
	shapes so that	2- D shapes [for	properties of 2-D		geometric	and irregular	given
	children	example,	shapes,		shapes,	polygons based	dimensions and
	recognise a	rectangles	including the		including	on reasoning	angles
	shape can have	(including	number of sides		quadrilaterals	about equal	<ul> <li>compare and</li> </ul>
	other shapes	squares), circles	and line		and triangles,	sides and angles.	classify
	within it, just as	and triangles]	symmetry in a		based on their	• use the	geometric
	numbers can.		vertical line		properties and	properties of	shapes based on
			• identify 2-D		sizes	rectangles to	their properties
			shapes on the		<ul><li>identify lines</li></ul>	deduce related	and sizes
			surface of 3-D		of symmetry in	facts and find	<ul> <li>illustrate and</li> </ul>
			shapes, [for		2-D shapes	missing lengths	name parts of
			example, a circle		presented in	and angles	circles, including
			on a cylinder		different		radius, diameter
			and a triangle on		orientations		and
			a pyramid]				circumference
			<ul> <li>compare and</li> </ul>				and know that
			sort common 2-				the diameter is
			D shapes and				twice the radius
			everyday objects				
		Autumn 3	Autumn 3	Summer 4	Summer 4	Summer 1	Summer 1

#### 3D Shapes

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
		<ul> <li>recognise and</li> </ul>	<ul> <li>recognise and</li> </ul>	• make 3-D		• identify 3-D	• recognise,
		name common	name common	shapes using		shapes,	describe and
		3- D shapes [for	3- D shapes [for	modelling		including cubes	build simple 3-D
		example,	example,	materials;		and other	shapes,
		cuboids	cuboids	recognise 3-D		cuboids, from 2-	including making
		(including	(including	shapes in		D	nets
		cubes), pyramids	cubes), pyramids	different		representations	
		and spheres]	and spheres]	orientations and			
			<ul> <li>compare and</li> </ul>	describe them			
			sort common 3-				
			D shapes and				
			everyday objects				
		Autumn 3	Autumn 3	Summer 4		Summer 1	Summer 1

# **Angles and Lines**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
				<ul> <li>recognise</li> </ul>	<ul> <li>identify acute</li> </ul>	<ul><li>know angles</li></ul>	<ul><li>find unknown</li></ul>
				angles as a	and obtuse	are measured in	angles in any
				property of	angles and	degrees:	triangles,
				shape or a	compare and	estimate and	quadrilaterals,
				description of a	order angles up	compare acute,	and regular
				turn	to two right	obtuse and	polygons
				<ul> <li>identify right</li> </ul>	angles by size	reflex angles •	<ul><li>recognise</li></ul>
				angles,	<ul> <li>identify lines</li> </ul>	draw given	angles where
				recognise that	of symmetry in	angles, and	they meet at a
				two right angles	2-D shapes	measure them in	point, are on a
				make a half-	presented in	degrees	straight line, or
				turn, three make	different	<ul><li>identify:</li></ul>	are vertically
				three quarters of	orientations	➤ angles at a	opposite, and
				a turn and four a	• complete a	point and one	find missing
				complete turn;	simple	whole turn (total	angles
				identify whether	symmetric figure	360°)	
				angles are	with respect to a	➤ angles at a	
				greater than or	specific line of	point on a	
				less than a right	symmetry	straight line and	
				angle		1 2 a turn (total	
				<ul><li>identify</li></ul>		180°)	
				horizontal and		➤ other	
				vertical lines and		multiples of 90°	
				pairs of			
				perpendicular			
				and parallel lines			
				Summer 4	Summer 4	Summer 2	Summer 1

## **Position and Direction**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	Select, rotate	describe	<ul> <li>order and</li> </ul>		<ul> <li>describe</li> </ul>	• identify,	• describe
	and manipulate	position,	arrange		positions on a 2-	describe and	positions on the
	shapes in order	direction and movement,	combinations of		D grid as	represent the	full coordinate
	to develop	including whole,	mathematical		coordinates in	position of a	grid (all four
	spatial reasoning	half, quarter and	objects in		the first	shape following	quadrants)
	skills	three-quarter	patterns and		quadrant	a reflection or	draw and
		turns	sequences		<ul><li>describe</li></ul>	translation,	translate simple
			• use		movements	using the	shapes on the
			mathematical		between	appropriate	coordinate
			vocabulary to		positions as	language, and	plane, and
			describe		translations of a	know that the	reflect them in
			position,		given unit to the	shape has not	the axes
			direction and		left/right and	changed	
			movement,		up/down		
			including		<ul> <li>plot specified</li> </ul>		
			movement in a		points and draw		
			straight line and		sides to		
			distinguishing		complete a given		
			between		polygon		
			rotation as a				
			turn and in				
			terms of right				
			angles for				
			quarter, half and				
			three-quarter				
			turns (clockwise				
			and anti-				
		0 0	clockwise)		0 0	0 0	0 0
		Summer 3	Summer 4		Summer 6	Summer 2	Summer 2

## Present and interpret data

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
INGREGIA	Кесерион	Tear 1	• interpret and construct simple pictograms, tally charts, block diagrams and simple tables	interpret and present data using bar charts, pictograms and tables	• interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs	complete, read and interpret information in tables, including timetables	• interpret and construct pie charts and line graphs and use these to solve problems
			Summer 3	Summer 5	Summer 5	Spring 5	Spring 6

#### **Solve statistical problems**

Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
			<ul> <li>ask and answer</li> </ul>	• solve one-step	• solve	• solve	<ul> <li>calculate and</li> </ul>
			simple questions	and two-step	comparison,	comparison,	interpret the
			by counting the	questions [for	sum and	sum and	mean as an
			number of objects	example, 'How	difference	difference	average
			in each category	many more?'	problems using	problems using	
			and sorting the	and 'How many	information	information	
			categories by	fewer?'] using	presented in bar	presented in a	
			quantity	information	charts,	line graph	
			• ask and answer	presented in	•	inic graph	
			questions about	•	pictograms,		
			totalling and	scaled bar charts	tables and other		
			comparing	and pictograms	graphs		
			categorical data	and tables			
			Summer 3	Summer 5	Summer 5	Spring 5	Spring 6

deep understanding of number to 10, including the composition of each number; 14. They will know and understanding how to Subitise (recognise quantities without counting) up to 5. They will be able to automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Children will be able to verbally count beyond 20, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one  should be able to count to thirty and identify number bonds to to tound to thirty and identify number bonds to to tand twenty. They should be able to add and subtract a 2digit and a 2digit numbers, are able to use their value to add and subtract a 2digit number beginning to show exchange and carrying. They know this. They should be able to use their reasoning. Children should be able to verbally count beyond 20, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one  should be able to count to thirty and identify number bonds to ten and twenty. They should be able to add and subtract a 2digit and a 2digit numbers, are able to use the column method confidently to add and subtract a 2digit number beginning to show exchange and carrying. They know this. They should be able to add and subtract a 2digit number beginning to show exchange and carrying. They know this is table They can add subtract a 2digit number beginning to show exchange and carrying. They know their 2,5, and 10 times table They can add and subtract a 2digit number beginning to show exchange and carrying. They know their 2,5, and 10 times table They can add and subtract a 2digit number.  Simulation to thirty and twenty. They will be able to add and subtract a 2digit number beginning to show exchange and carrying. They know their 2,5, and 10 times table They can add and subtract a 2digit number.  Simulation to thirty and twenty	Impact (End Point)							
Children in Reception will have a deep understanding of number to 10, including the composition of each number; 14. They will know and understanding how to Subitise (recognise quantities without counting) up to 5. They will be able to automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Children in Year 1, should be able to automatically recall (without reference to resources to show including double facts. Children in Year 2, will be able to count to thirty and identify number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Children in Year 2, will be able to count to thirty and identify number bonds up to 5 (including subtraction facts) and some number bonds to 10, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one  Children in Year 2 will be able to count to 100 and beyond; to 10 and beyond; to 10 and beyond; to 10 and beyond; to 10 and beyond; to 20 and add and subtract a 2 digit and a 2 digit number as 2 digit number. They know exchange and carrying. They know their 2,5, and 10 times table They can name and describe as 2 numbers. They can as 2 digit number as 2 digit number as 2 digit number as 2 digit number. They know their 2,5, and 10 times table They can name and describe as 2 numbers. They can as 2 digit number as 2 digit n	EYFS	KS1		KS2				
deep understanding of number to 10, including the composition of each number; 14. They will know and understanding how to Subitise (recognise quantities without counting) up to 5. They will be able to automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Children will be able to verbally count beyond 20, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one  should be able to count to thirty and identify number to 100 and beyond, They will use place value to ad and subtract a 2 digit and a 2 digit number, beginning to show exchange and carrying. They know their 2,5, and 10 times table They can ompare quantities up to 10 in different contexts, recognising when one  should be able to count to thirty and identify number to 100 and beyond, They will use place value to a dand and subtract a 2 digit and a 2 digit numbers, as digit numbers, are able to use their column method confident with 100 and beyond, They will use place value to a 3 digit numbers, are able to use the column method confidently to add and subtract a 2 digit and a 2 digit numbers, are able to use the column method confidently to add and subtract and all four operations. Children have a secure way that they use their written methods and understanding of mumbers and will be able to count to thirty and identify number bounds to ten and twenty. They should be able to add and subtract a 2 digit and a 2 digit numbers, are able to use the column method confidently to add and subtract a 3 in an understanding of mumbers and write numbers are able to use the column method confidently to add and subtract a 3 in an understanding of mathematical their ability to explain and explain and exprising to show mastery in the way that they use their written method sand understanding of mathematical their ability to explain and exprising to show mastery in the way that they	Nursery and Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	
the same as the other quantity. Children will also be able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally  Intograps and draw simple arrays. They can identify coins and measure simple lengths, heights, capacities and volumes.  They can identify coins and measure simple lengths, heights, capacities and volumes.  They recognize and use coins. They can tell the time to the nearest 15 minutes.	Children in Reception will have a deep understanding of number to 10, including the composition of each number; 14. They will know and understanding how to Subitise (recognise quantities without counting) up to 5. They will be able to automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. Children will be able to verbally count beyond 20, recognising the pattern of the counting system. They can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. Children will also be able to explore and represent patterns within numbers up to 10, including evens and odds, double facts and how	Children in Year 1 should be able to count to thirty and identify number bonds to ten and twenty. They should be able to add and subtract two groups and write number sentences to show this. They should be able to use resources to show their reasoning. Children should be able to identify a range of simple 2D and 3D shapes and recall basic properties (e.g. corners, faces). They can divide objects into groups and draw simple arrays. They can identify coins and measure simple lengths, heights, capacities	Children in Year 2 will be able to count to 100 and beyond, They will use place value to add and subtract a 2digit and a 2digit number beginning to show exchange and carrying. They know their 2,5, and 10 times table They can name and describe common 2d and 3d shapes. They can show mastery in the way that they use their written methods and understand word problems. They will be confident using bar models and part part whole models. They understand the fractions halves quarters and thirds. They recognize and use coins. They can tell the time to the	Children in Year 3 have a secure understanding of place value to 3 digit numbers, are able to use the column method confidently to add and subtract 3 numbers. They will have a secure knowledge of the 3,4 and 8 times tables and will be able to use written methods for multiplication	Children in Year 4 have a growing confidence with place value, using these skills within both written and mental calculations for all four operations. Children have developed a better understanding of mathematical	Children in Year 5 are prepared for KS2 SATS through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of	Children in Year 6 are prepared for transition to KS3 through their knowledge of mathematical concepts and their ability to explain and reason their mathematical thinking using a wide range of	