Maths Overview

YR and Y1 Autumn Term

•	<mark>Blue highlighting</mark> denotes specific material moved down from a higher year.
•	<mark>Yellow highlighting</mark> denotes content not explicit in the PNS for the year, to help you transfer from your existing lesson planning.
•	**Purple text** denotes repeated statements.
•	*Italics* indicate illustrative examples, non-statutory notes and guidance from the new PoS. (NB most of the non-statutory notes and guidance are new, from a higher year, or beyond the PNS.)

	Year R • **Bold** statements are Early Learning Goals for the end of the Foundation Stage/Reception. • Material shown in regular, non-bold text is introduced, as appropriate, from the Autumn term, and reinforced and developed in subsequent terms. • All objectives to be developed over the full year (repeated each term)	Year 1
Number and place value	• count actions or objects that cannot be moved • count an irregular arrangement of up to twenty objects • estimate how many objects they can see and check by counting them • use the language of more or fewer to compare sets • **count reliably with numbers from 1 to 20, place them in order and say which number is one more or less than a given number**	• <mark>Count to 100</mark>, forwards and backwards, beginning with 0 or 1, or from any given number *e.g. 19, 18, 17, 16, …* • <mark>Count, read and write numbers to 100</mark> in numerals, count in multiples of twos and tens *e.g. 2, 4, 6, 8, 10, 12, …* • Given a number, identify one more and one less • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least • Read and write numbers from 1 to 20 in numerals • *Use language of ordering e.g. first, second, third*
Addition and subtraction	• find the total number of items in two groups by counting all of them • begin to use the vocabulary involved in adding and subtracting • record using marks that they can interpret and explain • **use quantities or objects to add and subtract 2 single digit numbers and count on or back to find the answer** • begin to identify own mathematical problems based on own interests and fascinations • explore and solve problems in a range of practical and play contexts utilising own methods	• Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs • Represent, *memorise* and use number bonds and related subtraction facts *within 10, in several forms e.g. 3 + 4 = 7; 4 = 7 − 3;* • Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero • Solve simple one-step problems *(in familiar practical contexts, including using quantities)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems *e.g. 3 + ☐ = 7* • *Problems should include vocabulary such as: put together, add, altogether, total, take away, more than, less than…*
Multiplication and division	• make two equal groups of objects and check they are equal by counting • **solve problems, including doubling, halving and sharing**	• *Double and halve numbers to 20 e.g. double 6 is 12, half of 10 is 5*
Fractions		• Recognise, find and name a half as one of two equal parts of an object, shape, *length* <mark>or quantity</mark> *e.g. Find half of a length of string, by folding;.*

Measurement	• order two or three items by length or height
	• order two items by weight or capacity
	• order and sequences familiar events
	• measure short period of time in simple ways
	• **use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems**
		• Compare, describe and solve practical problems for:
		  o lengths and heights *(e.g. long/short, longer/shorter, tall/short, double/half)*
		  o mass or weight *(e.g. heavy/light, heavier than, lighter than)*
		  o capacity/volume *(full/empty, more than, less than)*
		  o time *(quicker, slower, earlier, later)*
		
		• *Use non standard measures to* measure and begin to record the following:
		  o lengths and heights

		o mass/weight o capacity and volume • Recognise and know the value of different denominations of coins • Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening • Recognise and use language relating to dates, including days of the week, weeks, months ==and years== • Tell the time to the hour ==and draw the hands on a clock face to show these times.==

Properties of shape	• use familiar objects and common shapes to create and recreate patterns and build models
	• notice patterns in the environment
	• make patterns using a range of media and resources
	• **recognise, create and describe patterns**
	• use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes
	• select a particular named shape
	• recognise and name common shapes in the environment
	
	•**explore characteristics of everyday objects and shapes and use mathematical language to describe them**
		• Recognise and name common 2-D and 3-D shapes, including:
		   o 2-D shapes *(e.g. rectangles (including squares), circles and triangles)*
		   o 3-D shapes *(e.g. cuboids, including cubes, pyramids and spheres).*

Position and direction	• describe their position such as behind or next to	*Describe positions, directions and movements using language such as left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside…*
Use and interpret data		

YR and Y1 Spring

	Year R	Year 1
Number and place value	- count actions or objects that cannot be moved - count an irregular arrangement of up to twenty objects - estimate how many objects they can see and check by counting them - use the language of more or fewer to compare sets **count reliably with numbers from 1 to 20, place them in order and say which number is one more or less than a given number**	- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number - Count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens *e.g. 22, 24, 26, 28, 30, … or 90, 80, 70, 60, …* - Given a number, identify one more and one less - Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least - Read and write numbers from 1 to 20 in numerals and words. *Use language of ordering e.g. first, second, third* *Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100 supported by objects and pictorial representations* *Begin to order numbers to 100 (different tens) e.g. order 36, 29, 63, 51*
Addition and subtraction	- find the total number of items in two groups by counting all of them - begin to use the vocabulary involved in adding and subtracting - record using marks that they can interpret and explain **use quantities or objects to add and subtract 2 single digit numbers and count on or back to find the answer** - begin to identify own mathematical problems based on own interests and fascinations - explore and solve problems in a range of practical and play contexts utilising own methods	- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs - Represent, *memorise* and use number bonds and related subtraction facts *within 10, in several forms,* and begin to know doubles to 20 e.g. 8 + 8 = 16 complements to 20 e.g. 8 + 12 = 20 - Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero - Solve simple one-step problems *(in familiar practical contexts, including using quantities)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems *Problems should include vocabulary such as: put together, add, altogether, total, take away, distance between, more than, less than…*
Multiplication and division	- make two equal groups of objects and check they are equal by counting **solve problems, including doubling, halving and sharing**	*Double and halve numbers to 20 e.g. double 8 is 16, half of 20 is 10*
Fractions		- Recognise, find and name a half as one of two equal parts of an object, shape, length or quantity *e.g. What is half of 12 counters?* - Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *e.g. find a quarter of a shape, by folding in half and half again*
Measurement	- order two or three items by length or height - order two items by weight or capacity - order and sequences familiar events - measure short period of time in simple ways **use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems**	- Compare, describe and solve practical problems for: - lengths and heights *(e.g. long/short, longer/shorter, tall/short, double/half)* - mass or weight *(e.g. heavy/light, heavier than, lighter than)* - capacity/volume *(full/empty, more than, less than, quarter)* - time *(quicker, slower, earlier, later)* *Begin to use measuring tools (ruler, weighing scales, containers) to measure and begin to record the following:* - lengths and heights - mass/weight - capacity and volume - time (hours, minutes) - Recognise and know the value of different denominations of coins and notes

		• Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening • Recognise and use language relating to dates, including days of the week, weeks, months ==and years== Tell the time to the hour and half past the hour ==and draw the hands on a clock face to show these times.==

Properties of shape	• use familiar objects and common shapes to create and recreate patterns and build models
	• notice patterns in the environment
	• make patterns using a range of media and resources
	• **recognise, create and describe patterns**
	• use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes
	• select a particular named shape
	• recognise and name common shapes in the environment
	
	•**explore characteristics of everyday objects and shapes and use mathematical language to describe them**
		• Recognise and name common 2-D and 3-D shapes, *in different orientations and sizes*, including:
		    o 2-D shapes *(e.g. rectangles (including squares), circles and triangles)*
		    o 3-D shapes *(e.g. cuboids, including cubes, pyramids and spheres).*
		• *know that rectangles, triangles, cuboids and pyramids can be different shapes*

Position and direction	• describe their position such as behind or next to	• *Describe positions, directions and movements using language such as left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside…* • Describe position, directions and movements, including half and quarter turns, *in a clockwise direction*
Use and interpret data		

	Year R	Year 1
Number and place value	- count actions or objects that cannot be moved - count an irregular arrangement of up to twenty objects - estimate how many objects they can see and check by counting them - use the language of more or fewer to compare sets **count reliably with numbers from 1 to 20, place them in order and say which number is one more or less than a given number**	- Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number *e.g. 103, 102, 101, 100, 99, 98, …* - Count, read and write numbers to 100 in numerals, count in multiples of twos, fives and tens *e.g. 5, 10, 15, 20, 25, …* - Given a number, identify one more and one less - Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least - Read and write numbers from 1 to 20 in numerals and words. *Use language of ordering e.g. first, second, third* *Begin to recognise place value in numbers beyond 20 by reading, writing, counting and comparing numbers up to 100 supported by objects and pictorial representations* *Begin to order numbers to 100 (different tens)* *Recognise odd and even numbers*
Addition and subtraction	- find the total number of items in two groups by counting all of them - begin to use the vocabulary involved in adding and subtracting - record using marks that they can interpret and explain **use quantities or objects to add and subtract 2 single digit numbers and count on or back to find the answer** - begin to identify own mathematical problems based on own interests and fascinations - explore and solve problems in a range of practical and play contexts utilising own methods	- Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs - Represent, *memorise* and use number bonds and related subtraction facts within 20, *in several forms e.g. 9 + 7 = 16;* *16 − 7 = 9; 7 = 16 - 9* - Add and subtract one-digit and two-digit numbers to 20 (9 + 9, 18 - 9), including zero - Solve simple one-step problems *(in familiar practical contexts, including using quantities)* that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems *e.g. 7 = - 9* *Problems should include vocabulary such as: put together, add, altogether, total, take away, distance between, more than, less than…*
Multiplication and division	- make two equal groups of objects and check they are equal by counting **solve problems, including doubling, halving and sharing**	*Double and halve numbers to 20* - 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 *e.g. share 8 sweets between 2 children*
Fractions		- Recognise, find and name a half as one of two equal parts of an object, shape, length or quantity - Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity *e.g. find ¼ of 12 beads, practically*
Measurement	- order two or three items by length or height - order two items by weight or capacity - order and sequences familiar events - measure short period of time in simple ways **use everyday language to talk about size, weight, capacity, position, distance, time and money to compare quantities and objects and to solve problems**	- Compare, describe and solve practical problems for: - lengths and heights *(e.g. long/short, longer/shorter, tall/short, double/half)* - mass or weight *(e.g. heavy/light, heavier than, lighter than)* - capacity/volume *(full/empty, more than, less than, quarter)* - time *(quicker, slower, earlier, later)* *Begin to use standard measures (metres, cms, grams/kg, litres) to measure and begin to record the following:* - lengths and heights

		o mass/weight o capacity and volume o time (hours, ==minutes, seconds==) • Recognise and know the value of different denominations of coins and notes • Sequence events in chronological order using language such as: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening • Recognise and use language relating to dates, including days of the week, weeks, months ==and years== • Tell the time to the hour and half past the hour ==and draw the hands on a clock face to show these times.==
Properties of shape	• use familiar objects and common shapes to create and recreate patterns and build models • notice patterns in the environment • make patterns using a range of media and resources • **recognise, create and describe patterns** • use mathematical names for 'solid' 3D shapes and 'flat' 2D shapes, and mathematical terms to describe shapes • select a particular named shape • recognise and name common shapes in the environment •**explore characteristics of everyday objects and shapes and use mathematical language to describe them**	• Recognise and name common 2-D and 3-D shapes, *in different orientations and sizes,* including: o 2-D shapes *(e.g. rectangles (including squares), circles and triangles)* o 3-D shapes *(e.g. cuboids (including cubes), pyramids and spheres).* • *know that rectangles, triangles, cuboids and pyramids can be different shapes*
Position and direction	• describe their position such as behind or next to	• *Describe positions, directions and movements using language such as left and right, top, middle and bottom, on top of, in front of, above, between, around, near, close and far, up and down, forwards and backwards, inside and outside…* •Describe position, directions and movements, including half, quarter ==and three-quarter== turns, *in a clockwise direction*
Use and interpret data		