Maths Overview

YR and Y1 and Y2 Autumn Term

●	**Purple text** denotes repeated statements.
●	*Italics* indicate illustrative examples, non-statutory notes and guidance from the National Curriculum PoS

	Year R	Year 1	Year 2
	● **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)		
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 100, forwards and backwards, beginning with 0 or 1, or from any given number *e.g. 19, 18, 17, 16, …* ● Count, read and write numbers to 100 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*	● count in steps of 2 and 5 from 0, and tens from any number, forward or backward *e.g. 93, 83, 73, 63, …* ● recognise the place value of each digit in a two-digit number (tens, ones) ● identify, represent and estimate numbers using different representations, including the number line ● read and begin to write numbers to at least 100 in numerals and in words *e.g. forty* ● compare and order numbers from 0 up to 100 ● use place value and number facts to solve problems
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…* ▢	●add and subtract numbers using concrete objects, pictorial representations, and mentally, including: 　○ a two-digit number and ones 　○ a two-digit number and tens *e.g. 87 – 30 = 57* ●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 ●begin to recall and use addition and subtraction facts to 20, *e.g. 19 – 7 = 12* and derive and use related facts up to 100 ●*e.g. 30 = 90 – 60* ●recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems. ●show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot

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*	•begin to recall and use multiplication and division facts for the 2, and 10 multiplication tables, including recognising odd and even numbers *e.g. 22 ÷ 2 = 11* •calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs •show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot •*recognise and use the inverse relationship between multiplication and division in calculations* •*relate multiplication and division to grouping and sharing discrete(e.g. counters and continuous quantities e.g. water* •solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts *e.g. share 18 counters between 3 children*
Fractions		• Recognise, find and name a half as one of two equal parts of an object, shape, *length* or quantity *e.g. Find half of a length of string, by folding;.*	• recognise, name and write fractions $^1/_3$, $^1/_4$, 2/4 and ¾ of a shape

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.
			•choose and use appropriate standard units to estimate and measure **length/height** in any direction (m/cm) to the nearest appropriate unit, using rulers
			
			•compare and order lengths and record the results using >, < and =
			
			•recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
			
			•find different combinations of coins to equal the same amounts of money
			•*e.g. find different ways to make 25p*
			
			•solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change *e.g. I buy a toy for £14; how much change do I get from £20?*
			
			•compare and sequence intervals of time
			
			• tell and write the time quarter past/to the hour and draw the hands on a clock face to show these times *e.g. draw the hands on a clock face to show ¼ to 6, making sure the hour hand is located correctly*

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
		• 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).*
			•identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line
			
			•*draw lines and shapes using a straight edge*
			
			•identify and describe the properties of 3-D shapes, including the number of vertices and faces

	• 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**		•compare and sort common 2-D and 3-D shapes and everyday objects •*e.g. sort 3-D shapes in different ways such as whether they have triangular faces, all straight edges…* • *recognise and name, polygons e.g. pentagon, hexagon, octagon and cones*
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…*	•order and arrange combinations of mathematical objects in patterns, *including those in different orientations e.g. a turning shape, draw the next shape in the pattern*
Use and interpret data			•interpret and begin to construct simple pictograms, tally charts, block diagrams and simple tables •answer simple questions by counting the number of objects in each category and sorting the categories by quantity answer questions about totalling and comparing categorical data.

YR and Y1 and Year 2 Spring

	Year R	Year 1	Year 2
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*	• count in steps of 2, 3, and 5 from 0, and tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • read and write numbers to at least 100 in numerals and in words *e.g. forty-five* • compare and order numbers from 0 up to 100; use <, > and = signs • use place value and number facts to solve problems. • *partition numbers in different ways e.g. 23 = 20 + 3 = 10 + 13* •

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…*
			• add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
			   o a two-digit number and ones
			   o a two-digit number and tens
			   o two two-digit numbers *e.g. 34+29*
			   o adding three one-digit numbers *e.g. 6 + 5 + 4*
			
			• solve problems with addition and subtraction:
			   o using concrete objects and pictorial representations, including those involving numbers, quantities and measures
			   o applying their increasing knowledge of mental and written methods
			
			• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
			
			• recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.
			
			• show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
			
			• *use the language 'sum' and 'difference' e.g. find two numbers with a difference of 6 (3 and 9, 10 and 16..);*

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*	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers

			• calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs • show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot • *recognise and use the inverse relationship between multiplication and division in calculations* • *relate multiplication and division to grouping and sharing discrete e.g. counters and continuous quantities e.g. water, and relating these to fractions and measures e.g. 40cm ÷ 2 = 20cm; 20cm is ½ of 40cm* • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts
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*	• recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity *e.g. how long is $^1/_3$ of a ribbon which is 60 cm long?* • write simple fractions e.g. ½ of 6 = 3 and recognise the equivalence of two quarters and one half. • *count in fractions e.g. 0, ½, 1, 1½, 2, 2½, …* •

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, quarter)*
		  o time *(quicker, slower, earlier, later)*
		
		• *Begin to use measuring tools (ruler, weighing scales, containers) to measure and begin to record the following:*
		  o lengths and heights
		  o mass/weight
		  o capacity and volume
		  o 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.
			• choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); **mass** (kg/g) to the nearest appropriate unit, using rulers, scales
			
			• compare and order lengths, masses and record the results using >, < and =
			
			• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value
			
			• find different combinations of coins to equal the same amounts of money
			
			• solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change e.g. *I buy 2 bags of sweets for 20p each, how much change will I get from 50p?*
			
			• compare and sequence intervals of time
			
			• tell and write the time to five minutes, including quarter past/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	• Recognise and name common 2-D and 3-D shapes, *in different orientations and sizes*, including:	• identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line

	• 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**	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*	•*draw lines and shapes using a straight edge* •identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces •compare and sort common 2-D and 3-D shapes and everyday objects *e.g. sort 3-D shapes in different ways such as whether they are prisms, whether they have more than 8 edges…* •*recognise and name* quadrilaterals, *polygons e.g. pentagon, hexagon, octagon, prisms and cones* • identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid
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*	•order and arrange combinations of mathematical objects in patterns, *including those in different orientations* •use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line. • *Use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (e.g. pupils themselves moving in turns, giving instructions to other pupils to do so, and programming robots using instructions given in right angles)*
Use and interpret data			•interpret and construct simple pictograms *e.g. where the symbol represents 2, 5 or 10 units,* tally charts, block diagrams and simple tables •answer simple questions by counting the number of objects in each category and sorting the categories by quantity answer questions about totalling and comparing categorical data.

	Year R	Year 1	Year 2
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*	• count in steps of 2, 3, and 5 from 0, and tens from any number, forward or backward • recognise the place value of each digit in a two-digit number (tens, ones) • identify, represent and estimate numbers using different representations, including the number line • read and write numbers to at least 100 in numerals and in words • compare and order numbers from 0 up to 100; use <, > and = signs • use place value and number facts to solve problems. • *partition numbers in different ways e.g. 23 = 20 + 3 = 10 + 13*

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…*
		□
			• add and subtract numbers using concrete objects, pictorial representations, and mentally, including:
			  o a two-digit number and ones
			  o a two-digit number and tens
			  o two two-digit numbers *e.g. 63-29*
			  o □adding three one-digit numbers *e.g. 9 + 7 + 9*
			
			• solve problems with addition and subtraction:
			  o using concrete objects and pictorial representations, including those involving numbers, quantities and measures
			  o applying their increasing knowledge of mental and written methods
			
			• recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
			
			• recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.
			
			• show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot
			
			• *use the language 'sum' and 'difference' e.g. three numbers sum to 12, two numbers are 3 and 7, what is the third number?*

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*	• recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers

		• 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*	•calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs •show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot •*recognise and use the inverse relationship between multiplication and division in calculations* •*relate multiplication and division to grouping and sharing discrete e.g. counters and continuous quantities e.g. water, and relating these to fractions and measures e.g. 40cm ÷ 2 = 20cm; 20cm is ½ of 40cm* • solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts *e.g. there are 10 pencils in a box, I have 5 boxes and 3 spare pencils, how many do I have altogether?*
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*	•recognise, find, name and write fractions 1/3, 1/4, 2/4 and 3/4 of a length, shape, set of objects or quantity •write simple fractions e.g. 1/2 of 6 = 3 and recognise the equivalence of two quarters and one half. • *count in fractions e.g. 3¼, 3²/₄, 3¾, 4, 4¼, …*

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, quarter)*
		   o time *(quicker, slower, earlier, later)*
		
		• *Begin to use standard measures (metres, cms, grams/kg, litres) to* measure and begin to record the following:
		   o 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.
			•choose and use appropriate standard units to estimate and measure: length/height in any direction (m/cm); mass (kg/g); **temperature** (°C); **capacity** (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels
			
			•compare and order lengths, masses, volume/capacity and record the results using >, < and =
			
			•recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value *e.g. make 73p using the fewest coins*
			
			•find different combinations of coins to equal the same amounts of money
			
			•solve simple problems in a practical context involving addition and subtraction of money of the same unit including giving change e.g. *I buy a cake for 60p and a biscuit for 25p, how much change will I get from £1?*
			
			•compare and sequence intervals of time
			
			• tell and write the time to five minutes, including quarter past/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	• Recognise and name common 2-D and 3-D shapes, *in different orientations and sizes,* including:	•identify and describe the properties of 2-D shapes, including the number of sides and symmetry in a vertical line

	- 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**	○ 2-D shapes *(e.g. rectangles (including squares), circles and triangles)* ○ 3-D shapes *(e.g. cuboids (including cubes), pyramids and spheres).* *know that rectangles, triangles, cuboids and pyramids can be different shapes*	•*draw lines and shapes using a straight edge* •identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces •compare and sort common 2-D and 3-D shapes and everyday objects *e.g. sort 2-D shapes in different ways such as whether they are quadrilaterals and have line symmetry….* •*recognise and name quadrilaterals, polygons e.g. pentagon, hexagon, octagon, prisms and cones* • identify 2-D shapes on the surface of 3-D shapes, for example a circle on a cylinder and a triangle on a pyramid
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*	•order and arrange combinations of mathematical objects in patterns, *including those in different orientations* •use mathematical vocabulary to describe position, direction and movement, including distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise), and movement in a straight line. • *Use the concept and language of angles to describe 'turn' by applying rotations, including in practical contexts (e.g. pupils themselves moving in turns, giving instructions to other pupils to do so, and programming robots using instructions given in right angles)*
Use and interpret data			•interpret and construct simple pictograms *e.g. where the symbol represents 2, 5 or 10 units,* tally charts, block diagrams and simple tables •answer simple questions by counting the number of objects in each category and sorting the categories by quantity answer questions about totalling and comparing categorical data.