Mathematics:
Progression of Knowledge and Skills

Nursery						Reception					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Recognise the colours red, blue, yellow, green, purple. Children identify coloured objects and say if an object is the correct colour or not. Recognise matching items. Sort by size Sort by colour Sorting – What do you notice? Sorting – Guess my rule	Number 1 – Subitising Number 1 – counting Number 1 – Numeral matching Number 2 – Subitising dice patterns Number 2 – Subitising different patterns Number 2 – Subitising different sizes and patterns Number 2 – Counting Number 2 – Link numeral and amounts Colour AB patterns Extend AB patterns – outdoor objects Extend AB patterns – Movement Fix my pattern (AB patterns) Extend ABC colour patterns Outdoor ABC patterns Consolidation – Sorting and matching Consolidation – Counting Consolidation – Pattern	Subitising 3 – Dice patterns Subitising 3 – Different patterns Subitising 3 Counting 3 Numeral 3 Composition of 3 Recognise triangles Counting 4 Numeral 4 Recognise squares and triangles Composition of 4 Counting 5 Numeral 5 Recognise pentagons Composition of 5	Consolidation – Subitising Consolidation – Counting Consolidation – Numerals Counting 6 Counting 6 – ten frame Tall and short Long or short Mass – introducing balance scales Mass- Lighter Mass- heavier or lighter Capacity – Full or empty Capacity – Nearly full or nearly empty Capacity – comparing containers Consolidation – Length Consolidation – Mass Consolidation – Capacity	Sequencing Position – On and under Position – In and out Position - In front and behind Comparing groups – More than Comparing groups – fewer than 2D shapes – Circle 2D shapes – Triangles 2D shapes – Rectangles 3D shapes - Cubes and cuboids 3D shapes – Cylinders 3D shapes Sphere Consolidation – Sequencing Consolidation – Position Consolidation – More and fewer	Composition of 3 Composition of 4 Number Composition What comes after? What comes before? Numbers to 5 Consolidation – Shape patterns Consolidation – More or fewer Consolidation – What comes before or after? Consolidation – Composition	Recognise numerals to 5. Count objects to 5. Find a total of two groups by counting up to a total of 5. Compare two groups of objects saying when they have the same number. Subitise numbers to 5 Compare length, weight and capacity.	Count forwards and backwards to 10. Count objects, actions and sounds. Link the number symbol with its cardinal value. Understand one more and one less than relationship between consecutive numbers. Compose and decompose shapes so that children recognise a shape can have other shapes within it. Continue, copy and create repeating patterns.	Subitise. Link the number symbol (numeral) with its cardinal number value. Count beyond 10. Compare numbers. Explore composition of numbers to 10. Compare length, weight and capacity.	Understand one more and one less than relationship between consecutive numbers. Explore composition of numbers to 10. Automatically recall the number bonds for numbers 0-10. Compose and decompose shapes so that children recognise a shape can have other shapes within it.	Subitise (recognise quantities without counting) up to 5. 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. Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.	Have a deep understanding of number to 10, including the composition of each number. Verbally count beyond 20, recognising the pattern of the counting system. Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

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Mathematics Development Matters 3-4 years	Mathematics Number (ELG) Numerical patterns (ELG)
• Develop fast recognition of up to 3 objects, without having to count them individually ('subitising'). • Recite numbers past 5. • Say one number for each item in order: 1,2,3,4,5. • Know that the last number reached when counting a small set of objects tells you how many there are in total ('cardinal principle'). • Show 'finger numbers' up to 5. • Link numerals and amounts: for example, showing the right number of objects to match the numeral, up to 5. • Experiment with their own symbols and marks as well as numerals. • Solve real world mathematical problems with numbers up to 5. • Compare quantities using language: 'more than', 'fewer than' • Talk about and explore 2D and 3D shapes (for example, circles, rectangles, triangles and cuboids) using informal and mathematical language: 'sides', 'corners'; 'straight', 'flat', 'round' • Understand position through words alone – for example, "The bag is under the table," – with no pointing. • Describe a familiar route. • Discuss routes and locations, using words like 'in front of' and 'behind'. • Make comparisons between objects relating to size, length, weight and capacity • Select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc. • Combine shapes to make new ones – an arch, a bigger triangle, etc • Talk about and identify the patterns around them. For example: stripes on clothes, designs on rugs and wallpaper. Use informal language like 'pointy', 'spotty', 'blobs', etc. • Extend and create ABAB patterns – stick, leaf, stick, leaf. • Notice and correct an error in a repeating pattern. • Begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...'	• Have a deep understanding of number to 10, including the composition of each number. • Subitise (recognise quantities without counting) up to 5. • 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. **Numerical patterns** (ELG) • Verbally count beyond 20, recognising the pattern of the counting system. • Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity. • Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.

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Nursery yearly overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn Starters: Number songs	Colours • Red • Blue • Yellow	Colours • Green • Purple • Mix of colours	Match • Buttons and colours • Matching towers • Matching shoes	Match • Match number shapes • Match shapes • Pattern handprints – big and small	Sort • Colour • Size • Shape	Sort • What do you notice? • Guess the rule • Guess the rule	Number 1 • Subitising • Counting • Numeral	**Number 2** Subitising- dice pattern Subitising- random pattern Subitising – different sizes	**Number 2** • Counting • Numeral • Numeral	**Pattern** • Extend AB Colour patterns • Extend AB Outdoor Patterns • AB Movement Patterns	• Fix my Pattern • Extend ABC Colour patterns • Extend ABC Outdoor Patterns	Consolidation Activities - Winter activity week
Spring Starters: Number songs	Number 3 Subitising Subitising Subitising	Number 3 3 Little pigs 1:1 counting Numerals/Triangles	Number 4 1:1 counting Numerals Squares/rectangles	Number 4 Composition of 4 Composition of 4 Composition of 4	Number 5 1:1 counting Numerals Pentagon	Number 5 Composition of 5 Composition of 5 Composition of 5	Consolidate 1 - 5	Number 6 Introduce 10 frame	Height & Length • Tall and short • Long and short • Tall/long and short	Mass Relate to books 3 little pigs goldilocks	Capacity	Consolidation
Summer Starters – subitising and revision	Sequencing	Positional Language	More than/fewer than	Shape – 2D Revisit pattern from Autumn	Shape – 3D Revisit pattern from Autumn	Consolidation: More than/fewer one more and one less	Number composition 1 – 5 Revision	What comes after?	What comes before?	Numbers to 5	Consolidation / Activity weeks SUMMER	Consolidation / Activity weeks

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Reception yearly overview

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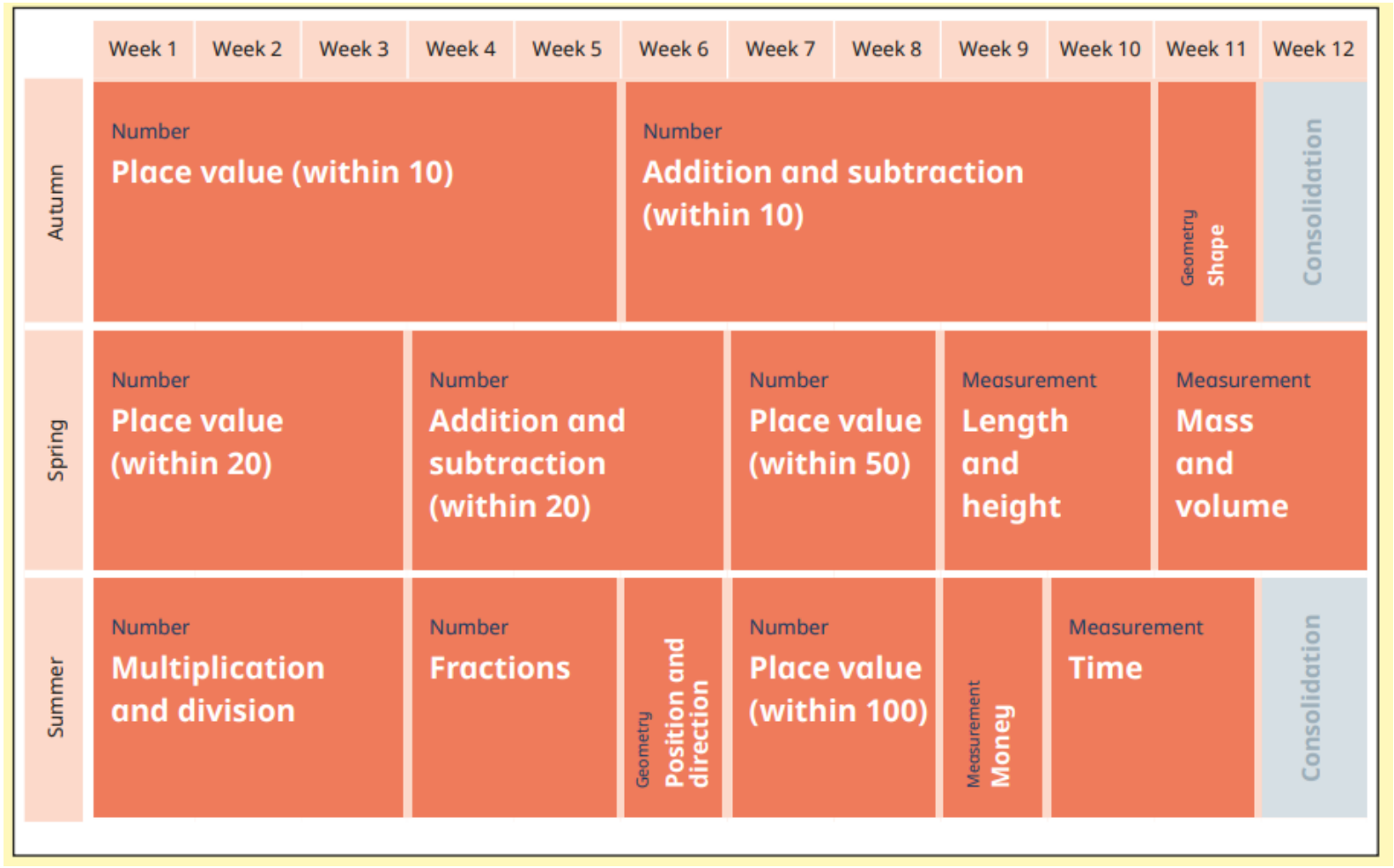
Year 1 yearly overview



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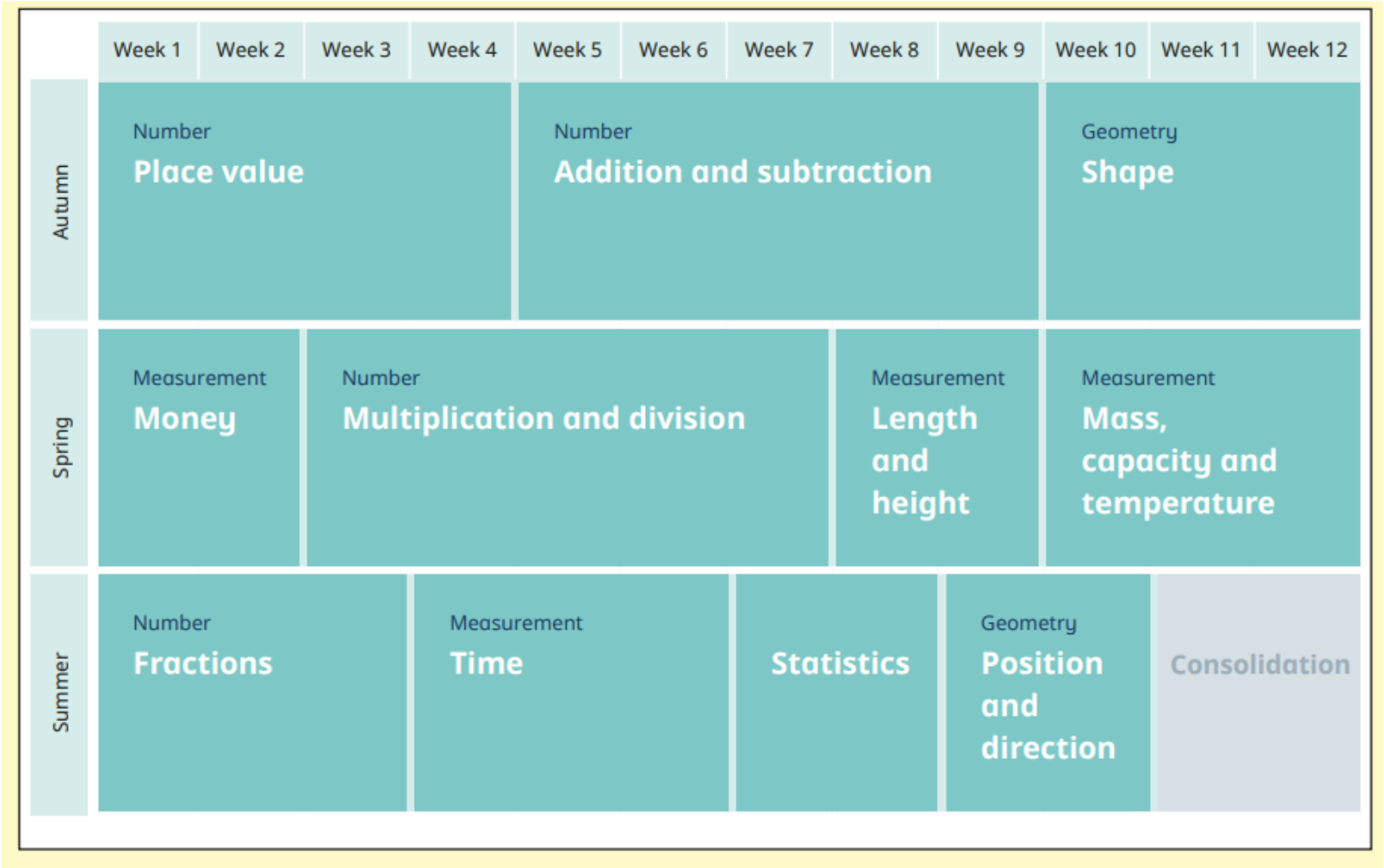
Year 2 yearly overview



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Year 1						Year 2					
Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Place Value: Count											
Place value within 10 Count to and across 10, forwards and backwards, beginning with 0 or 1, or from any given number Count numbers to 10 in numerals. (5 weeks)		Place value within 20 Count to and across 20, forwards and backwards, beginning with 0 or 1, or from any given number Count numbers to 20 in numerals; count in multiples of twos, fives and tens. (3 weeks)	Place value within 50 Count to and across 50, forwards and backwards, beginning with 0 or 1, or from any given number Count numbers to 50 in numerals; count in multiples of twos, fives and tens (2 weeks)		Place value within 100 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 (2 weeks)	Place value Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward (4 weeks)					
Place Value: Represent											
Identify and represent numbers using objects and pictorial		Identify and represent numbers using objects and pictorial	Identify and represent numbers using objects and pictorial		Identify and represent numbers using objects and pictorial	Read and write numbers to at least 100 in numerals and in words Identify, represent					

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representations Read and write numbers to 10 in numerals Read and write numbers from 1 to 10 in numerals and words. (5 weeks)		representations Read and write numbers to 20 in numerals Read and write numbers from 1 to 20 in numerals and words. (3 weeks)	representations Read and write numbers to 50 in numerals Read and write numbers from 1 to 20 in numerals and words. (2 weeks)		representations Read and write numbers to 100 in numerals Read and write numbers from 1 to 20 in numerals and words. (2 weeks)	and estimate numbers using different representations, including the number line. (4 weeks)					
Place Value: Use and Compare											
Given a number, identify one more and one less. (5 weeks)		Given a number, identify one more and one less. (3 weeks)	Given a number, identify one more and one less. (2 weeks)		Given a number, identify one more and one less. (2 weeks)	Recognise the place value of each digit in a two-digit number (tens, ones) Compare and order numbers from 0 up to 100; use <, > and = signs. (4 weeks)					
Place Value: Problems/ Rounding											
						Use place value and number facts to solve problems (4 weeks)					

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Addition and Subtraction: Calculations									
	Add and subtract one-digit and two digit numbers to 10, including zero. (4 weeks)	Add and subtract one-digit and twodigit numbers to 20, including zero. (2 weeks)			Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: ➢ a two-digit number and ones ➢ a two-digit number and tens ➢ two two-digit numbers ➢ adding three onedigit numbers (4 weeks)				
Addition and Subtraction: Problems									
	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9 (4 weeks)	Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = – 9 (2 weeks)			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. (4 weeks)				

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Multiplication and Division: Recall/ Use

				Count in 2s, 5s and 10s. Count in 10s to 100. Count in coins.					Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot (5 weeks)		

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Multiplication and Division: Calculations											
									Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (×), division (÷) and equals (=) signs. (5 Weeks)		
Multiplication and Division: Problems											
				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. (3 weeks)					Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. (5 weeks)		

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Fractions: Recognise and write											
					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. (2 weeks)					Recognise, find, name and write fractions 1/3, ¼, /.4 and ¾ of a length, shape, set of objects or quantity. (3 Weeks)	
Fractions: Compare											
										Recognise the equivalence of 1/2 and 2/4 (3 Weeks.	
Fractions: Calculations											
										Write simple fractions	

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										for example, 1/2 of 6 = 3 (3 weeks)	
Algebra											
Note – although formal algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3 Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9						*Note – although formal algebraic notation is not introduced until Y6, algebraic thinking starts much earlier as exemplified by the 'missing number' objectives from Y1/2/3* Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems					
Measurement: Using measures											
			Compare, describe and solve practical problems for: -lengths and heights -mass/weight -capacity and volume Measure and begin to record the following: -lengths and heights -mass/weight -capacity and volume (4 weeks)		Compare, describe and solve practical problems for: -Time Measure and begin to record the following: -time (hours, minutes, seconds) (2 Weeks)				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		

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									and measuring vessels Compare and order lengths, mass, volume/capacity and record the results using >, < and = (5 Weeks)		
Money											
					Recognise and know the value of different denominations of coins and notes. (1 week)			Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value Find different combinations of coins that equal the same amounts of money Solve simple problems in a practical context			

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								involving addition and subtraction of money of the same unit, including giving change. (2 weeks)			
Time											
					Sequence events in chronological order using language [for example, 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					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	

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					half past the hour and draw the hands on a clock face to show these times. (2 weeks)					Know the number of minutes in an hour and the number of hours in a day. (2 weeks)	
Geometry: 2D shapes											
	Recognise and name common 2-D shapes [for example, rectangles (including squares), circles and triangles] (1 week)						Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line. Identify 2-D shapes on the surface of 3-D shapes, [for example,				

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							a circle on a cylinder and a triangle on a pyramid] Compare and sort common 2-D hapes and everyday objects (3 weeks)				
Geometry: 3D shapes											
	Recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] (1 week)						Recognise and name common 3-D shapes [for example, cuboids (including cubes), pyramids and spheres] Compare and sort common 3-D shapes and everyday objects. (3 weeks)				

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Position and Direction											
					Describe position, direction and movement, including whole, half, quarter and three-quarter turn. (1 week)						Order and arrange combinations of mathematical objects in patterns and sequences Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns(clockwise and anti-clockwise) (2 weeks)

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Statistics: Present and interpret data											
											Interpret and construct simple pictograms, tally charts, block diagrams and simple tables.
Solve statistical problems											
											Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity Ask and answer questions about totalling and comparing categorical data.