TWHF EYFS Maths planning

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Note – This document provides an overview of the maths taught in EYFS each term. Please plan from the weekly plans for each term as these contain more detail.

Educational Programme

'Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding – such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.' DfE (March 2021:10) 'Statutory Framework for the Early Years Foundation Stage'

<u>Key</u>
Purple text = Aspects of the Farly Learning Goals

	Term 1/ Autumn 1 (8 weeks)	Term 2/ Autumn 2 (7 weeks)	Term 3/ Spring 1 (6 weeks)	Term 4/ Spring 2 (6 weeks)	Term 5/ Summer 1 (5 weeks)	Term 6/ Summer 2 (7.5 weeks – End of June at end of Week 4)			
	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to 10	Numbers to 10	Numbers to 15/20			
Songs and	Teach children a selec	tion of songs and rhymes	including counting songs	, addition and subtraction	n songs and rhymes, shap	e songs, etc.			
Rhymes									
Books	Read a selection of bo	• Read a selection of books, including books about counting, addition, subtraction, division, shape, measures, etc.							

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	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to	10 Numbers to 10	Numbers to 15/20
Subitising	Dice patterns Teach children to instantly recognise each dice pattern 1 – 6 and to describe what they can see. Ensure children understand that they can subitise to find out 'how many?'	Non-standard dot pattern Teach children to subitise 1, 2, 3 or 4 objects or dots in irregular arrangements and to describe what they can see. Encourage children to play with dominoes and to recognise the total number of dots where possible (and where there are between 1 and 6 dots).	•	As Term 4. Introduce Num Talks (Dot Talks).	• Teach children to subitise 1, 2, 3, 4, 5	Children at the expected level of development will subitise (recognise quantities without counting) up to 5 (ELG: Number). See Term 5.
- 140		,			,	
5 and 10 frames	• Teach children to make and recognise amounts from 1 - 5 on 5 frames (in various arrangements), and to describe what they can see. • Match numerals to 5 frames.	• Teach children to make amounts from 1 – 10 on arrangement only), and can see. • Move counters around • Match numerals to 10 Note:Tomake:Swiedarangements, or columnifist (wherepossible),	and recognise a 10 frame (in a 5- wise to describe what they on a 10 frame. frames. fill a row e.g.	wise/2-wise 1 arrangement), what arrangement is they can see arrangements, puthe 10 frame at 1	o make and recognise - 10 on a 10 frame (in a pair- nd to describe ee. pair wise'/ '2' wise' out two counters/ objects onto time,g.	• Teach children to make and recognise amounts from 10 to 15/ 16 to 20 on two 10 frames (in 5-wise and pair-wise/ 2-wise arrangements), and to describe what they can see.

	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to 10	Numbers to 10	Numbers to 15/20
Fingers	Finger patterns 1 – 5	Finger patterns 1 - 10	Finger patterns 0 – 10			Quantities from 0 – 20
	 Teach children to 	 Teach children to 	Help children to	 Develop speed in 'sho 	wing' 0 – 10 fingers	• See Term 5.
	'grow' and 'show'	'grow' and 'show' 6	develop speed in	and quantities to 8 in different ways.		 Teach children to
	quantities from 1 -	– 10 fingers.	'showing' 0 – 10			represent numbers
	5 on one hand.	 Teach children to 	fingers and quantities			from 11 – 20 with a
	 Teach children to 	make quantities to	to 5 in different ways.			partner.
	recognise how many	5 on two hands.				
	fingers (up to 5) are	•	Teach children to recog	nise how many fingers (up	o to 10) are shown in	
	shown in images of	images of two hands.				
	one hand.					
Number	Watch Series 1	Watch Series 1	Watch Series 2	Watch Series 2	Watch Series 2	Watch Series 3
Blocks	Episode 1 'One' to	Episode 11	Episode 3 ('Eight') to	Episode 9 ('Double	Episode 11 ('Odds	Episode 4 ('Fruit
	Series 1 Episode 10	'Stampolines' to Series	Series 2 Episode 8	Trouble') to Series 2	and Evens') to Series	Salad') to Series 3
	'How to Count'.	2 Episode 2 'Seven'.	('Counting Sheep').	Episode 14 ('The Two	3 Episode 3 ('The	Episode 10 ('Hiccups').
	Re-watch some	 Re-watch some 	Re-watch some	Tree').	Numberblocks	 Re-watch some
	episodes to provide a	episodes from Series	episodes from Series 1	 Re-watch some 	Express').	episodes from Series 1
	provocation for	1 to provide a	and 2 to provide a	episodes from Series 1	 Re-watch some 	to 3 to provide a
	children's play/ to	provocation for	provocation for	and 2 to provide a	episodes from Series 1	provocation for
	explore in depth.	children's play/ to	children's play/ to	provocation for	and 2 to provide a	children's play/ to
		explore in depth.	explore in depth.	children's play/ to	provocation for	explore in depth.
				explore in depth.	children's play/ to	
					explore in depth.	
			• Use the NCETM Numb	er Blocks support materia	als.	

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	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to 10	Numbers to 10	Numbers to 15/20 Please make sure that you have got as many children as possible to the ELGs for Number and Numerical Patterns before beginning work on numbers beyond 10
Number and Place Value	• Focus on developing number sense - e.g. that children will understand how '2', '3' etc. can look in numerals, words, Numicon, dice patterns, finger patterns, Numberblocks, on 5 frames, with big items, with small items, pennies, 2D shapes, real-life examples of the number and where the number comes on a number track to 10. • Ensure children have opportunities to reason - e.g. to spot mistakes.	 Revisit Term 1 number collections 1 5 and photograph further collections. Develop children's ability to spot mistakes and to sort images into, for example, '4'/ 'Not 4'. 	• Help children to develop the 'oneness of one', 'twoness of two', etc. with numbers 1 – 8. - Make number collections. - Spot mistakes in number collections. Sort images into ''/ 'Not' (e.g. '4'/ 'Not 4').	Help children to develop the 'oneness of one', 'twoness of two', etc. with numbers 1 – 8. Make number collections. Spot mistakes in number collections. Teach children what or are and how to work our 10 are odd or even.		 Children at the expected level of development will have a deep understanding of number to 10, including the composition of each number (ELG: Number). Teach children to make numbers from 11 to 15/20 using 10 frames, Numicon, bundles of straws/sticks and single straws/sticks, bead strings and arrow cards. Make number collections 11 – 15. Use the reasoning PowerPoints (0 – 10/20).

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Reading and Writing Numerals	• read the numerals 1 – 5 involving manipulatives	and representations	• read the numerals 6 – 1 manipulatives and repr	esentations and in the	• Ensure that all children recognise the numerals from 1 – 10.	each children to write the digits from 0 – 9.
Also see other sections including Addition and Subtraction	 Teach children to instantly recognise the Numicon shapes from 1-5. Teach children to make the Numicon shapes 1-5 with objects. 	 Teach children to instantly recognise the Numicon shapes from 6 – 10. Teach children to make the Numicon shapes 6 – 10 with objects. 	Teach children to sketc shapes from 1 to 5.		Teach children to sketo shapes from 1 to 10.	
Comparing and Ordering Numbers	 Help children to understand the concepts of "lots", "few" and "more". Teach children to compare numbers to 5. Teach children to order numbers to 5 using Numicon and 5 frames (1 – 5 and 5 – 1). 	 Teach children to compare numbers to 5/10 and spot when two sets have the same amount. Teach children to order numbers to 10 using Numicon, 10 frames and Number Blocks (1-10 and 10 – 1). Explore whether Numicon shapes are equal to/ heavier than (bigger than)/ lighter than (smaller than) each other. 	compare numbers to 10	nes, number collections, and spot when two sets habers to 10 using Numico 10 and 10 – 1).	nave the same amount.	 Children at the expected level of development will compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity (ELG: Numerical Patterns). Compare and order numbers to 15/20 using equipment and numerals (1 – 15/20 and 15/20 to 1).

	Term 1/ Autumn 1 (8 weeks)	Term 2/ Autumn 2 (7 weeks)	Term 3/ Spring 1 (6 weeks)	Term 4/ Spring 2 (6 weeks)	Term 5/ Summer 1 (5 weeks)	Term 6/ Summer 2 (7.5 weeks – End of June at end of Week 4)
	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to 10	Numbers to 10	Numbers to 15/20
Oral Counting	• Teach children to	Teach children to	Develop children's	• Develop children's flu	ency in orally counting in	Children at the
	orally count in 1s from	orally count in 1s from	fluency in orally	1s from 1 to 20/30 and	back in 1s from 10 to 0.	expected level of
	1 to 10 and back in 1s	1 to 20 and back in 1s	counting in 1s from 1	Teach children to coul	nt in 1s from a given	development will
	from 10 to 0.	from 10 to 0.	to 20 and back in 1s	number and to stop cou	inting at a given	verbally count beyond
		Teach children to start counting from	from 10 to 0. • Teach children to	number.		20, recognising the pattern of the
		different numbers	count in 1s from a			counting system (ELG:
		when counting	given number and			Numerical Patterns).
		forwards in 1s (in	to stop counting at			 Teach children to
		the range 1 – 20).	a given number.			orally count in 1s from
						1 to 30/ 50 and back in
						1s from 20 to 0.
						Teach children to
						count in 1s from a
						given number and
						to stop counting at
						a given number.
						 Teach children to
						count in multiples of
						10 from 0 to 100
						(alongside equipment/images).

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Object Counting	pictures, when the obje	e year the aim is that child cts or pictures are in a fan re 8)). We are aiming for c	niliar arrangement, or wh hildren to count only whe	en they can use conceptu n necessary.	al subitising (e.g. to see a	group of 5 and 3
	 Teach children to count sets of 1 – 5 items given to them and to count out 1 – 5 objects from a larger set. Encourage children to explain how they know how many objects there are in a set. 	 Teach children to count sets of 1 – 6 items given to them and to count out 1 – 6 objects from a larger set. Encourage children to explain how they know how many objects there are in a set. 	out 1 – 10 objects from • Encourage children to they have counted.	nt sets of 1 – 10 items give a larger set. find their own ways to ke nt sets of 1 – 10 pictures.		 Teach children to count sets of 1 – 15/20 items given to them and to count out 1 – 15/20 objects from a larger set. Encourage children to find their own ways to keep track of what they have counted. Teach children to count sets of 1 – 15/20 pictures.
Talk Pictures	 Use talk pictures to see what children notice and to develop children's counting. Use a talk picture and represent the number of items in a set on a 5 frame. 	Use talk pictures and ask children to show the number of cars/balls/ etc. on a 10 frame.	• Use a talk picture and represent the number of items in two small (different) sets on 10 frames. Add the quantities together.	Use a talk picture and ask children to find sets of 1 – 10 things.	Use a talk picture and look for doubles.	Use a talk picture (with sets of up to 15 pictures) to compare two sets.

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						at end of Week 4)
	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to 10	Numbers to 10	Numbers to 15/20
Addition and	Teach children to	Teach children to	Model the maths in	Continue Term 3	• Continue Term 4	Children at the
Subtraction	identify 1 more and 1	make sets containing 1	addition/ subtraction	work with numbers to	work with numbers to	expected level of
	fewer (up to 5).	more and 1 fewer (up	songs such as 'An	5/ 6.	10.	development will have
	• Sing a '5 Little'	to 6).	Elephant Came out to	Ensure that children	• Explore the number	a deep understanding
	song, modelling	• Take '1' for a walk	Play'/ '5 Little Ducks'.	can identify 1 more/ 1	bonds of 9 and 10.	of number to 10,
	taking 1 away	(with Numicon).	Teach children to	fewer (to 6).	• Explore 'first', 'then',	including the
	between each verse.		add 1 to sets of 1	 Tell the children 	'now' addition and	composition of each
			– 4 objects/ Numicon	different 'real-life'	subtraction stories.	number (ELG:
			shapes.	addition and	 Informally assess 	Number).
			 Teach children to 	subtraction problems	children's recall of	 Children at the
			subtract 1 from sets of	(involving numbers	number facts.	expected level of
			1 to 5 objects/	and totals to 5).		development will
			Numicon shapes made	 Using towers of 		automatically recall
			from Numicon pegs.	cubes, explore		(without reference to
			 Teach children to 	part- part-whole.		rhymes, counting or
			add and subtract	 Explore how a 		other aids) number
			(to 5).	number can be		bonds up to 5
			 Explore numbers 	partitioned in		(including subtraction
			'hiding' in other	different ways.		facts) and some
			numbers.	• Explore the number		number bonds to 10,
			• Explore the number	bonds of 5, 6, 7 and 8.		including double facts
			bonds of 2, 3, 4 and 5.			(ELG: Number).
			• Explore the concepts			Make 1 more and 1
			of 'equal' and 'not			fewer (up to 15/20).
			equal'.			Also see Term 5.
			Teach children what			
			a 'whole' and a 'part'			
			is.			

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Multiplication	N/A				Ensure that children	Children at the
and Division					understand the	expected level of
(Doubling and					concepts of doubling	development will
Halving)					and halving (that	explore and represent
					doubling is multiplying	patterns within
					by 2, and that halving	numbers up to 10,
					is dividing into two	including evens and
					equal groups).	odds, double facts and
					 Teach children to 	how quantities can be
					double numbers to 5.	distributed equally
					 Teach children to 	(ELG: Numerical
					halve amounts to 10.	Patterns).
					• Teach children to	Problem-solving
					solve word problems	based on 'The
					involving doubling	Doorbell Rang' by
					and halving.	Pat Hutchins.

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	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to 10	Numbers to 10	Numbers to 15/20			
Shape	• Teach children to name common 2D shapes (circle, triangle, rectangle and square) and common 3D shapes (cone, cylinder, cube, cuboid and sphere) and to describe their properties using informal and mathematical language (e.g. sides, corners and faces).								
	• 2D shape pictures. • Block play -* • Play with pattern bloce • Make models from re-		 3D shape hunt. Take rubbings from the faces of 3D shapes found in the environment. Read 'Cubes, Cones, Cylinders and Spheres' by Tana Hoban. 	Use 2D shape cards and 3D shapes as part of pattern activities (see below).		 Hidden shapes. What shape could it be?/ What shape couldn't it be? Why? Read 'The Shape of Things' by Dayle Ann Dodds and encourage children to make their own shape pictures. Explore how whole shapes can be cut/folded to make new shapes. Explore how shapes can be combined to make new shapes. Challenge children to see how many shapes they can make with 4 or 5 Snap Cubes. 			

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Spatial Reasoning	• Teach children to understand relationships – how things fit together and how moving parts work (e.g. by using jigsaws, Numicon baseboard overlays and age-appropriate construction equipment including wooden blocks).							
Aspect 1:	Provide different 'Fill the Board' challenges for children to complete using the Numicon baseboards and Numicon shapes.							
Understanding Relationships		• Play with children in the Block Play area, providing challenges for children to help them to move from one stage of block play to the next.						
			Provide old electrical equipment (with the plug cut off) and screwdrivers for the children to take apart.					
			 Provide provocations 	in the Block Play area.				
				Sketch and label comp	oleted models.			
Spatial Reasoning Aspect 2: Language	Teach children to describe position and direction.	 Continue to teach children to describe position and direction. Encourage children to respond to and use directional language in P.E. 	 See Term 2. Teach children to follow simple instructions to find objects hidden around the classroom/ outdoor area. 	• See Term 2.		 See Term 2. Play barrier games involving positional language. 		
Spatial Reasoning	Help children to remeTeach children to tidy	_						
Aspect 3: Spatial Memory			 Teach children to play 'Pairs' ('Pelmanism') with the cards laid out in a grid. 	- Teach children to play 'Kim's Game' with a tray of objects and a cloth.				
Spatial Reasoning Aspect 4: Sense of Direction	 Help children to develop their sense of direction (e.g. to notice where they are going and to find their way back). Help children to find their way around the classroom, outside area, school and school grounds. Continue to help children to find their around the classroom, outside area, school grounds. School grounds and to describe their rounds.					outside area, school and		

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Spatial Reasoning Aspect 5: Spatial	N/A		read models and diagra	ms.	derstand perspective and	·
Representations			 Read books about journeys. Read 'My Map Book' by Sara Fanelli. Provide simple pictorial maps for children to look at and use as part of their play. Ask children to imagine and then draw dice patterns or Numicon shapes from 1 – 5. 	Provide simple pictor to look at and use as provide simple pictor.	•	 Provide aerial photographs. Stand children in different places. Ask each child to describe what they can see without turning round. Sit children around an object to draw that has a clear front and back. Once the drawings are complete, ask the children to identify where children were sitting when they made their drawing. Place characters in small world scenes facing different directions. What can each character see? Provide pictorial instructions to make simple models with

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	Numbers to 5	Numbers to 5/10	Numbers to 8/10	Numbers to 10	Numbers to 10	Numbers to 15/20
Measures	Teach children to use a variety of words to describe size.	 Teach children to use a variety of words to describe height, including 'tall', 'short', 'taller than' and 'shorter than'. Discuss things that are tall. Compare the height of a child and the height of an adult/ the height of two children. Read books about height. Encourage children to make a 	• Teach children to use a variety of words to describe length and distance, including 'long', 'short', 'near', 'far away', 'longer than', 'shorter than', 'nearer than', and 'further away'.	• Teach children to compare two items by capacity and weight and to use the correct vocabulary: 'holds more than'/ 'holds less than'/ 'holds the same amount'/ 'is heavier than'/ 'is lighter than'.	• Teach children to order three items by height and length and to use the correct vocabulary: 'is taller than'/ 'is shorter than'/ 'is the tallest'/ 'is the shortest'/ 'is longer than'/ 'is the longest'/ 'is the shortest'. • Read 'Tallest' and 'Longest' in 'Biggest, Fastest, Tallest' by Darran Stobbart and Kasia Serafin.	• Teach children to order three items by weight and capacity and to use the correct vocabulary: 'is heavier than'/ 'is lighter than'/ 'is the heaviest'/ 'is the lightest'/ 'holds more than'/ 'holds less than'/ 'holds the most'/ 'holds the least'.
		height of two children. • Read books about height. • Encourage			 Read 'Tallest' and 'Longest' in 'Biggest, Fastest, Tallest' by Darran Stobbart and 	1

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Pattern	Use resources that encourage children to	Teach children to continue an AB	AB patterns (continued from Term	Teach children to make their own ABB	Encourage children to make repeating	Revisit and extend pattern making
Please see the NCETM's 'Early Years Typical Progression Chart – Pattern' for ideas and guidance (see general resources)	make repeating patterns. • Spot patterns in books and talk pictures. • Assess children's ability to make repeating patterns.	pattern (continue patterns horizontally and vertically) using different resources. • Teach children to copy AB patterns. • Teach children to make their own AB patterns. • Spot errors in AB patterns. • Identify the unit of	2).	and ABC patterns using different resources. Teach children to identify the unit of repeat in ABB and ABC patterns and to spot mistakes in ABB and ABC patterns.	patterns with resources available in continuous provision, e.g. musical instruments.	activities. Encourage children to record the patterns they make. • Generalise structures to another context or mode – can the child use to create a pattern with the same rule? • Provide opportunities for children to solve
		repeat in AB patterns. • Encourage children to make patterns with resources available in continuous provision.				problems involving pattern.