

EYFS MATHS OVERVIEW

EARLY LEARNING GOALS

Number	<ul style="list-style-type: none"> ● 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 Pattern	<ul style="list-style-type: none"> ● 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.

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	Week 13	Week 14
Autumn	Getting to Know You			Just Like Me!			It's Me 1 2 3!			Light and Dark		Consolidation		
Spring	Alive in 5!			Growing 6, 7, 8			Building 9 and 10			Consolidation				
Summer	To 20 and Beyond			First Then Now			Find My Pattern			On The Move				

THE COUNTING PRINCIPLES

1 The one-one principle. This involves children assigning one number name to each object that is being counted. Children need to ensure that they count each object only once ensuring they have counted every object.

Children will sometimes count objects more than once or miss an object but that needs to be counted. Encourage children to line up objects and touch each one as they count, saying one number name per object. This will also help to avoid children counting more quickly than they touch the objects which again shows they have not grasped one-one correspondence.

2 The stable-order principle. Children understand when counting, the numbers have to be said in a certain order.

Children need to know all the number names for the amount in the group they are counting. Teachers can therefore encourage children to count aloud to larger numbers without expecting them to count that number of objects immediately.

3 The cardinal principle. Children understand that the number name assigned to the final object in a group is the total number of objects in that group.

In order to grasp this principle, children need to understand the one-one and stable-order principle. From a larger group, children select a given number and count them out. When asked 'how many?', children should be able to recall the final number they said. Children who have not grasped this principle will recount the whole group again.

4 The abstraction principle. This involves children understanding that anything can be counted including things that cannot be touched including sounds and movements eg. jumps.

When starting to count, many children rely on touching the objects in order to count accurately. Teachers can encourage abstraction on a daily basis by counting claps or clicks. They can also count imaginary objects in their head to encourage counting on, this involves the children visualising objects.

5 The order-irrelevance principle. This involves children understanding that the order we count a group of objects is irrelevant. There will still be the same number.

Encourage children to count objects, left to right, right to left, top to bottom and bottom to top. Once children have counted a group, move the objects and ask children how many there are, if they count them all again they have not fully grasped this principle.

KEY LANGUAGE FOR TEACHERS

Cardinal - The number that indicates how many there are in a set.

Classification - The identification of an object by specific attributes, such as colour, texture, shape or size.

Conservation (of number) - The recognition that the number stays the same if none have been added or taken away.

Numeral - The written symbol for a number, eg. 3, 2, 1

Ordinal - A number denoting the position in a sequence eg. 1st, 2nd, 3rd, etc or page 1, page 2, page 3...

Partition - Separate a set into two or more subsets eg. Partition a set of socks into plain and patterned.

Subitise - Instantly recognise a small quantity, without having to count how many there are.

Number - Number can be:

- a count of a collection of items eg. three boxes,
- a measure eg. of length or weight, or
- a label eg. the number 17 bus

Quantity - The amount you have of something eg. a cup of flour, three boxes, half an hour.

AUTUMN 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
<p>Getting to Know You</p> <p>Opportunities for settling in, introducing the areas of provision and getting to know the children.</p>			Phase	Just Like Me!			It's Me 1 2 3!			Light and Dark		
			Number	Match and Sort Compare Amounts			Representing 1, 2 & 3 Comparing 1, 2 & 3 Composition of 1, 2 & 3			Representing Numbers to 5. One More and Less.		

AUTUMN

WEEK	WHITEROSEBLOCK	MAIN FOCUS	LEARNING	NUMBERBLOCK LINKS
1	Getting to know you			
2	Getting to know you			
3	Getting to know you			
4	Just like me	Match	<ul style="list-style-type: none"> Match objects which are the same 	
5	Just like me	Sort	<ul style="list-style-type: none"> Sort objects into sets based on different attributes, e.g. colour, shape or size 	
6	Just like me	Compare amount	<ul style="list-style-type: none"> Sort collections into sets Make comparisons Use language 'more/fewer' 	
7	It's Me, 1, 2, 3!	Representing 1,2,3	<ul style="list-style-type: none"> Recognise 1,2,3 Identify representations of 1,2,3 Subitise to 3. Count up to 3 objects. Represent 1,2,3 Recognise which arrangements of objects contain a group of 3. 	S1 Episodes 1 (One) Counting to 1 S1 Episodes 2 (Another One) 2 is more than 1 S1 Episodes 3 (Two) Counting to 2, the 'twoness' of 2 S1 Episodes 4 (Three) 3 is more than 2
8	It's Me, 1, 2, 3!	Comparing 1,2,3	<ul style="list-style-type: none"> Count to 3 – forwards and backwards Compare numbers 1,2 and 3 – 'bigger' and 'smaller' Know that 2 is 1 more than 1 and 3 is 1 more than 2. Know that 2 is 1 less than 3, 1 is 1 less than 2. 	S1 Episodes 5 (One, Two, Three!) Counting to 3; comparing numbers 1, 2 and 3 – 'bigger' and 'smaller'; ordering numbers 1 to 3; 3 is made of 2 and 1
9	It's Me, 1, 2, 3!	Composition of 1,2,3	<ul style="list-style-type: none"> Know 3 is made of 2 and 1 or 1+1+1 Identify different representations of 1,2,3 Use a 5 frame and recognise how many spaces there are when it contains 3 objects. 	
10	Light and Dark	Introduce 4	<ul style="list-style-type: none"> Recognise 4 Count on or back to 4. Count or subitise sets of up to 4 objects to find how many Match number names to numerals and quantity Say which sets have more and which have fewer items Represent numbers to 4 	S1 Episode 6 (Four) 4 is more than 3; counting to 4; the structure of 4 as a square number; recognition of 4 items without counting (subitising) S1 Episode 8 (Three Little Pigs) Counting to 4; adding 1s S2 Episode 13 (Terrible twos) 4 can be partitioned into 2 and 2; and, 1 and 1 and 1 and 1.

11	Light and Dark	Introduce 5	<ul style="list-style-type: none"> ● Recognise 5 ● Count on or back to 5. ● Count or subitise sets of up to 5 objects to find how many ● Match number names to numerals and quantity ● Say which sets have more and which have fewer items ● Represent numbers to 4 	<p>S1 Episodes 7 (Five) 5 is more than 4; counting to 5; line up 1 to 5 in order</p> <p>S1 Episodes 9 (Off We Go!) Counting to 5; line up 1 to 5 in order; identify missing numbers within a 1 to 5 line-up</p> <p>S1 Episodes 11 (Stampolines) Subitising numbers 1 to 5; different ways of arranging blocks to 5; conservation of number</p>
12	Light and Dark	1 more / 1 less Introduce taking away	<ul style="list-style-type: none"> ● Say 1 more or 1 less to 5 ● Count to find 1 more/1 less ● Link counting forwards and the one more pattern ● Link counting backwards and the one less pattern 	<p>S1 Episode 14 (Holes) The number of a group can be changed by adding to it or taking from it; addition and subtraction of 1; number bonds to 5</p>

SPRING

WEEK	WHITEROSEBLOCK	MAIN FOCUS	LEARNING	NUMBERBLOCK LINKS
1	Alive in 5	Introducing 0	<ul style="list-style-type: none"> Introducing the concept of zero Zero is 1 less than 1 and an absence of something 	S3 Episode 5 (Zero) Introducing the concept of zero; zero is one less than 1 and an absence of something
2	Alive in 5	Comparing numbers to 5	<ul style="list-style-type: none"> A review of numbers 1 to 5 (including totaling values and coins) Comparison of numbers to 5 using the language of greater than and less than 	S3 Episode 2 (Blockzilla) Comparison of numbers 1 to 5 using the language of 'greater than' and 'less than'
3	Alive in 5	Composition of 4 and 5 Number bonds to 5	<ul style="list-style-type: none"> Composition of 4/5 Partitioning and combining 5 in different ways Composition of numbers to 5 Exploring the part, part-whole model to partition and combine numbers to 5 	S1 Episode 12 (The Whole of Me) Composition of numbers 1 to 5: introduction to 'part-part-whole' Structure; partitioning a whole number into parts; conservation of number S1 Episode 15 (Hide and Seek) Addition and subtraction of numbers to 5; number bonds to 5 S3 Episode 3 (The Numberblocks Express) Composition of 5; partitioning and combining 5 in different ways S3 Episode 4 (Fruit Salad) Composition of numbers to 5; exploring the part-part-whole model to partition and combine numbers to 5
4	Growing 6,7,8	The Six-ness of 6 The Seven-ness of 7 The Eight-ness of 8	<ul style="list-style-type: none"> Counting 6,7,8 objects Represent 6,7,8 in different ways Count out the required number from a larger group Understand that numbers are made up from smaller numbers. 	S2 Episode 1 (Six) Counting (1 to 6); subitising (dice patterns) S2 Episode 2 (Seven) 7 is more than 6; counting (1 to 7) S2 Episode 3 (Eight) Counting (1 to 8); 8 is one more than 7; subitising (8) S2 Episode 8 (Counting Sheep) Exploring equivalent ways to represent 6; partitioning 6 into equal groups; factors of 6 S2 Episode 12 (Fluffies) Counting (1 to 8); number bonds within 7
5	Growing 6,7,8	Making pairs	<ul style="list-style-type: none"> Arrange small quantities into pairs Understand a pair is two. 	
6	Growing 6,7,8	Combining two groups	<ul style="list-style-type: none"> Combine 2 groups to find how many there are altogether 	
7	Building 9 and 10	Counting to 9/10 The Nine-ness of 9 The Ten-ness of 10	<ul style="list-style-type: none"> Counting to 9 and 10 forwards and backwards Represent 9 and 10 in different ways Arrange 9 or 10 into smaller groups to conceptually subitise Explore the composition of 9 and 10 Subitise groups of 9 and 10 (ten frames, numicon shapes) 	S2 Episode 4 (Nine) Counting (1 to 9); the structure of square numbers (4 and 9); partitioning and combining 9 S2 Episodes 5 (Ten) Counting (1 to 10); 10 ones are equivalent to one 10 S2 Episode 10 (The Three Threes)

				Partitioning 9 into 3 equal groups; partitioning is the inverse of combining
8	Building 9 and 10	Comparing numbers to 10	<ul style="list-style-type: none"> • Comparison of numbers to 10 using the language of 'bigger than' 'smaller than' leading to 'greater than' and 'less than' • Comparison of numbers to 10 (greater than, less than and equals sign) 	S3 Episode 9 (Peekaboo!) Comparison of numbers to 10 using the language of 'bigger than', 'smaller than' leading to 'greater than' and 'less than'
9	Building 9 and 10	Number bonds to 10	<ul style="list-style-type: none"> • Pairs of numbers that total 10 	S2 Blast off Count back from 10 to 1; number bonds that total 10 S3 Episode 15 (Ten Again) Pairs of numbers that total 10
10	Consolidation			TEACHER ASSESSMENT (Use to identify gaps in learning)
11				
12				

SUMMER

WEEK	WHITEROSEBLOCK	MAIN FOCUS	LEARNING	NUMBERBLOCK LINKS
1	To 20 and beyond	Building numbers beyond 10	<ul style="list-style-type: none"> Number recognition to 20. Composition of numbers to 20. Identify tens and ones in a number. Order numbers/pictorial representation of numbers to 20. Introduce 11,12,13,14,15,16,17,18,19 as 1 ten and x ones. Explain that thirteen and fifteen have an irregular name (thirteen not threeteen/fifteen not fiveteen) 	S3 Episode 21 (Eleven) Number 11; 11 is 10 and 1 S3 Episode 22 (Twelve) Number 12 and arrays S3 Episode 26(Thirteen) Number 13; 13 is 10 and 3 S3 Episode 27 (Fourteen) Number 14; 14 is 10 and 4 S3 Episode 28 (Fifteen) Number 15; 15 is 1+2+3+4+5 S3 Episode 29 (Tween Scenes) Exploring numbers 11, 12, 13, 14, and 15 S4 Episode 5 (Sixteen) Learn all about the number 16; 16 is 10 and 6 S4 Episode 7 (Seventeen) Learn all about the number 17; 17 is 10 and 7 S4 Episode 8 (Eighteen) Learn all about the number 18; 18 is 10 and 8 S4 Episode 10 (Nineteen) Learn all about the number 19; 19 is 10 and 9 S4 Episode 11 (Twenty) Learn all about the number 20; 20 is two tens S4 Episode 13 (Flights of fancy) Explore 11 to 20 as ten and a friend
2	To 20 and beyond			
3	To 20 and beyond	Counting patterns beyond 10.	<ul style="list-style-type: none"> Count on and back from different starting points. Say what number comes before/after a given number. Place sequences of numbers in order. 	S4 Episode 14 (I can count to 20) Counting in steps forward and back
4	First, then, now	Adding more	<ul style="list-style-type: none"> Represent number stories using ten frames, fingers and number tracks. Count on to find a total. 	
5	First, then, now	Taking away	<ul style="list-style-type: none"> Represent number stories using ten frames, fingers and number tracks. Take away to find how many are left. 	S3 Episode 12 (Numberblock rally) Subtraction
6	First, then, now	Consolidation – adding more/taking away	<ul style="list-style-type: none"> Represent number stories using ten frames, fingers and number tracks. 	
7	Find my pattern	Doubling	<ul style="list-style-type: none"> Double means ‘twice as many’. Build doubles using real objects and mathematical equipment. Say the doubles as they build them, e.g. Double 2 is 4 Children to sort into doubles and non-doubles. 	S2 Episode 9 (Double trouble) Doubling (1, 2, 4, 8) and halving; partitioning 8 into equal groups
8	Find my pattern	Sharing and Grouping	<ul style="list-style-type: none"> Recognise and make equal groups 	S2 Episode 8 (Counting sheep)

			<ul style="list-style-type: none"> Know that when items are shared equally everyone has the same. 	Exploring equivalent ways to represent 6; partitioning 6 into equal groups; factors of 6 S2 Episode 10 (The three threes) Partitioning 9 into 3 equal groups; partitioning is the inverse of combining
9	Find my pattern	Even and Odd	<ul style="list-style-type: none"> Understand that some quantities can be shared equally but some can not. Group quantities into pairs. 	S2 Episode 11 (Odds and Evens) Odd and even numbers; equal groups
10	On the move	Deepening understanding	<ul style="list-style-type: none"> Problem solving Critical thinking skills 	
11	On the move			
12	On the move	Patterns and relationships	<ul style="list-style-type: none"> Explore and investigate relationships between numbers and shapes using Cuisenaire rods, pattern blocks and the unit construction blocks Continue to copy, continue and create a widening range of repeating patterns and symmetrical constructions. 	