

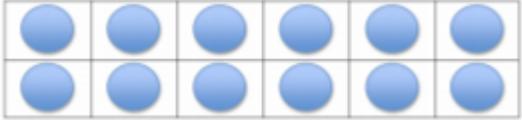
# WAT

# EYFS Calculation Policy



September 2020: To be reviewed  
September 2021



Maths Working Wall (How we use displays to support children's understanding of mathematical concepts)		
<b>Build it</b>	Use a real-life representation of the concept, which children can see, touch and feel.	
<b>Draw it</b>	Show a pictorial representation of the concept.	
<b>Solve it</b>	Show the mathematical representation of the concept	$6 \times 2 = 12$ $2 \times 6 = 12$ $12 \div 2 = 6$ $12 \div 6 = 2$ Factors of 12 are: 1, 2, 3, 4, 6 and 12
<b>Practise it</b>	Encourage children to practice the concept. Interactive opportunity – ask children to respond to questions, encourage them to add what they know, leave homework for children to take to master the concept.	$1 \times 2 = 2$ $2 \times 2 = 4$ $3 \times 2 = 6$ etc.
<b>Challenge it</b>	Set a challenge to be solved. Interactive opportunity – leave real-life objects or manipulatives for children to use to help solve the challenge.	How many different ways can 12 eggs be arranged into arrays? What if you try 24 eggs?
<b>Say it</b>	Use vocabulary related to the concept	Multiply, multiplication, repeated addition, array, divide, group, multiples, factors

Classroom visual prompts (How we represent maths to the children pictorially)						
Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

Big focus 10	Big focus 20	Big focus 100				
Place Value Chart 10	Place Value Chart 20	Place Value Chart 100	Place Value Chart Th- tenths	Place Value Chart Tth- Hundredths	Place Value Chart M- Thousandths	Place Value Chart M- Thousandths
Numicon number line with Numicon shapes	Numicon number line with Numicon shapes	Fractions number line	Fractions number line	Fractions and decimals number line	Fractions, decimals and percentages number line	Fractions, decimals and percentages number line
Odd and even numbers	Odd and even numbers	Odd and even numbers	Factors and multiples	Factors and multiples	Factors, prime and composite numbers	Number properties
	Number bonds to 10 Number bonds to 20	Number bonds to 10 Multiples of 10 totalling 100	Number bonds to 10 Multiples of 10 totalling 100			
0 – 20 number line / track	0 -50 number line	0 – 100 number line	Number line to 100	Number line including negative numbers	Number line including negative numbers	Number line including negative numbers
	100 square	100 square	100 square	100 square	100 square	100 square
Number names from 0 - 10	Number names of multiples of 10	Number names from 0 – 100	Number names from 0 - 1000	Number names to hundred thousands	Number names to one million	Number names to million
Real coins and Large coins	Real coins and Large coins	Real coins and Large coins	Real coins and Large coins	Real coins and Large coins	Real coins and Large coins	Real coins and Large coins
Counting in 1s and 2s	2, 5 and 10 multiplication tables	2, 4 and 8 multiplication tables	3, 6 and 12 multiplication tables	7, 9 and 11 multiplication tables All multiplication tables up to 12 x 12	All multiplication tables up to 12 x 12	All multiplication tables up to 12 x 12
Counting in 1s and 2s multiplication table patterns and divisibility rules and connections	2, 5 and 10 multiplication table patterns and divisibility rules and connections	2, 4 and 8 multiplication table patterns and divisibility rules and connections	3, 6 and 12 multiplication table patterns and divisibility rules and connections	All multiplication table patterns and divisibility rules Connections 5/10 3/6/12 3/9 2/4/8 Also focus on 0 multiplication table and 1 multiplication table	All multiplication table patterns and divisibility rules Connections Also focus on 0 multiplication table and 1 multiplication table Square and cube numbers	All multiplication table patterns and divisibility rules Connections Also focus on 0 multiplication table and 1 multiplication table Square and cube numbers
			Roman numerals	Roman numerals	Roman numerals	Roman numerals
What = means Not an answer but equivalent If children are writing the equations	The = sign means not an answer but is equivalent to (is the same as not is the answer)	The = sign means not an answer but is equivalent to	The = sign means not an answer but is equivalent to	The = sign means not an answer but is equivalent to	The = sign means not an answer but is equivalent to	The = sign means not an answer but is equivalent to

(is the same as )						
Real-life / pictorial fractions	Real-life / pictorial fractions	Fractions including fraction number line/wall	Fractions including fraction number line/wall	Fractions including fraction number line/wall	Fractions, decimals and percentages including fraction number line/wall	Fractions, decimals and percentages including fraction number line/wall
			MAS (multiplication, addition, subtraction)	MAS (multiplication, addition, subtraction)	BIDMAS (Brackets, indices, division, multiplication, addition, subtraction)	BIDMAS (Brackets, indices, division, multiplication, addition, subtraction)
2D and 3D shapes	2D and 3D shapes	2D and 3D shapes	2D and 3D shapes	2D and 3D shapes	2D and 3D shapes	2D and 3D shapes

### Progression in the teaching of counting in Foundation Stage

<p><b>Pre-counting</b></p> <p>The key focus in pre-counting is an understanding of the concepts more, less and the same and an appreciation of how these are related. Children at this stage develop these concepts by comparison and no counting is involved</p>	<p><b>Ordering</b></p> <p>Count by reciting the number names in order forwards and backwards from any starting point.</p>	<p><b>One to one correspondence</b></p> <p>One number word has to be matched to each and every object. Lack of coordination is a source of potential error – it helps if children move the objects as they count, use large rhythmic movements, or clap as they count.</p>	<p><b>Cardinality (Knowing the final number counted is the total number of objects)</b></p> <p>Count out a number of objects from a larger collection. Know the number they stop counting at will give the total number of objects.</p>
<p><b>Pre-counting ideas</b></p> <p>Provide children with opportunities to sort groups of objects explicitly using the language of more and less.</p>	<p><b>Ordering ideas</b></p> <p>Provide children with opportunities to count orally on a daily basis. Rote count so that children are able to understand number order and can hear the rhythm and pattern. Use a drum or clap to keep the beat.</p>	<p><b>One to one correspondence ideas</b></p> <p>Play counting games together moving along a track, play games involving amounts such as knocking down skittles.</p>	<p><b>Cardinal counting ideas</b></p> 



Which group of apples has the most?  
Which group of apples has the least?



Use traditional counting songs throughout the day ensuring children have the visual/kinaesthetic resources e.g. 5 little ducks, 10 green bottles

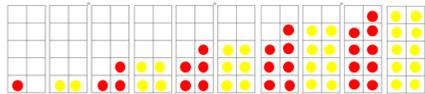
How many bananas are in my fruit bowl? Allow children to physically handle the fruit.

Provide children with objects to point to and move as they count and say the numbers.

### Progression in the teaching of counting in Foundation Stage

#### Subitising (recognise small numbers without counting them)

Children need to recognise small amounts without counting them e.g. dot patterns on dice, dots on tens frames, dominoes and playing cards as well as small groups of randomly arranged shapes stuck on cards.

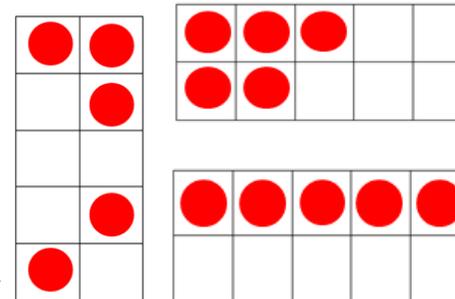


#### Abstraction

You can count anything – visible objects, hidden objects, imaginary objects, sounds etc. Children find it harder to count things they cannot move (because the objects are fixed), touch (they are at a distance), see, move around. Children also find it difficult to count a mix of different objects, or similar objects of very different sizes.

#### Conservation of number – MASTERY!

Ultimately children need to realise that when objects are rearranged the number of them stays the same.

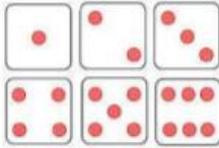
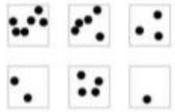
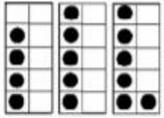


#### End of year counting expectations

- count reliably to 20
- count reliably up to 10 everyday objects
- estimate a number of objects then check by counting
- use ordinal numbers in context e.g. first, second, third
- count in twos, fives and tens
- order numbers 1-20
- say 1 more/ 1 less than a given number to 20

### Subitising ideas

Provide children with opportunities to count by recognising amounts.



### Abstraction ideas



How many pigs are in this picture?  
Provide children with a variety of objects to count.



### Conservation of Number

The amount is "seven" and doesn't change.

