

Woodland Academy Trust EYFS Calculation Document

Last updated 2021

Foundation	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Real-life objects	Real-life objects	Mini-whiteboards	Mini-whiteboards	Mini-whiteboards	Mini-whiteboards	Mini-whiteboards
0 – 9 digit cards	0 – 9 digit cards	Place value cards			Protractors	Protractors
Number track/line to	Number line to 20 and	Number line to 100	Number line to 100	Number line including	Number line including	Number line including
20	50			negative numbers	negative numbers	negative numbers
Meter/Counting stick	Meter/Counting stick	Meter/Counting stick	Meter/Counting stick	Meter/Counting stick	Meter/Counting stick	Meter/Counting stick
		Transparent rulers	Transparent rulers	Transparent rulers	Transparent rulers	Transparent rulers
Tens frame	Tens frame and hundred	Tens frame and	Tens frame and	Tens frame and	Tens frame and	Tens frame and
	square	hundred square	hundred square	hundred square	hundred square	hundred square
Building blocks	Place value charts – Tens	Place value charts –	Place value charts –	Place value charts –	Place value charts to a	Place value charts to 10
0	and ones	Ones to hundreds	Ones to Thousands	Ones to Ten thousands	million and three	million and three
					decimal places	decimal places
Containers that are	Containers that are		Fraction b	ars, walls, circles (centralis	ed storage)	
different shapes and	different shapes and					
sizes	sizes					
Numicon shapes	Numicon shapes/ Dienes	Dienes	Dienes	Dienes	Dienes	Dienes
Sorting hoops	Sorting hoops	Sorting hoops	Place value counters	Place value counters	Place value counters	Place value counters
Big Dice	Place value arrow cards	Place value arrow cards	Place value arrow cards	Place value arrow cards	Place value arrow cards	Place value arrow card
	<ul> <li>tens and ones</li> </ul>	<ul> <li>tens and ones</li> </ul>	– H, T, O	– H, T, O		
Part-part-whole mat	Part-part-whole mat	Part-part-whole mat	Part-part-whole model	Part-part-whole model	Part-part-whole model	Part-part-whole model
Transparent counters	Transparent counters	Transparent counters	Transparent counters	Transparent counters	Transparent counters	Transparent counters
Bar model with real-	Bar model pictorial	Bar model with	Plastic mirrors	Plastic mirrors	Plastic mirrors	Plastic mirrors
life objects	objects/ representative	counters /Dienes				
	objects e.g. counters	progressing to numbers				
Bead strings – ten	Bead strings –	Bead strings - hundred	Bead strings - hundred	Bead strings - hundred	Bead strings - hundred	Bead strings - hundred
	twenty/fifty					
Dice	Dice	Dice	Dice	Dice	Dice	Dice
Cuisenaire rods	Cuisenaire rods	Cuisenaire rods	Cuisenaire rods	Cuisenaire rods	Cuisenaire rods	Cuisenaire rods
Double sided counters	Double sided counters	Double sided counters	Double sided counters	Double sided counters	Double sided counters	Double sided counters
Multilink – use one	Multilink – use one	Multilink – use one	Multilink – use one	Multilink – use one	Multilink – use one	Multilink – use one
colour to model an	colour to model an	colour to model an	colour to model an	colour to model an	colour to model an	colour to model an
amount	amount	amount	amount	amount	amount	amount
	Maths balances			Weighir	ng scales	
		Solid geor	metric shapes (centralised	storage)		
		Coins	and notes (centralised sto			

Maths Working Wall (How we use displays to support children's understanding of mathematical concepts)					
Build it	Use a real-life representation of the concept, which children can see, touch and feel.	10000000			
Draw it	Show a pictorial representation of the concept.				
Solve it	Show the mathematical representation of the concept	6 x 2 = 12 2 x 6 = 12 12 ÷ 2 = 6 12 ÷ 6 = 2 Factors of 12 are: 1, 2, 3, 4, 6 and 12			
Practise it	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.			
Challenge it	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?			
Say it	Use vocabulary related to the concept	Multiply, multiplication , repeated addition, array, divide, group, multiples, factors			

		visual prompts (Ho				I
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	Place Value Chart	Place Value Chart	Place Value Chart	Place Value Chart	Place Value Chart	Place Value Chart
10	20	100	Th- tenths	Tth- Hundredths	M- Thousandths	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	Odd and even	Odd and even	Factors and multiples	Factors and multiples	Factors, prime and	Number properties
numbers	numbers	numbers			composite numbers	
	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 /	0 -50 number line	0 – 100 number line	Number line to 100	Number line including	Number line including	Number line including
track				negative numbers	negative numbers	negative numbers
	100 square	100 square	100 square	100 square	100 square	100 square
Number names from 0	Number names of	Number names from 0	Number names from 0	Number names to	Number names to one	Number names to
- 10	multiples of 10	- 100	- 1000	hundred thousands	million	million
Real coins and	Real coins and	Real coins and	Real coins and	Real coins and	Real coins and	Real coins and
Large coins	Large coins	Large coins	Large coins	Large coins	Large coins	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. Display after introducing the times tables to the children.	2, 4 and 8 multiplication table patterns and divisibility rules and connections. Display after introducing the times tables to the children.	3, 6 and 12 multiplication table patterns and divisibility rules and connections. Display after introducing the times tables to the children.	All multiplication table patterns and divisibility rules Connections between 5/10, 3/6/12, 2/4/8 Also focus on 1, 7, 9 and 0 multiplication table.	All multiplication table patterns and divisibility rules Connections between 5/10, 3/6/12, 2/4/8 Also focus on 1, 7, 9 and 0 multiplication table. Square and cube numbers	All multiplication table patterns and divisibility rules Connections between 5/10, 3/6/12, 2/4/8 Also focus on 1, 7, 9 and 0 multiplication table. Square and cube numbers
			Roman numerals	Roman numerals	Roman numerals	Roman numerals
The = sign means	The = sign means	The = sign means	The = sign means	The = sign means	The = sign means	The = sign means
not an answer but is equivalent to	not an answer but is equivalent to	not an answer but is equivalent to	not an answer but is equivalent to	not an answer but is equivalent to	not an answer but is equivalent to	not an answer but is equivalent to
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					
Pre-counting	Ordering	One to one correspondence	Cardinality (Knowing the final		
			number counted is the total		
The key focus in pre-counting is an	Count by reciting the number	One number word has to be	number of objects)		
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	names in order forwards and backwards from any starting point.	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.	Count out a number of objects from a larger collection. Know the number they stop counting at will give the total number of objects.		
Pre-counting ideas	Ordering ideas	One to one correspondence	Cardinal counting ideas		
		ideas			
Provide children with opportunities to sort groups of objects explicitly using	Provide children with opportunities to count orally on a daily basis. Rote		The second second		
the language of more and less.	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.	Play counting games together moving along a track, play games involving amounts such as knocking down skittles.			
	123.		How many bananas are in my fruit bowl? Allow children to physically handle the fruit.		
Which group of apples has the most?		Use traditional counting songs throughout the day ensuring	Provide children with objects to		
Which group of apples has the least?		children have the visual/kinaesthetic resources e.g. 5 little ducks, 10 green bottles	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 For the second sec	Conservation of Number The amount is "seven" and doesn't change.	