

Mathematics Long Term Progression Overview

Check Point 1- December

Check Point 2- March

Check Point 3- May

Intent:

Our children will leave the Foundation Stage at Lower Peover CE Primary School with an enjoyment for mathematics. Pupils will enjoy spending time interacting with number and numerical patterns. They will be confident in counting to 20 and will start to go beyond this, recognising the patterns of the counting system. They will have a deep understanding of numbers up to 10 and be able to explore their composition and subitise up to 5. Pupils will be able to recall number bonds to 5 and begin to recall some up to 10. The children will develop an enthusiasm for pattern, and be able to apply this to concrete, pictorial and number sequences. What is essential at Lower Peover, is that we provide the children with regular, intentional, number focused mathematical activities to successfully build their understanding.

Implementation:

The importance of mathematics is implemented through a range of different activities. At Lower Peover practitioners provide creative and engaging opportunities for children to ignite their curiosity and enthusiasm for the subject of mathematics. Activities and experiences are frequent and varied and allow children to build on and apply understanding of numbers to 10. Concrete manipulatives are a key focus within sessions, as is the use of pictorial representations including ten frames, part/whole models. Children are actively encouraged to use mathematical terminology within their understanding, with a focus on developing positive attitudes and interest in the subject. Children participate in regular maths sessions and are given time to explore mathematical concepts, test ideas, develop their understanding and practise taught skills through play. Mathematical resources and equipment are available to be used in all our provision, so children experience it in a purposeful and meaningful context within their play and daily routines. We provide opportunities for extended mathematical discussion to further develop thinking.

There is a lot of research documenting the forms of effective and appropriate early years mathematics pedagogy that can be used through play, guided learning, or direct teaching. They include mathematizing routines, playful experiences, exploring familiar rhymes and stories and participation in games, puzzles, and activities. At Lower Peover, we use different models flexibly from whole class to group work to individual interactions depending on the needs of the children. These models should not be seen as discrete but connected opportunities to further make links between learning.

Below shows the progression of skills that build towards the Mathematic Early Learning Goals.

Impact:

Our children make excellent progress from their mathematic starting point. They can count confidently to 20 and beyond, visually recognise amounts and numbers, and discuss the compositions. They appreciate pattern and can apply this to different areas of the EYFS curriculum. They can use their mathematical knowledge in their day to day lives and they are well prepared for the next phase of their education.

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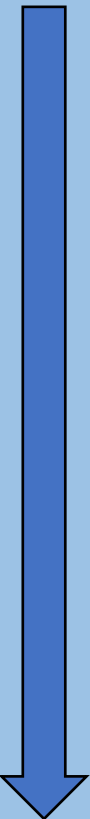
Number			
Key Skill: Composition	Key Skill: Subitising	Key Skill: Number bonds	
Baseline - Starting to recognise some numbers within numbers (1 and 1 is 2, 2 and 1 is 3)	Baseline - Recognise that numbers	Baseline - Starting to recognise some numbers within numbers (1 and 1 is 2, 2 and 1 is 3)	
On Track Check Point 1 - Splitting and recombining sets of objects 1-5 including on part whole model	On Track Check Point 1 - Subitising numbers 1 to 3	On Track Check Point 1 - Splitting and recombining sets of objects 1-5 including on part whole model	
On Track Check Point 2 - Systematic approach to partitioning sets of objects 1-5 including on part whole model - Partitioning and recombining sets of objects 6-9, including on part whole model and tens frame	On Track Check Point 2 - Subitising numbers 1 to 5	On Track Check Point 2 - Recalls some number bonds for numbers 1-5	
On Track Check Point 3 - Systematic approach to splitting and recombining 10 including on tens frame and part whole model - Use part whole model to partition numbers where both parts are the same - Is beginning to explore splitting numbers into more than 2 parts on a part whole model	Check Point 3 - Embedding their knowledge of subitising numbers 1 to 5 - Starting to explore numbers beyond 5 up to 10.	On Track Check Point 3 - Recalls number bonds for numbers 1-5, including subtraction facts - Recall some number bonds for 10 - Know double facts of numbers up to 10.	
ELG: Have a deep understanding of number to 10, including the composition of each number	ELG: Subitise up to 5 (recognise quantities without counting)	ELG: Automatically recall (without reference to rhymes, counting or other aids) number bonds up to five (including subtraction facts) and some number bonds to 10, including double facts.	
Provisions:	First4Maths planning and resources, Numicon, ten frames, counting within the day-to-day life of the classroom, board games that include dice, NCETM Number blocks, concrete and pictorial representations within the classroom environment.		

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Numerical Patterns		
Key Skill: Counting and Cardinality	Key Skill: Comparison	Key Skill: Pattern
	<p>Baseline</p> <p>- Can count to 5 and recognise some of the numerals.</p>	<p>Baseline</p> <p>Has some understanding and awareness of the vocabulary: more / fewer / most /fewest, and can apply to scenarios.</p>
<p>On Track Check Point 1</p> <p>- Accurate counting of sets of objects 1-10, recognising and ordering numerals 1-10</p>	<p>On Track Check Point 1</p> <p>- Compare numbers using vocab of more/less - Find 1 more using sets of objects on tens frames and on a number track</p>	<p>On Track Check Point 1</p> <p>- Identifying unit of repeat - Completing AB & ABC patterns (complete, copy, make own and spot/correct errors in patterns)</p>
<p>On Track Check Point 2</p> <p>- Counting backwards 10-1 & ordering numbers 10-1</p>	<p>On Track Check Point 2</p> <p>- Finds 1 less using sets of objects on tens frame and on a number track - Can compare height and length.</p>	<p>On Track Check Point 2</p> <p>- More complex patterns – ABB, ABBC - Generalising pattern and transferring to another format e.g., link pattern of shapes to movements - Numerical Patterns – linked to finding 1 more/1 less using a mental number line</p>
<p>On Track Check Point 3</p> <p>- Counting beyond 20 noticing patterns in tens</p>	<p>On Track Check Point 3</p> <p>- Can start to share fairly, between more than two. - Can compare mass and capacity.</p>	<p>On Track Check Point 3</p> <p>- Numerical patterns: odds & evens - Symmetry/reflections – link to doubles - Starting to look at halving as inverse of doubles</p>
<p>ELG:</p> <p>Verbally count beyond 20, recognising the pattern of the counting system.</p>	<p>ELG:</p> <p>Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity.</p>	<p>ELG:</p> <p>Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.</p>
Provisions:	First4Maths planning and resources, Numicon, ten frames, counting within the day-to-day life of the classroom, board games that include dice, NCETM Number blocks, concrete and pictorial representations within the classroom environment.	

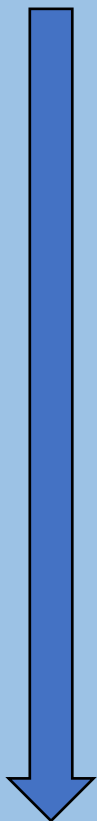
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Space, Shape and Measure (No ELG but included to support the curriculum)	
Key Skill: Space and shape	Key Skill: Measure
Baseline	Baseline
- Can name some 2D shapes (Square, triangle, circle)	Can use some measure related vocabulary (bigger, smaller, more, less)
On Track Check Point 1	On Track Check Point 1
<ul style="list-style-type: none"> - Knowledge of 2D shapes and discuss their properties - Begin to describe properties of shapes with informal comparative language e.g. house-shaped and discriminates between different versions of shapes e.g. pointy triangle & fat triangle 	<ul style="list-style-type: none"> - Compare numbers using vocab of more/less
On Track Check Point 2	On Track Check Point 2
<ul style="list-style-type: none"> - Further developed their knowledge of 2D shapes (Uses some more formal language) - Use spatial vocabulary (in front, behind, in between, on, in, under, first second, third) - Use spatial vocabulary (forwards, backwards, up, down, across) 	<ul style="list-style-type: none"> - Can compare items and use comparative language – taller than, tallest (direct comparison, indirect comparison and ordering) - Can compare items lining up start points and use comparative language – longer than, widest (direct comparison, indirect comparison and ordering)
On Track Check Point 3	On Track Check Point 3
<ul style="list-style-type: none"> - Knowledge of 3D shapes and discusses the properties - Begin to describe properties of shapes with informal comparative language e.g., ball-shaped and discriminates between different versions of shapes e.g. big cube & small cube - Can discuss the relationships between shapes: Notice and name shapes within shapes including 2D faces on 3D shapes - Can represent spatial ideas in 2D e.g., by drawing a map 	<ul style="list-style-type: none"> - Can start to share fairly, between more than two. - Can compare items using a spring scale or a pan balance and use comparative language – lighter than, heavier than (direct comparison, indirect comparison and ordering) - Can compare volumes or capacities by pouring sand or water from one container into another and use comparative language – holds more than, holds less than (direct comparison, indirect comparison and ordering) - Sequences series of events in their daily lives using language such as before, next, after, yesterday and tomorrow. - Experiment with different durations of time using timers
No ELG, but supports and enhances other areas of the EYFS curriculum	
Provisions:	First4Maths planning and resources, Numicon, ten frames, counting within the day-to-day life of the classroom, board games that include dice, NCETM Number blocks, concrete and pictorial representations within the classroom environment.



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First4Maths Programme of Study					
Autumn 1	Autumn 2 (Check Point 1)	Spring 1	Spring 2 (Check Point 2)	Summer 1	Summer 2 (Check Point 3)
<p><u>Cardinality & Counting</u></p> <p>Accurate counting of sets of objects 1-5</p> <p>NB S1 episodes 9 & 10 (1:1 correspondence, cardinality)</p> <p>Subitising 1-3</p> <p>NB S1 episodes 1-4 (Introducing 1, 2 and 3)</p> <p>Numeral Recognition to 5</p> <p><u>Composition</u></p> <p>Conceptual subitising noticing numbers within numbers</p> <p><u>Comparison</u></p> <p>Compare sets 1-5 using vocab of more / fewer / most / fewest</p> <p><u>Shape/Space</u></p> <p>2D shapes and their properties</p> <p><u>Pattern</u></p> <p>Simple AB patterns (complete, copy, make own and spot/correct errors in patterns)</p> <p>A lot of this content should be a recap from Nursery and provides us with baseline assessment data</p>	<p><u>Cardinality & Counting</u></p> <p>Accurate counting of sets of objects 1-10, recognising and ordering numerals 1-10</p> <p>Subitising 1-5</p> <p>NB S1 episodes 6 & 7 (Introducing 4 and 5)</p> <p><u>Composition</u></p> <p>Applied conceptual subitising</p> <p>NB S1 episode 11 (Stampolines)</p> <p>Inverse operations - splitting and recombining sets of objects 1-5 including on part whole model</p> <p>NB S1 episode 12 (Whole of me)</p> <p><u>Comparison</u></p> <p>Compare numbers using vocab of more/less</p> <p>Find 1 more using sets of objects on tens frames and on a number track</p> <p><u>Pattern</u></p> <p>Identifying unit of repeat – AB & ABC patterns</p>	<p><u>Cardinality & Counting</u></p> <p>Counting backwards 10-1 & ordering numbers 10-1</p> <p><u>Composition</u></p> <p>Systematic approach to partitioning sets of objects 1-5 including on part whole model</p> <p>NB S1 episode 14 (Holes)</p> <p><u>Comparison</u></p> <p>Find 1 less using sets of objects on tens frame and on a number track</p> <p><u>Measures</u></p> <p>Height</p> <p><u>Shape/Space</u></p> <p>Spatial vocabulary (in front, behind, in between, on, in, under, first second, third)</p> <p><u>Pattern</u></p> <p>More complex patterns – ABB, ABBC</p> <p>Generalising pattern and transferring to another format e.g. link pattern of shapes to movements</p>	<p><u>Composition</u></p> <p>Recall number bonds for numbers 1-5</p> <p>Partitioning and recombining sets of objects 6-9 including on part whole model and tens frame</p> <p>NB S2 episodes 1-5 (Introducing 6-10)</p> <p><u>Measures</u></p> <p>Length</p> <p><u>Shape/Space</u></p> <p>Representing spatial relationships as maps</p> <p>Spatial vocabulary (forwards, backwards, up, down, across)</p> <p><u>Pattern (alongside Comparison)</u></p> <p>Numerical Patterns – linked to finding 1 more/1 less using a mental numberline (Comparison)</p> <p>NB S2 episodes 6 & 7 (Just add one & ten green bottles)</p>	<p><u>Cardinality & Counting</u></p> <p>Counting beyond 10 noticing pattern in ones</p> <p><u>Composition</u></p> <p>Systematic approach to splitting and recombining 10 including on tens frame and part whole model</p> <p>Recall some number bonds for 10</p> <p>NB S2 Episode 13 (Blast Off!)</p> <p><u>Measures</u></p> <p>Mass</p> <p><u>Shape/Space</u></p> <p>3D shapes: properties of shapes</p> <p><u>Patterns</u></p> <p>Numerical patterns</p> <p>odds & evens</p> <p>NB S2 episode 11 (Odds & Evens)</p>	<p><u>Cardinality & Counting</u></p> <p>Counting beyond 20 noticing pattern in tens</p> <p><u>Measures</u></p> <p>Capacity</p> <p>Time – sequence of events</p> <p><u>Shape/Space</u></p> <p>Relationships between shapes</p> <p><u>Pattern (alongside Composition & Comparison)</u></p> <p>Symmetry/reflections – link to doubles</p> <p>Share fairly (comparison), Use part whole model to partition numbers where both parts are the same (Composition) and look at halving as inverse of doubles (Pattern)</p> <p>NB S2 episode 9 (Double Trouble)</p> <p><u>Possible extension</u></p> <p>Sharing between more than two (comparison)</p> <p>NB S2 episode 8 (Counting Sheep)</p> <p>Splitting into more than 2 parts on a part whole model (composition)</p> <p>NB S2 episode 10 (The three threes)</p>