Somerville Federation

Maths progress model for knowledge and skills

<table>
<tr><th></th><th colspan="5">Expectations for Nursery</th><th colspan="3">Expectations for Reception</th><th>ELG</th><th>Links to KS1</th></tr>
<tr><td rowspan="4"><u>Numerical Patterns</u>
Counting</td><td>Awareness of number through songs.</td><td rowspan="2">Recite numbers to 3</td><td rowspan="2">Recite numbers beyond 3</td><td rowspan="2">Recite numbers beyond 5</td><td rowspan="2">Recite numbers forwards beyond 10</td><td>Recite numbers forwards and backwards beyond 10</td><td>Count on from any number</td><td rowspan="4">Verbally count beyond 20, recognising the pattern of the counting system</td><td rowspan="4">See NC Yr 1 Programme of study:

Number – Number and Place Value

Number addition and subtraction

Number Multiplication and Division

Number - Fractions</td></tr>
<tr><td>Says some numbers randomly</td><td>Can count in the pattern of 2’s</td><td>Can count in the pattern of 2’s, 5’s and 10’s.</td></tr>
<tr><td></td><td>Children join in with simple number rhymes linked to 1 more / 1 less e.g. 5 speckled frogs</td><td>Use nonverbal adding and subtracting with very small numbers of objects. E.g. 1 teddy – 1 more – how many?</td><td>Can give you 1 more or take one away than a group of objects up to 3</td><td>Can give you 1 more and take 1 away than a group of objects up to 5</td><td>Using a numberline can find 1 more or one less to numbers beyond 10.</td><td>can recall one more or one less than numbers up to 10</td></tr>
<tr><td>Children say number names randomly during play.
Uses words such as ‘a lot’</td><td>Says some number names but not for each object</td><td>Counts objects and actions to 3 saying a name for each one.</td><td colspan="2">Count objects and actions to 5+ (understanding the last number tells you how many you have)</td><td>Counts objects and actions to 10+</td><td>Counts objects and actions beyond 20</td></tr>
<tr><td>Counting / Reciting vocab</td><td colspan="8">Recite
Number
Count
More
Less
Same/equal</td></tr>
<tr><td><u>Nume</u>
<u>rical</u>
<u>Patte</u></td><td colspan="2">Recognise some numbers special to them</td><td>Recognise numbers to 3</td><td>Recognise numbers to 5</td><td>Recognise and write numbers to 5</td><td colspan="2">Recognise and write numbers to 10</td></tr>
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<table>
<tr><td></td><td colspan="2"></td><td></td><td colspan="2">Can order up to 5</td><td colspan="2">Can order up to 10</td><td></td></tr>
<tr><td>Number recognition vocab</td><td colspan="7">Order
Number name
Numbers</td><td></td></tr>
<tr><td rowspan="6"><u>Number</u>
Number Composition</td><td colspan="2" rowspan="2">Children join and copy as adults represent number through actions or objects e.g. claps, fingers</td><td rowspan="2">Show finger / objects for numbers up to 3/5</td><td rowspan="2">Show finger / objects for numbers up to 5</td><td>Show finger / objects for numbers up to 5</td><td>Understands what numbers 5-10 look like and are able to make using different objects</td><td>Able to represent the composition of number through drawings.</td><td rowspan="5">Have a deep understanding of numbers to 10 including the composition of number

Subitise (recognise quantities without counting) up to 5.

Automatically recall number bonds up to 5 (including subtraction facts) and some number facts to 10 including doubles.</td></tr>
<tr><td>Able to recall the number bonds to make 3 and 4</td><td>Knows and can recall number bonds to 7 (including subtraction facts)</td><td>Knows and can recall number bonds to 10 (including subtraction facts)</td></tr>
<tr><td colspan="2">Begin to subitise (to 2)</td><td>Can subitise (to 3)</td><td colspan="2">Can subitise (to 5)</td><td colspan="2">Can subitise (up to 10)</td></tr>
<tr><td rowspan="2">Children join in with simple number rhymes linked to 1 more / 1 less e.g. 5 speckled frogs</td><td colspan="2">Can combine groups of objects up to 3 to see how many altogether.</td><td colspan="2">Can combine groups of objects up to 5 and say how many they have altogether.</td><td>Can add 2 single digit numbers up to 7 representing through drawings</td><td>Can add 2 single digit numbers to 10 by counting on.</td></tr>
<tr><td colspan="2">In practical contexts takes some away and knows that they have ‘less’</td><td colspan="2">Can solve simple subtraction problems up to 5 using objects</td><td>Subtracts a single digit number from a number up to 7 using drawings</td><td>Subtracts a single digit number from a number up to 10 by counting backwards</td></tr>
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<table>
<tr><td>Number composition vocab</td><td colspan="5">Subitise
Combine
More
Altogether
Add
Less
Subtract
Minus</td><td></td><td></td></tr>
<tr><td rowspan="4"><u>Numerical Patterns</u>
Fractions / Comparison</td><td rowspan="4">Children begin to use mathematical language such as ‘more’</td><td rowspan="4">Identify whether collections are the "same" number or which is "more" visually</td><td>Can recognise which group has more, less or the same and use the correct language up to 5.</td><td>Can recognise which group has more, less or the same by counting and use the correct language up to 7</td><td>Can compare groups of objects up to 10 + understanding the difference between size and quantity</td><td rowspan="4">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 to 10, including odd and evens, double facts and how quantities can be distributed equally.</td><td rowspan="4"></td></tr>
<tr><td rowspan="3">Can halve/share objects out equally in practical situations</td><td rowspan="3">Can halve and share objects out using the part part whole model up to 7</td><td>Can halve and share objects out using the part part whole model up to 10</td></tr>
<tr><td>Knows that even numbers can be shared and that odd numbers can’t</td></tr>
<tr><td>Recognise when they have the same as their friend and can count to see how many altogether</td><td>Can double numbers up to 10 using objects and begin to recall double facts up to 10</td></tr>
<tr><td>Fractions/ comparison vocab</td><td colspan="5">More
Less
Same
Double
compare</td><td></td><td></td></tr>
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<table>
<tr><td rowspan="3">Shape</td><td>Children use shapes of different sizes and types within their play</td><td>Has an interest in shapes in the environment</td><td>Begins to recognise and name basic 2d shapes with support</td><td colspan="2">Can name basic 2d shapes – circle, square, rectangle, triangle</td><td>Can name oval, pentagon, octagon, hexagon</td><td></td><td rowspan="3">Recognise and name common 2-D shapes, including rectangles (including squares), circles and triangles

Recognise and name common 3-D shapes, including cuboids (including cubes), pyramids and spheres</td></tr>
<tr><td rowspan="2">Children complete simple inset jigsaws and shape sorters.</td><td rowspan="2">Uses shapes to make pictures</td><td>Selects shapes appropriately e.g. triangle for a roof</td><td>Talks about and explores 2D shapes using some mathematical language e.g. corners, sides</td><td>Explores how many corners and sides basic 2d shapes have</td><td>Explores how many corners and sides other 2d shapes have</td><td rowspan="2"></td></tr>
<tr><td colspan="2">Children use 3D shapes within their play and may identify their names / features</td><td colspan="3">Can correctly recognise and name some 3D shapes e.g. sphere, cone, cylinder, cuboid and cube
Is beginning to explore other shapes such as pyramids and triangular prisms</td></tr>
<tr><td>Shape Vocab</td><td colspan="6">2D shape
3Dshapes
Shape names
Side
Corner
Vertices
Face
Edge</td><td></td><td></td></tr>
<tr><td>Space</td><td>Children start to notice similarities and repeated shapes</td><td colspan="2">Notice simple repeating patterns, such as a wall of blocks with
long, short, long, short, long ...</td><td>Continue and copy simple AB repeating patterns</td><td>Continues, copies and recreates repeated</td><td>Continues, copies and recreates repeated</td><td>Continues, copies and recreates repeated</td><td></td><td>Describe position, direction and movement,</td></tr>
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	in the environment.	Talks about pattern in the environment (spotty, stripy…)	Can sort items by their colour or pattern	Creates repeated patterns with 2 shapes	patterns AB and extend this and spot errors	patterns ABB and extend this and spot errors	patterns ABBC and AABB and extend this and spot errors		including whole, half, quarter and three-quarter turns.
	Children take part in action rhymes and copying games Children develop spatial awareness through movement.	Understand and use ideas such as in, over, under, above, on , next to, behind, between Can understand position through words alone		Begins to describe locations using words such as 'in front of' and 'behind'	Can follow instructions using positional language	Uses vocabulary such as 'over', 'above', 'beneath', 'beside'			
Space vocab	Patterns Repeating patterns Shapes Colours Positional vocabulary Prepositions								
Measurement	Children show an awareness of size through stories and activities such as playing with construction materials and showing an awareness of size e.g. big / small	Uses 'big' and 'small', 'short' and 'tall to compare size		Uses 'big' and 'small', 'short' and 'tall to compare size	Can order three items by length/height using non-standard measures Uses 'biggest', 'smallest', 'shortest' and 'tallest'				Compare, describe and solve practical problems for lengths and heights
		Uses 'heavy' and 'light'		Make simple comparisons using 'heavier' and 'lighter'	Can order three items by weight using non-standard measures Uses 'heaviest', 'lightest'				Compare, describe and solve practical problems for mass/weight
		Uses 'full' and 'empty' to compare capacity		Make simple comparisons using 'more' and 'less'	Can order three items by capacity using non-standard measures Uses 'full', 'empty', 'half empty'				Compare, describe and solve practical problems for capacity and volume

		Knows day and night	Knows and talks about the events in a day through routines / visual timetables	Can sequence events in the day	Knows days of the week	Begins to use language before, after, yesterday, today, tomorrow		Recognise and use language relating to dates, including days of the week, weeks, months and years
	Develops an awareness of money through role play			Understands that we need to pay for items in a shop and can talk about what they would like to buy Talks about the different ways we can pay for things Recognises that there are different coins Can pay for items using 1p coins				Recognise and know the value of different denominations of coins and notes
Measurement vocab	Sequence Tallest Shortest Big Small Weight Heaviest Lightest Longest Length Days of the week Money Coins							