Maths at Springfield

Year	Autumn	Spring	Summer
Nursery	**Counting and Cardinality:** Develop a fast recognition of up to 3 objects (without having to count them individually- subitise); recite number names in sequence past 5; select a small number of objects from a group. **Comparison:** Notice similarities and differences within collections; understand and respond to the language of 'lots' and 'more' in the context of comparing groups or collections; to make comparison between quantities and notice/describe changes in quantity using 'more', 'less', 'fewer' etc. **Shape and space:** Begin to categorise objects according to properties e.g. shape and colour. **Measure:** Begin to categorise objects according to size. **Pattern:** Begin to understand that things might happen now or at another time (routine).	**Counting and Cardinality:** One to one correspondence within 5; matching numeral and quantity within 5. **Comparison:** Continue to compare quantities of groups, including describing when groups are the same/equal; know that a group of things changes in quantity when something is added or taken away. **Composition:** To know sets can be changed or arranged differently by adding or taking away (mostly seen in context of number songs). **Shape and space:** To take an interest in shapes in the environment; to talk about and explore 2D and 3D shapes, extending onto talking about sides, corners, flat, round etc. **Measure:** Make comparisons between objects relating to size. Make comparisons between objects relating to weight. **Pattern:** Extend, continue and create ABAB patterns.	**Counting and Cardinality:** Show finger numbers up to 5; count objects in a line within 5; cardinality of number secure within 5; experiment with representing quantity and number through symbol and numerals. **Composition:** Solve real mathematical problems with numbers up to 5. **Shape and space:** Understand positional language words; describe a familiar route using positional language; select appropriate shapes when building; combine shapes to make new ones. **Measure:** Make comparisons between objects relating to length; make comparisons between objects relating to capacity. **Pattern:** Anticipate meal times and talk about past and future; begin to describe a sequence of real or fictional events.
Reception	**Counting and Cardinality:** Subitise to 5; count objects, actions and sounds using 1:1 correspondence with secure understanding of cardinality to 10; count out objects from a larger group; count forwards and backwards within 10; show finger numbers to 10; recognise numerals to 10, link numeral and quantity; know that a quantity does not change when rearranged (order irrelevance principle). **Through all of the above, children gain a strong number sense within 10 and secure the 5 principles of counting; stable order, 1:1 correspondence, cardinality, abstract principle, order irrelevance principle.** **Comparison:** Compare different collections of amounts using language such as more/fewer; compare collections of equal amounts. **Space and shape:** Develop spatial awareness by experiencing different viewpoints; respond and use language of position and direction, use positional language relevant to the viewpoint; develop shape awareness through construction (including selecting, manipulating & rotating 2D+3D shapes). **Measure:** Recognise which attributes apply to which objects e.g. sticks are long and adults are tall; compare 2 items by size and find out which is bigger and smaller; compare 2 items by length or height. **Pattern:** Continue, copy and create an AB pattern; notice and correct an error in an AB pattern and fix it; identify the unit of repeat in an AB pattern. continue an AB pattern; continue a pattern which ends mid unit; create an ABB, ABBC pattern; spot an error in an ABB pattern.	**Counting and Cardinality:** Count forwards and backwards beyond 20 recognising patterns of the counting system; estimate how many objects and check by counting; explore a range of marks to represent quantity and numeral. **Comparison:** Use reasoning to compare numbers and quantities; know the 'one more/one less' relationship between consecutive numbers within 10. **Composition:** Explore the composition of numbers 0-5. Explore the composition of numbers 6-10, record compositions of number stories using pictures, symbols and numbers. **Space and shape:** Represent spatial relationships e.g. maps; identify similarities between shapes. **Measure:** Compare items by capacity and describe which holds to most and least; compare 2 items by weight and find out which is heavier and lighter; show an awareness of comparison in estimating and testing predictions around measure; indirectly compare (problem solving) e.g. putting all the heavy items into a shopping bag first. **Pattern:** continue an ABC pattern; continue a pattern which ends mid unit; create an ABB, ABBC pattern; spot an error in an ABB pattern; record a pattern and explain the sequence; generalise structures to another context or mode.	**Comparison:** Explore how quantities can be distributed equally (within 10); compare quantities up to 10 using language 'more than', 'greater than', 'less than', 'fewer', 'same as', 'equal to'. **Composition:** Explore and represent odd and even number patterns within 10; explore and represent double facts within 10; automatic recall of number bonds including subtraction facts within 5; automatic recall of some number bonds within 10 including double facts; begin to explore and work out problems including + or -. **Space and shape:** Show an awareness of the properties of shape; describe the properties of shape; compose and decompose shapes so as to understand shapes within shapes; use own ideas to make models, solve problems and visualise what they will build. **Measure:** Recognise the relationship between the size and the number of units when measuring; begin to use units to compare things; begin to use time to sequence events including positional language and relational terms; begin to experience specific time durations in play e.g. timers and stopwatches. **Pattern:** Make a pattern which repeats around a circle; make a pattern around a border with a fixed number of spaces; identify patterns around us.

1	Previous Reception experiences and counting within 100 Comparison of quantities and part–whole relationships Numbers 0 to 5 including measure Geometry: recognise, compose, decompose and manipulate 2D and 3D shapes	Geometry: recognise, compose, decompose and manipulate 2D and 3D shapes Numbers 0 to 10 including measure Additive structures Addition and subtraction facts within 10	Numbers 0 to 20 Unitising and coin recognition (money) Geometry: position and direction Time Fractions
2	Numbers 10 to 100 Calculations within 20 Fluently add and subtract within 10 Addition and subtraction of two-digit numbers (1)	Introduction to multiplication Introduction to division structures Geometry Addition and subtraction of two-digit numbers (2)	Money Fractions Time Geometry: position and Direction Multiplication and division – doubling, halving, quotitive and partitive division Sense of measure – capacity, volume, mass Statistics
3	Adding and subtracting across 10 Numbers to 1000	Geometry: angles Manipulating the additive relationship and securing mental calculation Column addition 2, 4, 8 times tables Column subtraction	Unit fractions Non-unit fractions Geometry: parallel and perpendicular sides in polygons Time Statistics Measure
4	Review of column addition and subtraction Numbers to 10,000 Measure: perimeter 3, 6, 9 times tables	3, 6, 9 times tables 7 times table and patterns Understanding and manipulating multiplicative relationships Geometry: coordinates	Review of fractions Fractions greater than 1 Geometry: symmetry in 2D shapes Time Division with remainders Statistics Geometry: position and direction
5	Decimal Fractions Money Negative numbers Short multiplication and short division	Measure: area and scaling Calculating with decimal fractions Factors, multiples and primes	Fractions Measure: converting units Geometry: angles and position and direction Statistics
6	Calculating using knowledge of structures (1) Multiples of 1,000 Multiples of 10,000,000 Geometry: draw, compose and decompose shapes	Multiplication and division Area, perimeter Geometry: position and direction Fractions and percentages	Statistics Ratio and proportion Calculating using knowledge of structures (2) Algebra: solving problems with two unknowns Order of operations Mean average Measure