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 Recognise, compose, decompose and manipulate 2D and 3D shapes	Recognise, compose, decompose and manipulate 2D and 3D shapes Numbers 0 to 10 Additive structures Addition and subtraction facts within 10	Numbers 0 to 20 Unitising and coin recognition Position and direction Time
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 Shape Addition and subtraction of two-digit numbers (2)	Money Fractions Time Position and Direction Multiplication and division – doubling, halving, quotitive and partitive division Sense of measure – capacity, volume, mass
3	Adding and subtracting across 10 Numbers to 1000	Right Angles Manipulating the additive relationship and securing mental calculation Column addition 2, 4, 8 times tables Column subtraction	Unit fractions Non-unit fractions Parallel and perpendicular sides in polygons Time
4	Review of column addition and subtraction Numbers to 10,000 Perimeter 3, 6, 9 times tables	3, 6, 9 times tables 7 times table and patterns Understanding and manipulating multiplicative relationships Coordinates	Review of fractions Fractions greater than 1 Symmetry in 2D shapes Time Division with remainders
5	Decimal Fractions Money Negative numbers Short multiplication and short division	Area and scaling Calculating with decimal fractions Factors, multiples and primes	Fractions Converting Units Angles
6	Calculating using knowledge of structures (1) Multiples of 1,000 Multiples of 10,000,000 Draw, compose and decompose shapes	Multiplication and division Area, perimeter, position and direction Fractions and percentages	Statistics Ratio and proportion Calculating using knowledge of structures (2) Solving problems with two unknowns Order of operations Mean average