Mathematics in the EYFS

In the EYFS at Springvale we aim to support everyone to reach their potential by living out our ethos of PLAY TOGETHER LEARN TOGETHER ACHIEVE TOGETHER. We deliver our curriculum through themes, and use a core text as a ‘hook’ to introduce our learning for that term. We plan six topics each year, on a two-year cycle, through which the children learn skills from many areas of the curriculum; PSHE, literacy, mathematics, science, history, geography, physical education, art and design and R.E.

At Springvale we believe that developing a **strong grounding in number** is essential so that all children develop the necessary **building blocks** to excel mathematically. Children should be able to **count confidently**, develop a deep understanding of the **numbers to 10**, the **relationships between** them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using **manipulatives,** including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which **mastery of mathematics** is built. In addition, it is important to provide **rich opportunities for children to develop their spatial reasoning** skills across all areas of mathematics including shape, space and measures. We want all children to **develop positive attitudes and interests in mathematics**, look for **patterns and relationships**, spot **connections, ‘have a go’**, **talk to adults and peers** about what they notice and not be afraid to make mistakes.

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| CYCLE A | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
| Daily Skills | Maths should not only be taught during specific maths sessions but wherever possible throughout the day. The following should be utilised to support maths teaching:  Days of the week song and talking about the dayGeneral counting e.g. counting how many bananas there are in the fruit box.Counting songs Use of ordinal numbers e.g. “Sam line up first, Lilly line up second…”Maths games such as track counting gamesNoticing maths in the environment e.g. asking children what they notice about a tree. They may say it is tall, has circles on etc.Incorporating maths in areas of continuous provision wherever possible e.g. an activity that matches numeral to quantity in the finger gym area.Incorporating maths in daily routines e.g. during registration time. If there are 3 children absent the children clap 3 times. Having labels on pencil pots with a representation of a number to show how many pencils go in that pot during tidy up time. Different representations of number on the ‘how many children can play here’ posters. |
| **Number FS1** | * Say one number for each item in order: 1, 2, 3, 4, 5.
* Knows that the last number reached when counting a small set of objects tells you how many there are in a set (cardinal principle)
* Can show finger numbers up to 5
* Can link numerals and amount, eg showing the right number of objects to match the numeral
* Is experimenting with his/her own symbols and marks as well as numbers
* Is able to solve real world problems with numbers up to 5
* Can compare quantities using language such as ‘more than’ ‘fewer than’
 | Vocabulary**Number**zero, one, two, three … to twenty and beyond, teens numbers, eleven, twelve … twenty, none, how many …? count, count (up) to, count on (from, to), count back (from, to) **Place value**the same number as, more, larger, bigger, greater fewer, smaller, less, fewest, smallest, least most, biggest, largest, greatest, one more, one less, compare, order, size, first, second, third… last, last but one, before, after, next**Estimating** guess how many …? estimate, nearly, close to, about the same as, just over, just under, too many, too few, enough, not enough. **Calculation** add, more, and make, total, altogether, double, one more, how many more to make …? take away, how many are left/left over? how many have gone? one less**Multiplication and division** sharing, halving, **Fractions** parts of a whole, half |
| **Numerical Patterns FS1** | * Can talk about and explore 2D and 3D shapes (eg circles, rectangles, triangles & cuboids using informal and mathematical language, ‘sides’ ‘corners’ ‘straight’ ‘flat’ ‘round’
* Understands position through words alone, eg ‘The bag is under the table’ with no pointing
* Can describe a familiar route
* Is able to discuss routes and locations, using words like ‘in front of’ and ‘behind’
* Can make comparisons between objects relating to size, length, weight and capacity
* Selects shapes appropriately; flat surfaces for building, a triangular prism for a roof etc
* Combines shapes to make new ones; an arch, a bigger triangle etc
* Talks about and identifies the patterns around him/her eg stripes on clothes, designs on rugs etc. He/she uses informal language like ‘pointy’ ‘spotty’ ‘blobs’ etc
* Is able to extend and create ABAB patterns
* Notices and corrects an error in a repeating pattern
* Is beginning to describe a sequence of events, real or fictional, using words such as ‘first’, ‘then…’
 | Vocabulary**Measure** Size, compare, guess, estimate, enough, not enough, too much, too little, too many, too few nearly, close to, about the same as, just over, just under. **Length** long, short, tall high, low, wide, narrow, thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest, highest … and so on far, near, close. **Weight** weigh, weighs, balances, heavy, light, heavier than, lighter than, heaviest, lightest scales. **Capacity** Full, empty, half full holds, container. **Time** days of the week, Monday, Tuesday …, week, birthday, holiday, morning, afternoon, evening, night, bedtime, dinner, time, playtime, today, yesterday, tomorrow, before, after, next, last, now, soon, early, late, quick, quicker, quickest, quickly slow, slower, slowest, slowly, old, older, oldest, new, newer, newest, takes longer, takes less time, **Money** Coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay.**Properties of shape** shape, pattern, flat, curved, straight, round, hollow, solid, sort, make, build, draw, size, bigger, larger, smaller, symmetrical pattern, repeating pattern, match. 2-D shapes corner, side, rectangle (including square), circle, triangle. 3-D shapes face, edge, vertex, vertices, cube, pyramid, sphere, cone.**Position and direction** position over, under, above, below, top, bottom, side on, in, outside, inside, around, in front, behind front, back, beside, next to, opposite, apart, between, middle, edge, corner, direction, left, right, up, down, forwards, backwards, sideways, across, next, to, close, near, farlong, through, to, from, towards, away, from, movement, slide, roll, turn, stretch, bend |
| **FS1 Half-Termly Focus** | Autumn 1number songscolourssortingpattern | Autumn 2number songssizecounting principlecomparing | Spring 1number songsnumber 1number 2number 3 | Spring 2number songsnumber 4number 5number 6 | Summer 1number songsshapesmy daylength and height | Summer 2number songsweightcapacitypositional language |
| **Number FS2** | * Count objects, actions and sounds
* Is able to subitise
* Is able to link the number symbol with its cardinal number value.
* Can count beyond 10
* Is able to compare numbers
* Understands the one more/one less than relationship between consecutive numbers
* Explore the composition of numbers to 10.
* Solve real world mathematical problems with numbers up to 10.
* Automatically recall number bonds for numbers 0-10 including doubles and subtraction facts
 | Vocabulary**Number** zero, one, two, three … to twenty and beyond, teens numbers, eleven, twelve … twenty, none, how many …? count, count (up) to, count on (from, to), count back (from, to) count in ones, twos, fives, tens, is the same as more, less odd, even, few, pattern, pair**Place value** ones, tens, digit, the same number as, as many as more, larger, bigger, greater fewer, smaller, less, fewest, smallest, least most, biggest, largest, greatest, one more, ten more, one less, ten less, compare, order, size, first, second, third… twentieth last, last but one before, after, next**Estimating** guess how many …? estimate, nearly, close to, about the same as, just over, just under, too many, too few, enough, not enough. **Calculation** add, more, and make, sum, total, altogether, double, one more, two more … ten more, how many more to make …? how many more is … than …? how much more is …? take away, how many are left/left over? how many have gone? one less, two less, ten less … how many fewer is … than …? how much less is …? difference between **Multiplication and division** sharing, doubling, halving, number patterns. **Fractions** parts of a whole, half |
| **Numerical Patterns FS2** | * Can select, rotate & manipulate shapes in order to develop spatial reasoning skills
* Investigates composing and decomposing shapes and recognises a shape can have other shapes within it, just as numbers can
* Is able to continue, copy and create repeating patterns
* Can compare length, weight and capacity
* Can compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as another quantity
* Is able to explore and represent patterns within numbers to 10, including
 | Vocabulary**Measure** Size, compare, guess, estimate, enough, not enough, too much, too little, too many, too few nearly, close to, about the same as, just over, just under. **Length** long, short, tall high, low, wide, narrow, thick, thin longer, shorter, taller, higher … and so on longest, shortest, tallest, highest … and so on far, near, close. **Weight** weigh, weighs, balances, heavy, light, heavier than, lighter than, heaviest, lightest scales. **Capacity** Full, empty, half full holds, container. **Time** days of the week, Monday, Tuesday …, week, birthday, holiday, morning, afternoon, evening, night, bedtime, dinner, time, playtime, today, yesterday, tomorrow, before, after, next, last, now, soon, early, late, quick, quicker, quickest, quickly slow, slower, slowest, slowly, old, older, oldest, new, newer, newest, takes longer, takes less time, **Money** Coin, penny, pence, pound, price, cost, buy, sell, spend, spent, pay.**Properties of shape** shape, pattern, flat, curved, straight, round, hollow, solid, sort, make, build, draw, size, bigger, larger, smaller, symmetrical pattern, repeating pattern, match. 2-D shapes corner, side, rectangle (including square), circle, triangle. 3-D shapes face, edge, vertex, vertices, cube, pyramid, sphere, cone.**Position and direction** position over, under, above, below, top, bottom, side on, in, outside, inside, around, in front, behind front, back, beside, next to, opposite, apart, between, middle, edge, corner, direction, left, right, up, down, forwards, backwards, sideways, across, next, to, close, near, farlong, through, to, from, towards, away, from, movement, slide, roll, turn, stretch, bend, whole turn, half turn |
| **ELG Assessment Statements** | Automatically recalls (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double factsHas a deep understanding of number to 10, including the composition of each numberIs able to subitise (recognise quantities without counting) up to 5 |
| **FS2 Termly Number Focus** | **Autumn Term** Match and SortCompare AmountsRepresenting 1 2 & 3Comparing 1 2 & 3Composition of 1 2 & 3Representing Numbers to 5One More & Less | **Spring Term**ZeroComparing Numbers to 5Composition of 4 & 56 7 8Making PairsCombining 2 groups9 & 10Comparing Numbers to 10Bonds to 10 | **Summer Term**Building Numbers beyond 10Counting Patterns beyond 10Adding MoreTaking AwayDoublingSharing & GroupingEven and OddDeeping UnderstandingPatterns and Relationships |
| **FS2 Termly Focus****Number Patterns** | **Autumn Term**Compare Size, Mass & CapacityExploring PatternCircles and TrianglesPositional LanguageShapes with 4 sidesTime | **Spring Term**Compare Mass Compare CapacityLength & HeightTime3D ShapePattern | **Summer Term**Spatial Reasoning 1-4Match, Rotate, ManipulateCompose and DecomposeVisualise & BuildMapping |